



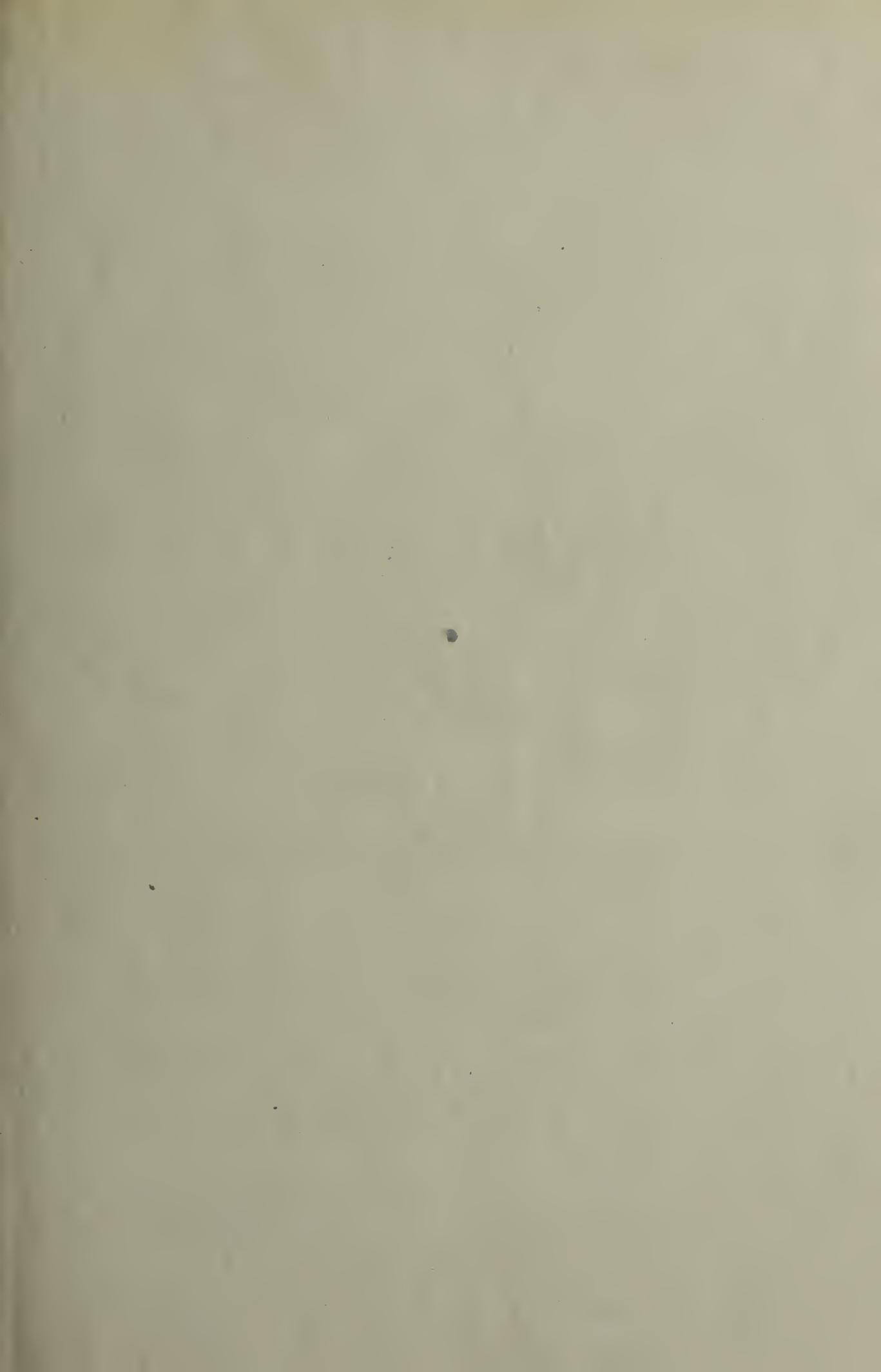
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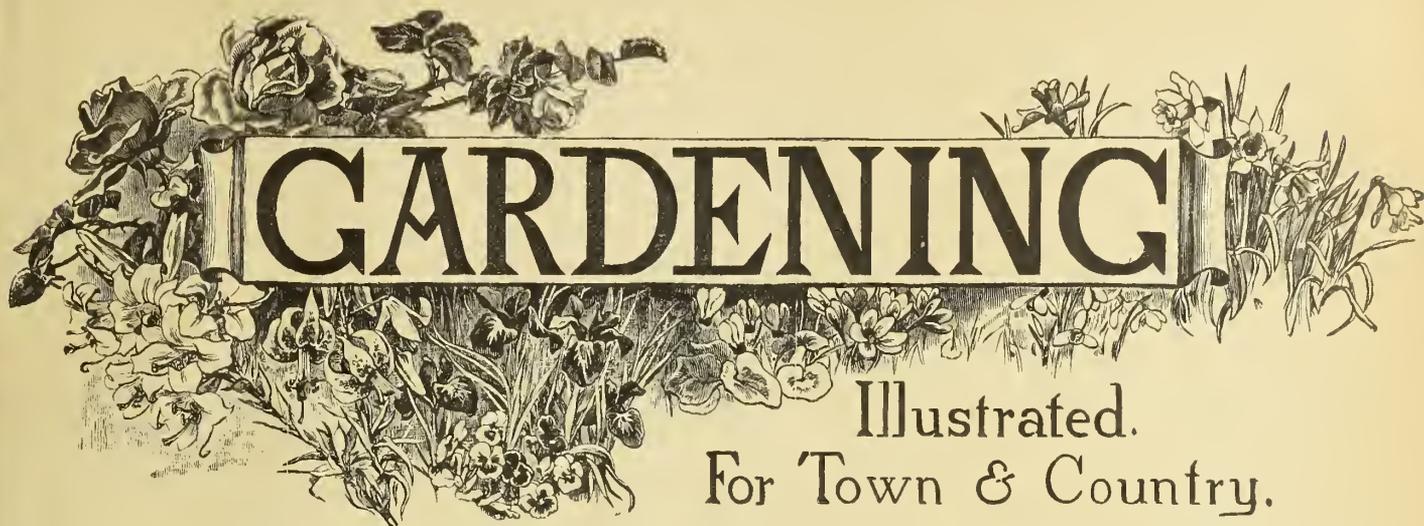
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A Weekly Journal for Amateurs and Gardeners.

FOUNDED BY W. ROBINSON,

*Author of "The English Flower Garden," "The Wild Garden," "Hardy Flowers," "Alpine Flowers," &c.
Founder of "The Garden" and "Farm and Home."*

"YOU SEE, SWEET MAID, WE MARRY
A GENTLE SCION TO THE WILDEST STOOK;
AND MAKE CONCEIVE A BARK OF BASER KIND
BY BLOOD OF NOBLER RACE: THIS IS AN ART
WHICH DOES MEND NATURE—CHANGE IT RATHER: BUT
THE ART ITSELF IS NATURE."—*Shakespeare.*

"CALL THE VALES AND BID THEM HITHER CAST
THEIR BELLS AND FLOWERETS OF A THOUSAND HUES."—*Milton.*

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NOTES OF THE WEEK.

Pruning Clematis lanuginosa.—I cannot agree with "T.'s" instructions for pruning Clematis lanuginosa. I have a terrace wall, about 8 feet high, on which are twenty plants of Clematis Nelly Moser. Nearly every spring I cut them to within a few inches of the ground and obtain very strong shoots from the old wood. When they have grown about 3 feet I pinch out the leaders in order to obtain natural growth, and by this treatment I obtain an abundant mass of flowers twice in the year—namely, June and September.—L. H., Nuneham Park, Oxford.

The alpine-house.—I venture to think that the increased use of the alpine-house is to be deprecated. That such a structure is of use is admitted, but many of us—most of us, in fact—do not possess such a house, and while it may be handy for sheltering the finer and rarer alpine plants from rain and snow, it appears to be quite easily dispensed with in the case of Iris reticulata, I. r. cyanea, and similar Irises referred to in the issue of December 11th, p. 750, and which, with a little experience and knowledge of their requirements, can be grown equally well in the open.—KIRK.

Berberis subcaulialata.—This is a very attractive shrub, for, in addition to having a pleasing habit, it fruits freely and carries its berries well into winter. A native of Western China, it is one of many new kinds that have made their appearance during the last twenty years. In some places it may retain its leaves, or some of them, almost until new ones appear, whilst in other instances it may be quite deciduous. The branches are armed with numerous stiff but slender spines and clothed with small, bright green leaves. The yellow flowers are borne in clusters from the leaf-axils about June and are followed by small round fruits which, when ripe, are bright red. They are rarely at their best before the end of October, but hang for a considerable time in good condition.

Pears from Gunton Park.—Who shall say that we want southern valleys for growing good Pears when some of the finest we have seen come from Gunton? Among them there are superb specimens of Charles Ernest and Beurré Dubuisson, which Mr. Allan praises very much, and also President Barabé, which we are all getting to like. There is no doubt that over a large extent of our islands much fine fruit can be grown with success, and the moral is that we should not waste room with second-rate fruit and stewing Pears, or those only remarkable for size.

Saxifraga Burseriana multiflora.—Thanks to the courtesy of Mr. W. A. Clark, of York, I have at last received the information for which I was seeking, and am now enabled to give the history of this most interesting Saxifrage. Its parents were, as I suspected and suggested, S. Burseriana and S. Rochelliana (the pollen parent, however, was not the type S. Rochelliana, but its variety coriophylla). It was raised by the late Mr. Boyd, of Faldonside, Melrose—to whom we also owe S. Boydi and S. Faldonside—and was originally sent out by Backhouse, of York. How it got to impersonate a Burseriana is not clear, but it seems probable that it was sent out instead of a true S. Burseriana multiflora that the late Mr. Backhouse once collected and had sent out about 1889 or 1890. The hybrid is certainly one of the freest-flowering white Saxifrages of this section, and is well worthy of a distinctive name.—MURRAY HORNIBROOK.

French Vines for colour.—I have been an enthusiastic cultivator of Japanese Vines for some years now, and with a view to varieties I got some of our European or Grape Vines from France, with the beauty of which I am very much struck. They are more varied than the Japanese Vines, with all sorts of various colours on the same shoot. Wanting to know more about them I sent to Mons. F. Morel, of Lyons, who has kindly given me the names of the best kinds. They are grown under the general name of Teinturier. They are

Petit Bouschet, Alicante Bouschet, Gamay de Bonze, Gamay de Friant, Gamay de Moreau. He says they are all very hardy and the reddest in colour.—W.

Iris reticulata and I. r. cyanea.—A note in the issue of December 11th induces me to ask: Are conditions of soil and exposure studied when these and the earlier-flowering Irises are planted? I. reticulata and its varieties are frequently destroyed by an insidious disease which kills the bulbs in a short time, and from observation I feel fairly certain that this disease may be, almost entirely, prevented by the selection of a suitable site and exposure. Frequently this Iris is planted, with other bulbs, in a hardy plant border—very often exposed to the dangers arising from sodden soil in autumn and winter, and further handicapped by the shade of growing plants in spring when the ripening is being completed. Under such circumstances the vitality of the bulbs is weakened, and if disease should follow, the unhealthy bulb quickly succumbs. On the other hand, I. reticulata planted in light, loose soil at the base of a south wall will grow as freely and bloom as well as Iris stylosa, nor does disease appear to trouble the bulbs in such a position. If the shelter of a wall—whether the coping be of glass or merely of slates—can be given in addition, the blooms will expand clean and clear in colour.—KIRK.

The Mezereon (Daphne Mezereum).—This flowers at a time when outdoor flowers are welcome, its blossoms being at the same time showy and fragrant. Found wild in Europe and Siberia, it is occasionally found in a natural state in the British Isles, though it is much commoner as a garden shrub, especially in the North of England, where very fine bushes are frequently met with in cottage gardens. Very often it grows about 3 feet high, sometimes taller, and forms a shapely bush with vigorous, erect shoots. The flowers are borne from axillary buds on the previous year's wood, the whole shoot being a mass of bloom when at its best. As a rule,

the type and its white-flowered variety are at their best in February, but *D. M. grandiflora* commences to bloom in late autumn and is at its best about Christmas. Unfortunately, this particular variety is rather difficult to obtain, for it cannot be had true from seed as can the type and the white-flowered form. The colour of the flowers of *D. M. grandiflora* is reddish-purple, somewhat deeper than that of the type. It bears the familiar, rich scarlet berries of *D. Mezereum*, whilst *alba* bears yellow berries. Both the type and varieties give the best results in naturally moist soil and appreciate a little shade from hot sun.—D.

From Nice.—*Bignonia venusta* and *Bougainvillea Sanderae* are in great beauty with the Lamarque Roses growing in and out of them, and that wonderful winter-flowering *Acacia podalyriaefolia* is a sight just now. So with the Oaks, just in their autumn glory; we do not seem near Christmas. I really am writing to ask what you know about *Cupressus arizonica glauca*. I never saw it till the other day at Troncy's nursery near Cannes. It is a silver-grey, like an Olive (not at all blue), and on a dry hillside has a most beautiful effect with Aloes, Cacti, and grey-foliaged things, and "swears" horribly with ordinary Cypress and green things, so it would not look well in England, if it is known there. Coming from Arizona it wants a dry climate, even if it be fairly frost-proof. You never saw such strangling growths of wild Clematis, Brambles, and Ivy as I find in my valley after eighteen months' absence. I feel like Laocoon struggling with strangling, serpent-like coils of these monsters. In two more years my valley would be impassable, and at present I can get no labour save one nice young man not strong at all, but who loves his plants. Two years ago I planted some *Galanthus Fosteri* in the valley. They have thriven wonderfully and are now in very fine flower. It must be a southern form.—E. H. WOODALL.

Colour of trees in Britain and in New England.—I am very glad to get your interesting notes about autumn colouring of the trees. Your American Maple which loses its leaves is no doubt *Acer rubrum*, the only one of our species which seems to do well in England. Eastern American trees lose their leaves much earlier than European trees, at least that is the case in this country, the leaves of your European Elm, for example, remaining green long after those of the American species have entirely disappeared. The leaves of most Japanese trees and shrubs turn in this country as well as those of our native plants of the same genera, but a month later, and we are finding now that the leaves of many of the new Chinese trees and shrubs remain green even later than those of Japanese plants. As this is not a country of broad-leaved evergreens we particularly value trees and shrubs which retain green leaves late in the season. One of the most distinct of these is your European Privet, which is a much better plant than any of the now more popular Japanese and Chinese species. Nothing here has been so handsome, perhaps, lately, as Wilson's *Lonicera Maacki podocarpa*, which retains green leaves very late, and is still covered with bright scarlet fruits. I hope this plant does as well in England as it does here. On the whole, however, the best crop of Wilson's plants for us here are the Cotoneasters, and among them the finest species, I think, is *C. huphensis*, the handsome shrub, from our point, of all Wilson's discoveries. — C. S. SARGENT, *Arnold Arboretum, Mass.*

FRUIT.

ROOT-LIFTING AND ROOT-PRUNING.

FIRST as to root-pruning, the object of which is to check over-luxuriance. This check is best given by lifting the trees, laying the roots out in a horizontal position nearer the surface. In a well-balanced tree the roots should about balance the branches, and the most active roots are within a foot, or less, of the surface. If there were less branch-pruning there would be less need for root-pruning. Often our restricted systems of training render necessary some check being placed upon the roots in the case of wall trees and espaliers. In the old days this was met in some instances by an impervious base immediately under the tree, generally in the shape of concrete. If young trees were lifted when four years or so planted, and the roots properly laid out, the advantage would be great. Every gardener I have known seeks to obtain the control of the roots and keep them near the surface under the influence of the sunshine.

Of course, there are soils and positions so favoured that one cannot go wrong. On the other hand the wise man studies the roots as well as the branches. Take the case of the Fig. In many parts of the country, if we lose control of the roots we get no fruit, and perhaps in a less degree in the case of the Vine and the Peach. On clayey, badly-drained soils, station planting, which consists of an impervious base 3 feet or so square, or round, which arrests and turns aside the tap roots, is necessary. All badly-drained land should have drains at necessary intervals not less than 3 feet deep, especially for fruit culture. Shallow drains are useless on fruit land as they ultimately become blocked by roots.

E. H.

MISTAKES WITH CORDON PEARS.

THE cordon system of Pear culture has increased very considerably of recent years, and the trees, as a rule, are fairly well done, but mistakes are made, especially by amateurs, who probably often plant before making themselves conversant with the several points essential to success. Among the mistakes, perhaps the most frequent and noticeable are shallow planting, indifferent selection, and summer pruning. A certain amount of preparation of soil is essential before planting, which is often done before the ground is thoroughly settled, thus exposing the collar of the tree and the top roots. If this happens, the remedy is to prepare a certain amount of soil, the greater part a rather heavy loam with a small portion of thoroughly decomposed manure, putting it on as a mulch of sufficient thickness to come just above the planting-line of the tree. In the matter of

SELECTION there is first the question of the varieties that do well on the Quince, then the choice of the best sorts, and lastly (whether the collection is on a large or small scale) the question of season. Too many varieties of the same season are not required, as Pears, with few exceptions, are short-lived after approaching the ripening stage, and it seems a pity that fruit of high-class quality should be wasted. One of the exceptions from a keeping standpoint is *Glou Morceau*, which, if slightly advanced or retarded before or after its natural ripening season, can be had in first-rate condition for several weeks. This and *Marie Benoist*, *Nouvelle Fulvie*, and *Josephine de Malines* are about the most satisfactory late Pears as cordons. Another mistake, and one

highly prejudicial towards securing an annual crop, is in connection with

SUMMER PRUNING or pinching. This, with an idea towards the neat appearance of the trees, is often done far too early, with the result that a lot of weak growth that is absolutely worthless follows, and which has to be cut clean away later in the season to secure a sturdy back-break, meaning the loss of a part of the crop for a couple of seasons. No exact time can be fixed for the work. It will vary in different seasons according to atmospheric conditions and as early or late growth is made. The start should be delayed until the wood of the shoots from the base upwards is getting a bit firm and showing signs of a change of colour towards the ripening stage. In the case of varieties inclined to make a lot of growth it is as well to retain a few well-balanced shoots at occasional intervals the length of the trees; these can be tied in loosely if the weather is rough to prevent the danger of snapping at the base, which sometimes happens with strong, succulent growth. There is also a considerable difference in the manner of growth in different varieties so far as the first formation of shoot and spur on the main stem is concerned, and if the spurs are very thickly set and blossom is freely produced at the expense of growth it is sometimes advisable at the winter pruning to remove every other one of such spurs, not too hard in to the main stem, but sufficiently so that a nice strong break, that can presently be treated for the formation of a fruiting spur, comes away.

E. B. S.

Hardwick.

NOTES AND REPLIES.

Failure of Gooseberries.—I have a number of cordon Gooseberries which have for some years been bearing very good crops. Some of them are single cordons, others double, and others treble. For the last few years I have been much troubled because each year a certain number of these trees loses entire branches, which die away in an unaccountable way. It looks like a sort of canker. Can you tell me the cause and cure? I may add that the trees are sprayed every winter with the caustic alkali wash.—C. J. L.

[The dying of the branches on the Gooseberry-trees in the question is, we think, due to the agency of the caterpillars of the clearwing moth. These gain ingress to the shoots or branches through one of the buds situated on the same, and from where they tunnel upwards and downwards, destroying the pith in so doing and ultimately causing the death of the said shoots and branches. The very fact of the attack being set up in the manner briefly described renders remedies in the shape of insecticides and caustic washes of no avail. As a rule, their presence is usually denoted by the leaves on the affected parts beginning either to wilt or assume a sickly or unhealthy appearance, and if these pieces of wood are at once removed, cutting them back to where the leaves are quite healthy and normal, the infestation can be, to a great degree, lessened. Both these affected pieces of wood as well as prunings should be burnt. By paying strict attention to the timely removal of the infested shoots as indicated above you should in the course of a season or two get rid of the trouble.]

Red Currants shrivelling.—In a garden of which I have charge I have Red Currants round one square, and last spring all the fruit bunches on the trees on two sides of the square shrivelled up without any apparent reason, while on the other sides the fruit developed all right. I want, if possible, to prevent this happening again next spring, and shall be obliged for any help.—C. J. S.

[This, no doubt, was due to caterpillars of the Currant shoot and fruit moth. The latter deposits its eggs in the young fruit and the caterpillars, when hatched out, render it useless. This same pest is

also a pith-borer, and the best means of circumventing it is to be on the alert and remove every shoot and piece of wood exhibiting the slightest sign of being infested, indication of which will be given by the wilting of the young leaves, and burning them. Also be very careful to remove and burn all prunings at the present time, and keep the soil beneath the bushes clear of any kind of rubbish in the shape of dead twigs, etc., at all times. When pruning is going on carefully scrutinise the two-year-old wood and cut back any portion found in a dead or dying condition to a point where it is sound and healthy. Insecticides and caustic washes are, as in the case of dealing with the caterpillars of the clear-wing-moth, useless.]

Pear Durondeau not ripening.—For the last three years my Durondeau Pear has not

for planting—August for preference—there are sometimes reasons for delay, and then March, or very early in April, offers the best chance. If the land is not in good condition no time should be lost during January or February in trenching and manuring. Allow time for settlement before planting, as firmness is essential for Strawberries, the opposite often leading to blindness. I have seen in the past Onions planted between the Strawberries and very profitable crops raised. The Onions were raised under glass in boxes in January, hardened off in cold frame, and planted out early in April 6 inches apart in alternate rows with the Strawberries. All the work required afterwards was clean culture by hoeing, and perhaps a light mulch of manure. There may be only a light

TREES AND SHRUBS.

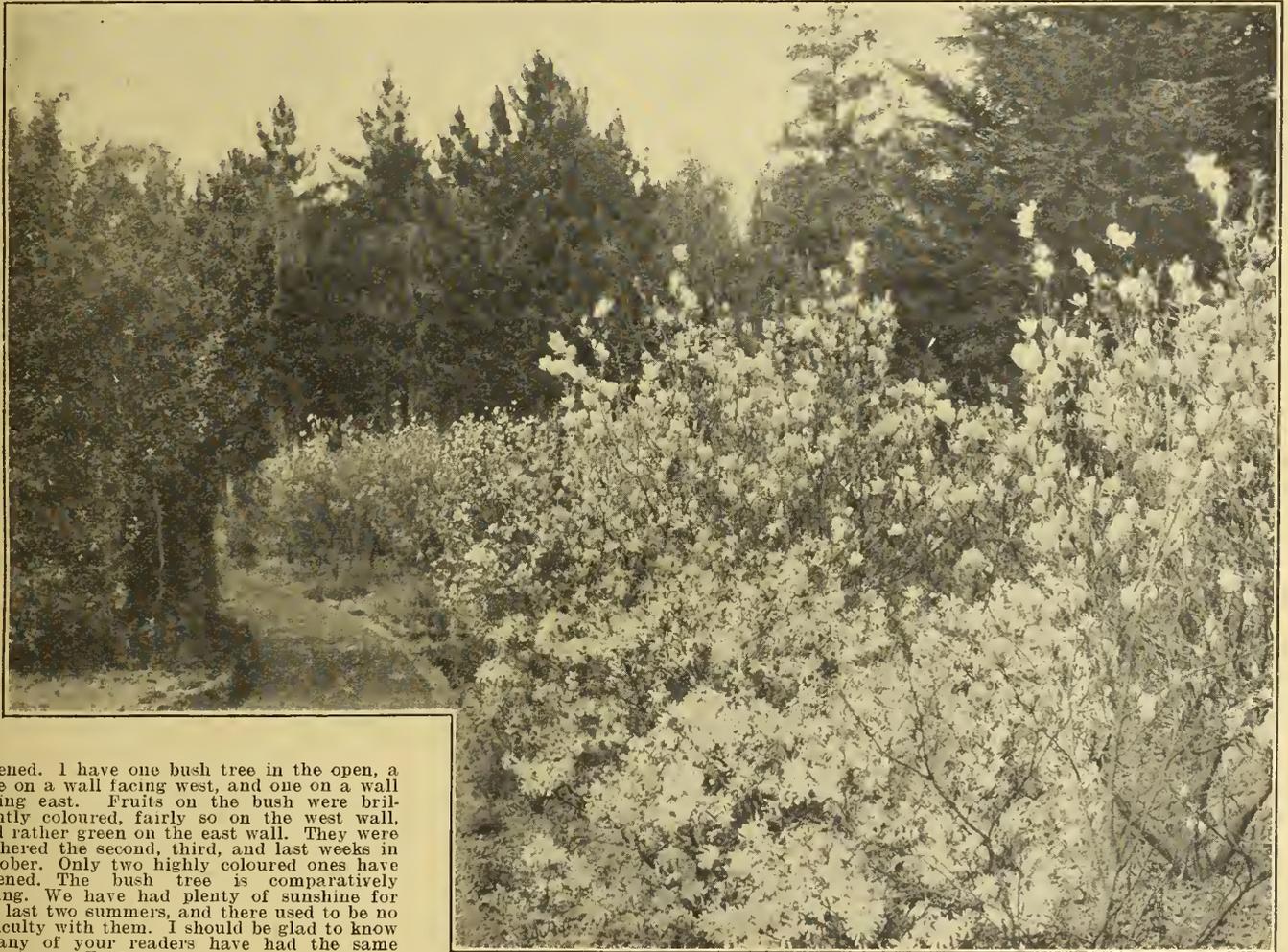
THE STAR MAGNOLIA.

(*M. STELLATA*.)

This is a very free and hardy kind, and easier, I find, to grow than most sorts in cultivation. Here I have it especially effective in the foreground of a group of taller Magnolias, with a background of Pines. The soil is cool and rather heavy, but this Magnolia does not seem to fear the conditions. W.

SOME ORNAMENTAL FRUITS IN DECEMBER.

ALTHOUGH the weather of the past two months has not been particularly favourable for the outdoor garden, many attractive fruits are still to be found in good



Magnolia stellata and others. Gravetye.

ripened. I have one bush tree in the open, a tree on a wall facing west, and one on a wall facing east. Fruits on the bush were brilliantly coloured, fairly so on the west wall, and rather green on the east wall. They were gathered the second, third, and last weeks in October. Only two highly coloured ones have ripened. The bush tree is comparatively young. We have had plenty of sunshine for the last two summers, and there used to be no difficulty with them. I should be glad to know if any of your readers have had the same experience.—F. M. G.

[The Durondeau Pear is on some soils but half melting, or, in other words, the flesh is inclined to be rather crisp-eating; but as yours have till within the last season or two ripened perfectly, we think the reason for their not doing so since must be due to the roots having gone down into the subsoil. Under the circumstances, we can in no other way account for the trouble. The remedy is either to root-prune or to lift the roots, preferably the latter, unless the trees are too large to be thus dealt with, and to lay them out afresh in a nearly level position, placing some fresh loam of a fibrous nature and a small quantity of wood-ashes about them before returning the ordinary soil thrown out in the process of searching for the roots. The roots will thus be brought nearer the surface and under the influence of solar warmth, conditions which should remedy the evil complained of.]

Strawberries, spring planting.—Even admitting that the autumn is the best time

crop of Strawberries the first season, but the crop of Onions will be a compensation, and in the second year the Strawberries will occupy all the ground and will produce abundantly. The following are good varieties:—Royal Sovereign, Sir J. Paxton, Reward, and Givon's Late Profitic.—E. H.

Thinning out old Currant-bushes (E.).—In the case of the Red Currants, some of the old branches, if they cross each other and are very thick, should be cut out entirely, and the side shoots left on those should be spurred in to two or three eyes, like a Vine, the leading shoots being left 6 inches or 8 inches in length. The Black Currants bear on the young wood, therefore thin out the bushes by removing as far as necessary the old cross branches, and let the young wood be left in at full length, and not too thickly. If you could get a good gardener in the neighbourhood to show you how to prune the bushes it would be a great gain to you.

condition. Particularly beautiful are the bright red berries of *Cotoneaster frigida*, borne in large clusters from long, slender branches, and few shrubs fruit more freely. A bush 15 feet or more high or a small, well-branched tree add greatly to the general effect of a garden. As a rule, birds commence to eat the berries in November, but this year they have escaped. Another very beautiful *Cotoneaster* is *C. rotundifolia*. The bright red berries of this usually hang until March, birds for some reason leaving them untouched whilst food of any other description can be procured. The orange-coloured berries of the Sea Buckthorn (*Hippophae rhamnoides*), though somewhat bleached by frost, are still attractive. Anyone planting this shrub must be careful to procure both male and female plants, otherwise there will be no fruits. As a rule, one

male may be planted amongst six females. The *Pyraecanthas* form another attractive group, in this case bright berries being mingled with evergreen leaves. *P. coccinea* and *P. crenulata* have rich scarlet berries, and *P. angustifolia* orange-coloured fruits. The last-named is more tender than the others, and even in the south of England should be given wall culture. The others are usually grown against walls, but give quite good results in the open ground. Unfortunately, if the bushes are not netted the fruits are soon taken by birds. The Siberian Crab (*Pyrus baccata*) is a very desirable tree for its freely-borne red fruits are conspicuous from a great distance and often hang until March. *Pernettya mucronata* bears large numbers of berries which may be of various shades of colour—red, purple, lilac, or white, according to variety. *Celastrus articulatus* is a vigorous climber with yellow fruits enclosing orange-scarlet seeds. *C. scandens* bears similar fruits. The various *Hollies* are, of course, very beautiful now, particularly the common *Ilex Aquifolium* and the American *I. opaca* with bright red berries; also the yellow-berried form of *I. Aquifolium*. The deciduous Holly *I. verticillata* is also most attractive now, its thin, wiry shoots being festooned with small, coral-red berries. A few days ago two Thorns, *Crataegus Carrierei* and *C. cordata*, were still covered with fruit, whilst several kinds of *Pyrus* of the Aria group were also effective. The berries of the common Mistletoe are effective in many places, but the fruits of the Snowberry (*Symphoricarpos racemosus*), which usually remain good until the New Year, have been turned yellow by frost. D.

NOTES AND REPLIES.

Halesia tetraptera, var. monticola.—The Silver Bell-tree of the southern States, *Halesia tetraptera*, has long been cultivated in northern gardens. It is usually shrubby in habit with several stout, wide-spreading stems, and here in the north rarely grows more than 15 feet to 20 feet high. It is an inhabitant of the southern States from West Virginia to southern Illinois, northern Florida, and eastern Texas. It grows at low altitudes, and does not appear to ascend to the slopes of the high Appalachian mountains, although the *Halesia* of those mountain forests was long considered identical with the lowland tree. The *Halesia* of the high slopes, however, is a tree often 80 feet or 90 feet high, with a trunk 3 feet in diameter, sometimes free of branches for a distance of 60 feet from the ground. It is apparently only in recent years that this mountain tree has been introduced into cultivation. The mountain tree which has lately been distinguished here as *var. monticola* grows as a tree from the time the seed germinates and the seedlings show no variation of habit. Young trees are clean stemmed with short branches which form a narrow pyramidal head. The leaves are of rather different shape and less hairy than those of the lowland tree; the flowers are fully a third larger and the fruit is nearly twice as large. Trees less than 10 feet high produce flowers and fruit freely. There is now every reason to believe that the mountain *Halesia* will prove one of the handsomest flowering trees of large size which it is possible to cultivate in this climate. Its tall trunk and narrow head suggest that it may prove a good street and roadside tree.—*Arnold Arboretum Bulletin*.

Hardy Heaths.—This is a very large family, but they are exceedingly beautiful and interesting to fill suitable positions in the rock garden or to form broad edgings round masses of shrubs. If a good selection is planted, some may be had in flower nearly all the year. Sandy soil seems to suit them best.—E. H.

PLANTS AND FLOWERS.

ROSES.

PRUNING CLIMBING ROSES IN COLD-HOUSE.

Will someone kindly tell me the proper time for cutting back and pruning Roses the roots of which are outside? The house is kept rather cold. I grow *Maréchal Niel*, *Niphetos*, and *Mrs. W. J. Grant*. By-the-by, the foliage of these Roses invariably gets very black and dirty after, say, June, in spite of fumigating and syringing, which I find spoil pot plants, such as *Zonal Pelargoniums*, below them.—*BRENTWOOD*.

[The best time to prune such varieties as you mention is about June—after flowering is over—when it is advisable to cut away any old wood that has apparently done its work. This will cause the plant to throw up plenty of young growths for next season's flowering, provided the roots are in rich soil, or are supplied with nourishment from the surface. The production of these young rods will be encouraged by keeping the house rather close and supplying plenty of moisture during early summer, gradually hardening them off in late summer and autumn by giving more air. Any further pruning that may be necessary should not be done too early or new growths will be forced and will probably be nipped by any severe frosts that happen to come. The beginning of February is about the best time to cut in the lateral growths, etc. To encourage early flowering every bit of sun heat should be shut in during February and March.

The dirty appearance of the leaves after June is probably caused by the presence of aphids, and it is only possible to get rid of the nuisance by spraying with an insecticide. Much of the dirty foliage would be removed if the older wood were pruned away after flowering, as recommended. It is most difficult to grow Roses successfully indoors when other plants, such as *Pelargoniums*, have to be placed in the same house, for Roses need special treatment which will not suit other subjects.]

NOTES AND REPLIES.

The Macartney Rose (*Rosa bracteata*).—In the autumn of 1893 I procured a plant and placed it at the foot of one of the pillars of a pergola. That winter the mercury showed 20 degs. of frost on two consecutive nights, but the plant was unharmed and threw out shoots 5 feet in length the next summer. The next winter was the severe one of 1894-5, when for many weeks in the early part of the latter year the ground remained frost-bound. The Rose was absolutely unprotected, but with the return of more genial weather it burst into fresh growth and subsequently flowered well. Seeing that this Rose had no wall-protection it may be claimed to have successfully withstood a tolerably trying ordeal. However, it may not be sufficiently hardy to warrant its being recommended for trial in any exceptionally cold district, even if given wall-protection. It is largely grown in the south-west, where many fine specimens exist. One of its chief charms lies in the length of its blossoming season. It rarely commences to bloom before the end of June or beginning of July, but from that time until November it continues to produce its single white blossoms. The individual flowers remain attractive for about two days, and are produced in rapid succession, good plants often carrying from four to five dozen expanded blooms at the same time. In comparison with Roses, whose flowering season is short-lived, this number may appear insignificant, but it must be remem-

bered that this average is often kept up for fifteen weeks or more. Its dark, glossy foliage is practically evergreen.—*WYNDHAM FITZHERBERT*.

Rose Coronation.—Many of the Roses to which the National Rose Society has awarded its Gold medal fail to prove worthy of this distinction, but in the H.P. *Rose Coronation* we have a noble addition to the Gold medal Roses. It is one of the largest Roses yet raised, but is so well formed that there is not the slightest suggestion of coarseness about it as is so often the case with very large blooms. The flower is very solid, the firm, thick petals enabling it to open perfectly in the dampest weather. Its form is perfect. The colour is lovely, the bright shrimp-pink of the young flowers fading to a soft silvery pink as they expand. The wood is extra stout, the plants sending up great limbs upon the top of which the flowers are borne quite erect. This Rose will also be useful in the garden, and may be grown in the form of a pillar or against a wall or fence.—*EGLANTINE*.

Rose Mrs. Wakefield Christie Miller.—There are many Roses now in cultivation which flower right into the winter, but there are few that can surpass *Mrs. W. Christie Miller* in this respect. My plants have been in flower right from June until now (December 10th), and it is the most effective variety I have had in bloom during November and December. The buds are of a very rich deep rose, fading a trifle as the flowers expand, when the soft pearly-pink on the inner side of the petals is revealed. The form could hardly be called ideal, as the petals are very short and ragged at the edges, but the blooms are of good size and fairly substantial, the curious overlapping and incurving style of the petals causing them to hold together for a very long time. Many present-day Roses are extremely fleeting because of their thinness, while most of the more solid varieties have the unfortunate habit of hanging their heads. In this Rose we have one which holds its flowers perfectly erect on good, firm stems, thus showing them to the best advantage. The growth and habit of this Rose, too, leave nothing to be desired, each of the shoots producing a succession of fine flowers. No weather seems to harm the blooms, the substantial petals withstanding quite severe frosts. I have not yet seen any signs of either mildew or black-spot on this variety.—*EGLANTINE*.

Rose Farben Konigin.—This is one of the finest Roses I have seen this autumn, and it is strange it is not more widely grown. The name, which literally means Queen of colours, is very apt indeed, for the colour of the blossoms is very distinct. The buds and young flowers are bright red, the colour of the older blossoms changing to clear pink with deep pink in the centre. The blooms are showy right from the bud stage until the petals drop, the colour particularly during the autumn being very bright. *Farben Konigin* is a vigorous grower of the *La France* type. Not only is the habit very free, but the flowers are produced in abundance throughout the season. For grouping, *Rose Farben Konigin* has few equals. A valuable characteristic of this Rose is its sweet scent.—*EGLANTINE*.

Climbing Rose Lady Godiva.—Of several charming flesh-pink sports from *Dorothy Perkins*, still one of the most popular of the *Wichuraiana* climbers, it may be said that they are much alike. *Lady Godiva*, *Dorothy Dennison*, and *Christian Curle* are all so near each other that one may well grow one only. I grow the one exhibited at the Temple Show of 1906 as *Lady Godiva*, and every year it grows in my estimation. In the garden it is lovely, while its delightful flesh-pink flowers are very useful for cutting for the house.—*SCORCH ROSE*.

INDOOR PLANTS.

RHODODENDRON GRIFFITHIANUM (SYN. R. AUCKLANDI) AND ITS HYBRIDS.

RHODODENDRON GRIFFITHIANUM is one of the finest members of the family, but being tender, and requiring a good-sized structure for its development, it is uncommon. Though unsuited for outdoor culture everywhere, some of the several hybrids raised from it are quite hardy and valuable from their distinct character. Such an one is

PINK PEARL, of which *R. Griffithianum* is one of the parents. The flowers of this, which are borne in somewhat loose

clear rose, which latter is almost crimson when in the bud state. In all of these the flowers are shallow and the trusses loose, as in the typical *R. Griffithianum*. There is undoubtedly a great future before the members of this group, but up to the present they are scarcely to be obtained from nurseries.

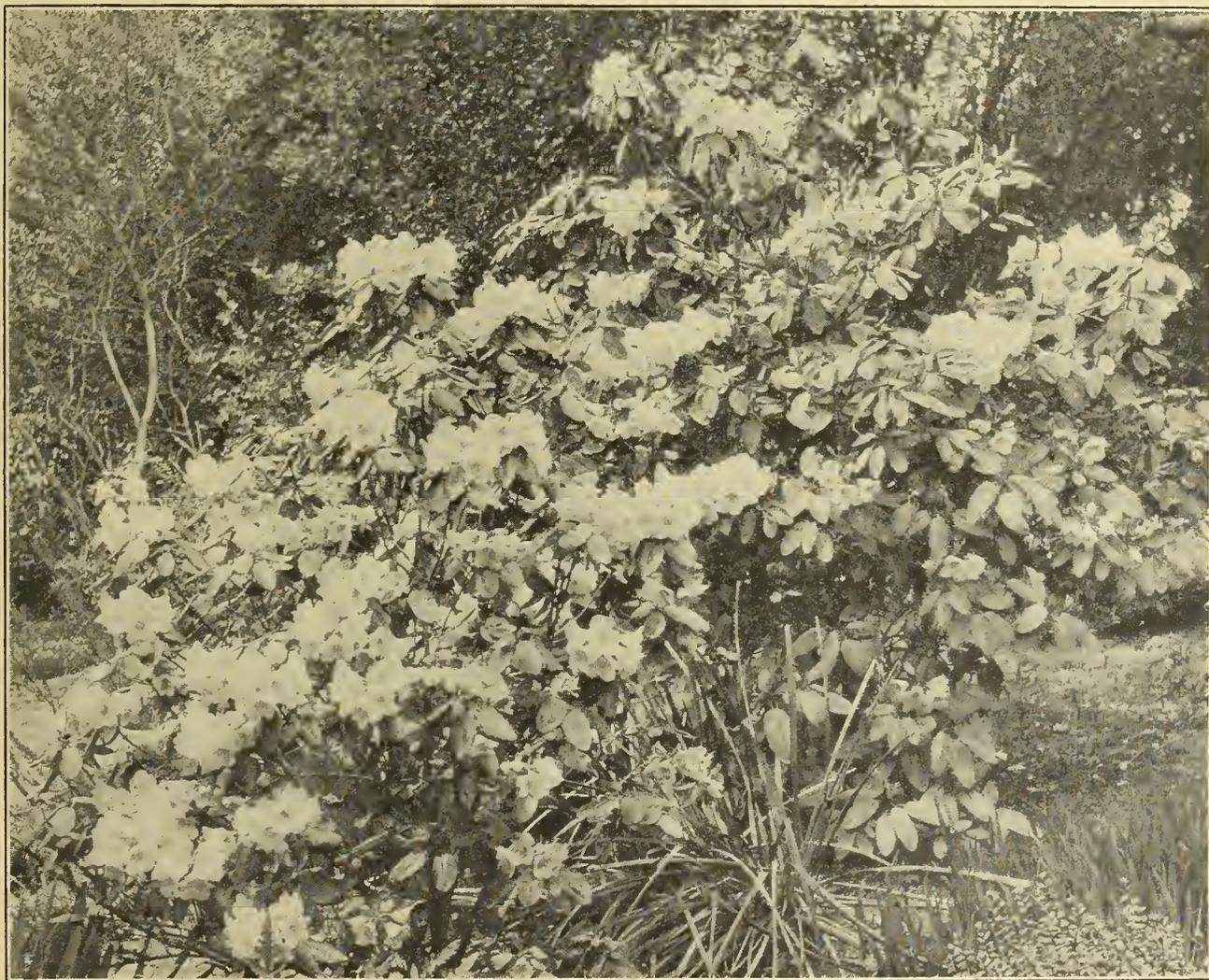
R. MANGLESII was raised by Messrs. Veitch and Son between *R. Griffithianum* and a garden form known as *album grandiflorum*. It is a very pretty variety, whose saucer-shaped blooms are pure white, except a few reddish spots on the inside.

R. LODERI was raised at Leonardslee between *R. Griffithianum* and *R. Fortunei*. This, in its large leaves and flowers, bears

able whether it is wise to allow them to remain too long in the boxes before potting them. As a rule, far too many cuttings are placed in one box at first, with the result that crowding results. Where plants are given a fair amount of room in boxes, one can begin to cut them down in spring and strike again in the warmth of a propagating bed. I find that a shelf near the greenhouse roof is the best place, as there the plants do not become unduly drawn.—WOODBASTWICK.

LILIUMS.

THE best of the bulbs of *L. lancifolium* *Krätzeri* and *L. l. rubrum*, which last season were grown in pots for greenhouse decoration and other purposes, are now in fit condition for shaking out and repotting.



Rhododendron Griffithianum in Mrs. Chambers' garden at Haslemere.

trusses, are individually about 4 inches across, and of a delightful shade of clear rose-pink, with but a few small brownish spots upon the upper segments. This was raised and distributed by Messrs. John Waterer and Sons, of Bagshot, and was first shown by them in the spring of 1887, when it was given an award of merit by the Royal Horticultural Society. Three years later this was increased to a first-class certificate.

R. KEWENSE.—A beautiful series of hybrids between *R. Griffithianum* and *R. Hookeri* was raised at Kew, and the different members have proved to be perfectly hardy there. To this group the collective name of *Kewense* has been applied. In these different forms the flowers vary from pure white to a deep

a great general resemblance to *R. Griffithianum*. The blooms, however, are borne in bolder trusses and are pure white in colour, though in the buds there is a pinkish suffusion.

Their cultural requirements in no way differ from those of the other garden forms of hybrid *Rhododendrons*—that is to say, a fairly moist soil, containing at least a good proportion of vegetable matter, while if they can be planted so as to be partially sheltered from spring frosts so much the better, as *Kewense* at least is rather apt to start early. T.

Bedding plants in boxes.—A great number of bedding plants are now grown in boxes, but after Christmas, when the young plants begin to grow, it is question-

This is best done before new roots are emitted. The bulbs not deemed worth growing in pots again come in useful for planting in groups in the flower borders. These, now about to be potted, will flower in advance of the imported bulbs which will shortly be coming to hand. After having been potted they will, from want of room at the present moment, be placed on a vacant shelf in the fruit-room. As but little water is required until they start growing, their being placed here will not in any way prove objectionable or occasion inconvenience. Thoroughly clean pots are necessary, which should be well drained. Good fibrous loam in the proportion of two-thirds with one-third leaf-mould with a liberal quantity of coarse silver sand is the compost employed.

When the leaf-mould is in a very decayed condition a small quantity of spent Mushroom dung is added. A little sand is placed at the base of each bulb to encourage early rooting, the bulbs also being kept low enough down in the pots to allow of a top-dressing of the same kind of compost being added when growth is in full vigour. When the bulbs are well rooted and growth begins to push up they will be removed to a cool greenhouse. New bulbs as soon as received will be potted in the same kind of compost and placed for a time in the fruit-room with the others and eventually in a pit. G. P. K.

Shrubs for forcing.—Where shrubs intended for forcing are not already established in pots they should be potted directly the leaves fall. If this is done and the pots plunged up to the rims in leaves or some protective material the plants will, if carefully watered, become established before it is necessary to take them indoors. It will be found that the more thoroughly the plants are established before they are subjected to forcing so much the longer will the flowers last. This applies more especially to shrubs with a limited number of fibrous roots, such as the Almonds, Pyrus, etc., than it does to members of the Ericaceæ, Azaleas for instance, as their hair-like roots are so numerous and of such an interlacing nature that each plant carries a large ball of earth. The chief difficulty is to get them into a pot of moderate dimensions without unduly distressing the roots. Another point of importance in the forcing of shrubs, and, indeed, plants of all kinds, is that they should be gradually inured to a higher temperature instead of being introduced all at once into a warm structure. It is very essential, too, that after forcing has commenced they are at no time allowed to suffer from want of water.—W. T.

Lindenbergia grandiflora.—Introduced somewhere about the middle of the last century, this would appear to have been lost to cultivation, or nearly so, till a dozen years ago, or thereabouts. Since then it has cropped up here and there, but at the same time it is far from common. It was within the last three or four years given an award of merit by the Royal Horticultural Society. This Lindenbergia is a somewhat straggling sub-scandent herb, that needs to be stopped freely when young in order to ensure a bushy specimen. The bright-yellow flowers suggest those of a large form of Musk, and being borne for some distance along the shoots they make a goodly show. A succession is kept up for some time. Cuttings can be readily struck during the spring, while the old plants may be shortened back and grown on a second season. Good examples may be had from 18 inches to 4 feet in height.

Cinerarias.—The earliest plants are developing their flower-heads, and are afforded plenty of stimulants. A number of the more forward specimens has been placed in a warm house, where they will bloom very early.—F. W. GALLOP.

Dracæna Goldieana.—This is quite distinct from all the other members of a numerous family. Its stem is erect, and the foliage stands out almost at right angles, its mottled leaves being banded with green and grey bars. The reverse of the young foliage and the tip of the stem are of an attractive reddish hue, and well-grown pieces are useful in many ways. *D. Goldieana* can be grown in a warm greenhouse; but the temperature of the stove is more suited to it.

Canterbury Bells in pots.—One may have quite a brilliant show of bloom in the spring in a cool-house by potting up now Canterbury Bells from seed sown last May. I find if they are potted up in the late autumn into 5-inch or 6-inch pots and placed under glass—a cold-frame will answer the purpose for a couple or three months—and afterwards brought into the house they will give a deal of pleasure at a very trifling cost.—TOWNSMAN.

GARDEN FOOD.

NOTES AND REPLIES.

The Ribston Pippin.—I have just had a good sample of this from Mr. Thorburn, of Upton Cross, Chester, who grows it very well as a standard; and why should not many do the same with this grand old Apple? The enemies of it most visible about my district are the American blight and canker, which with our present knowledge we ought to be able to abolish if we begin with young healthy trees. Old warty trees are better on the fire. Canker can be kept away by washing the healthy young trees with the usual mixture, and no trees should be sent out that are not absolutely free from American blight. A nursery in which the trees are infected with American blight should be avoided altogether. The Ribston is the best Apple we have for eating and keeping, and, as I maintain, for cooking. The thing is to get it into good health and fertility.—W.

Baked Potatoes.—Potatoes for baking are very poor this year. My own, which I usually always bake with pleasure, have turned out so bad that I wrote to Messrs. Judd and Malin, the well-known Jermyn-street salesmen, to whom I go when I want a good baking potato. They wrote me as follows, and offer a dismal prospect for the winter:—

“We have a few British Queen that cook really well, but find the utmost difficulty in getting any quantity of really good stuff. The late frost and second growth have spoilt the quality of the Lincolns. The Dunbars are of large size, but diseased, and of inferior quality. It is possible that, as there is an idea current that Potatoes will reach a high price, farmers may be holding anything really good.”

Brussels Sprouts, right way with.—I hope that no reader will go too far in trying to use nearly every leaf of her Brussels Sprouts. Some cooks merely remove those leaves which are actually diseased, and, after cleansing the Sprouts in salted water, proceed to boil them to death and to serve them discoloured and sodden like baby Cabbages that have been racketing about all night. The proper way is to trim them until only the firm and hard part remains, which should be like a handsome, closely-grown, miniature Cabbage, about the size of a walnut. They must be put into salted boiling water, or, better still, into a perforated steamer over boiling water, and cooked until, without losing their firmness, they have become tender. Half-an-hour of boiling or steaming will generally be enough. If they are to be eaten with meat and gravy they will be simply drained dry and served hot. If, however, they are required to accompany some rather dry meat, or to be eaten as a separate dish, you must put them back into the saucepan, having first melted therein 1 oz. of butter to every pound of Sprouts. The butter must be very hot. The pan is kept by the side of the fire or over the smallest gas-jet and is shaken now and then during six or seven minutes. The saucepan remains uncovered from the beginning to the end of these operations, even during the first boiling. If you should boil the Sprouts in a closed saucepan they would not keep their pleasant colour. If Brussels Sprouts are lifted out of the pan or steamer before they are quite tender, and are dried with a cloth and dusted over with salted and peppered flour, they can be fried. Each Sprout must be dipped in a mixture of egg and bread-crumbs till it is coated all over, and the frying must be true frying in boiling

fat at least 2 inches deep. As always with fried tit-bits, the Sprouts must be drained on paper and not a moment must be wasted in piling them on a very hot dish and sending them straight to the table.—*Home Cookery in War Time.*

Winter salads.—I had given up salads with the going of the various Lettuces, and now (end of November) enjoyed an excellent one of another sort, a mixture of a crisp Celery and Newtown Pippin Apple, both cut into small bits, with a few small pieces of Beetroot. Another excellent winter salad is of Lamb's Lettuce and Celery. Lamb's Lettuce should be more often grown.—W.

Red Cabbage with Apples.—Take a medium-sized Red Cabbage. Clean, cut into quarters, cut across into very thin strips. Cut up two medium-sized crisp Apples. Have ready a thick saucepan, preferably of French earthenware, put in a tablespoonful of butter or dripping (cold), add Cabbage and Apples, put on the stove, and let it cook very gently until Cabbage is tender. No water is needed if cooked slowly. A little Lemon juice, which many think an improvement, may be added if liked.

Standard Pear-trees.—In many gardens the fruit from these is of much higher flavour than from walls. In my own garden I have standards 16 feet high of Beurré Hardy and Louise Bonne of Jersey. This year the crop was good and extra clean, of good size, and of the best flavour. From a tree of Doyenne du Comice that had been grafted on Beurré Diel the fruit was delicious. I have now Glou Moreau from a standard tree, each fruit weighing about 6 oz., and of the best flavour and equal to those from wall trees. This year none of the fruit cracked. These trees are on the Pear stock, on which they thrive far better than on the Quince.—WEST SURREY.

Storing Apples.—I am convinced more fruit is spoilt from over dryness than from damp. Placing the fruit on wooden shelves is very unwise where the air is dry. I should prefer to put them on the floor and cover them. Shelves answer in sheds, cellars, etc., where the air is moist. I prefer to cover them against frost to giving artificial heat. Storing in boxes, barrels, etc., has much to recommend it. “W. S.” mentions having seen them stored in this way by me many years ago, when at Forde Abbey. Since I have lived in Surrey I have used nothing else, and have had a continued supply from end of July till mid-summer, finishing with Sturmer Pippin. I have nothing but an iron shed to keep them in at any time, and use no artificial heat in the severest weather. “W. S.” does well to point out the advantage of late gathering and using paper instead of straw, etc.—J. CROOK.

Food in France.—The poorer middle classes, the aristocracy which has not gilded its coat of arms with plebeian gold, and a large proportion of the working classes have reduced their kitchen expenses very thoroughly since the war began. Meat once a day is the rule, not the exception, and simplicity is a marked feature of every meal. The early breakfast of tea or coffee with rolls and butter (such excellent butter) is followed by a mid-day lunch of three courses—a dish of Rice or macaroni, a meat and vegetable course, cheese and fruit. In the evening comes a good vegetable soup, a dish of eggs, vegetables or one of the many varieties of macaroni flavoured with an appetising sauce, and then a compôte of cooked fruit.—*The Times.*

A delicious oatmeal gruel for children and grown-ups.—Take half milk and half water the quantity required. When boiling, sprinkle in gradually enough medium Scotch oatmeal to make a gruel, not too thick. Add a few Prunes and Raisins. Let boil until the oatmeal is done (about three-quarters of an hour); just before serving add a few blanched Almonds. One or two sticks of Cinnamon put in with the Prunes and Raisins improve it if Cinnamon flavour is liked.—H. O.

Cooking Celériac.—Will some reader give a few hints as to the best ways of cooking Celériac and the means of preventing it turning a dark colour in the process?—A GARDENING COOK.

OUTDOOR PLANTS.

A GARDEN PORCH.

This is my garden porch. It was designed by Sir Ernest George in the simplest way. The pillars and walls are of sandstone and the roof is of old Horsham stone. Having built it I threw some Houseleeks on top, where they all seem happy enough without attention of any kind.

W.

SOME STORM-PROOF PLANTS.

It is surprising the number of plants there are—even at the end of October—which have braved the cold nights and are still giving touches of brilliant colour. One of the brightest corners we have is occupied by *Salvia splendens*, with a background of berried Hollies and Willow-leaved Pear. The plants were raised from seeds sown in April and grown on steadily and planted in their present position at the middle of June. The display of colour during these autumn days shows the great value of this *Salvia* for the outdoor garden.

4 inches across, and emitting a delightful perfume towards the close of the day. This fine dwarf Evening Primrose should be in every garden, however small, for there is no more effective and valuable hardy plant grown. It is also well suited for the alpine garden.

FUCHSIAS, both hardy and tender, are beautiful now, and appear to enjoy the moist conditions prevailing, producing in abundance their graceful drooping sprays of flowers in various colours. These look happier now than at any period of the year, with one exception, and that is *F. fulgens*, which has suddenly ceased to bloom. The

SHAMROCK PEA (*Parochetus communis*), far too rarely seen, is now flowering more freely than has hitherto been the case this year. I have observed this in former seasons, the flowers being produced in greater profusion as the season advances, and so continuing until a severe frost lays it low. The small blue, Pea-shaped flowers surmounting the trailing, clover-like foliage are always admired. Unfortunately slugs are very fond of this plant, and a little protection is necessary for a

also propagated from cuttings inserted during late summer. Generally it is hardy here. The Japanese Windflower, in its many varieties, has been flowering profusely for a long time, and is still attractive, especially the fine pink variety, Queen Charlotte. The Starworts, which have been so much improved of late, are always a feature at this season of the year. Planted thinly among autumn-tinted shrubs, their beauty is much enhanced, while their value as cut flowers can scarcely be over-estimated. Everlasting Peas are still quite gay and valuable for cutting. Cactus Dahlias have been splendid and are still covered with flowers. The outdoor Chrysanthemums are making a gorgeous display and give promise of a long succession of bloom.

CYPERUS LONGUS and *Phragmitis communis* by the waterside are still bearing their attractive and uncommon flower-spikes. The Pampas Grasses, of which the Sunningdale variety, *Gynerium Rendatleri*, *G. argenteum pumilum*, and the true *G. argenteum* are a few of the best, are flowering freely. In irregular groups among old Vine-clad Apple trees, they are very attractive. Astonishing, too, is the way they have withstood the storms—especially the first, which is a magnificent variety. There is a vast difference in the beauty of these stately plants when grouped. The Sunflower family is valuable. Rising from among autumn-tinted Azaleas or thinly-disposed near groups of Starworts they have a pretty autumn effect. Heliotropes are still flowering freely on a sheltered border, but their perfume is not so apparent as earlier in the season. There are also many kinds of annuals the flowers of which, with a glimpse of sunshine, open as in summer. Especially beautiful are the Pimpernels, Swan River Daisy, Violet Cress, Snapdragon, etc., while *Tropaeolum tuberosum*, with its curious orange-scarlet, trumpet-like flowers, is at the height of its beauty.

Many shrubs and climbers could also be mentioned which are extremely beautiful, and help to increase the interest of outside gardening during these late autumn days.

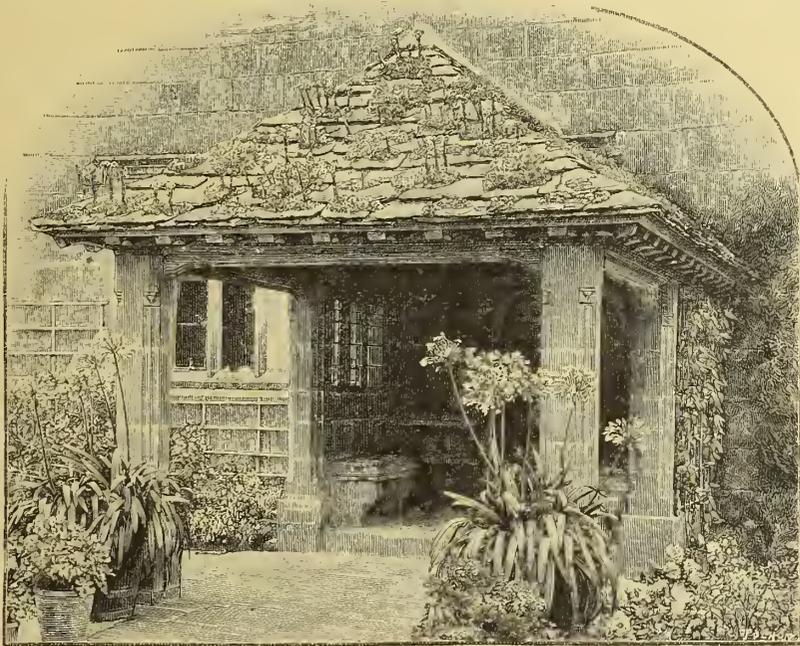
E. MARKHAM.

Sussex.

TUFTED PANSIES: EARLY PROPAGATION.

With much experience to the contrary I cannot allow the recommendations of "Woodview" (p. 639) to go unchallenged. One passage in the note referred to in particular calls for remark. It runs thus: "I find the greatest success has attended the propagation of these plants quite late in the year, and cuttings inserted in late October and throughout November have invariably rooted freely." I do not doubt it, but the right sort of cuttings would have rooted more freely, certainly much more quickly, had the cuttings been inserted two months earlier. Is not "quite late in the year" a contradiction of "early propagation"? Can "Woodview" aver that a cutting of Tufted Pansy has more vitality in "late October and throughout November"—that vitality and youthful energy which, in conjunction with favourable conditions, are so largely responsible for a quick and successful rooting—than it would have earlier in the season? I think not, and if not then his recommendation is faulty and his "greatest success" must be relegated to second or even third place.

Rightly treated, few hardy subjects are so useful as the Tufted Pansy. Perfect soil carpeters, simple cultural needs, early, free, and continuous flowering are some of the good points, but method and intelligence are required to bring them into being



Garden porch, roof covered with Houseleeks.

Plants that apparently enjoy the autumn days are the Cardinal Lobelias. So intense is the colour of these handsome plants when seen in good-sized groups that one is attracted by them from a considerable distance. These revel in plenty of moisture during the growing season, and the spikes of crimson flowers are produced with the greatest profusion, especially so in the variety Firefly, which I consider the best. Its more branching habit of growth and greater production of crowns facilitate its extended use.

GAZANIA SPLENDENS is as gay as in summer, its large, single, deep-yellow, Marigold-like flowers quickly expanding on the approach of an hour's sunshine. These Treasure flowers, with their large and attractive dark centres, are occasionally referred to as being coarse, but used with care they are very beautiful in the autumn garden. Easily propagated from cuttings put into boxes during late summer, and placed in a frame kept close for a time, after which it is only necessary to keep the frost from them, *Oenothera macrocarpa* is well furnished with its large yellow blossoms, each

time after planting, unless used in large vases, where it forms a most graceful draping. It is also very pretty falling over a low retaining wall. Cuttings inserted in sandy soil and kept close for a time root readily. *Felicia abyssinica* and *Bellis cœrulescens* are two charming little plants with pale mauve, Daisy-like flowers, which have never ceased blooming since spring. Both are still very pretty and ideal subjects for alpine gardens. The self-sown seeds of the *Bellis* germinate freely and scores of seedlings are available.

THE BLUE BINDWEED (*Convolvulus mauritanicus*), of which there is an excellent illustration in GARDENING ILLUSTRATED, October 23rd (p. 639), has been flowering unceasingly the whole summer and autumn; even now, with a little sunshine, it is bespangled with its fascinating lavender-blue flowers. As an edging it is delightful, while falling over the ledge of low walls it leaves nothing to be desired. In this position, and given a favourable season, it ripens seed freely, which, if sown during the following spring, forms nice little plants for summer use. It is

Too frequently the great value of early flowering of which these plants are capable is either overlooked or unknown, and "Woodview," who apparently, with many others, has not appreciated its importance in the garden, places—all unwittingly it may be—a stumbling-block in the way of progress by advising propagation in October and November. For many years, in order to obtain the earliest possible flowering from these plants, I made it a practice to plant my specimen beds during the first week of October, before, indeed, "Woodview" would have put in a single cutting. At that time the plants were sturdy little bushes of several shoots each, and were made possible in the following manner:—

With the greater flush of summer flower beauty past, the plants, so many as were required, were cut close back, the earth loosened about them, a mulch of rich soil given, finer material being sprinkled into the centre of each plant. From that time, failing rain, the plants were watered frequently, the result being that within a month the centre of each was bristling with new life. Then, as a direct result of the combined watering and mulching, these new growths rooted freely, so that at the end of a month or so it was possible to remove them by a sharp upward pull as rooted examples ready for transplanting. By taking the larger shoots first, room was afforded the remainder, and by repetition a maximum production was obtained. Thus, without the making of a single cutting and at a minimum of cost I have raised many thousands of plants and of a type—every one being of basal growth—that cannot be surpassed. The value of these basal shoots lies in the fact that they have latent eyes or buds, which, presently springing into being, give rise to the tufted character for which these Pansies are renowned. The system is good and sound for all, from the grower of thousands to the amateur for whom a few dozens are ample.

Transplanted to a bed of sandy soil these young plants soon pushed away into growth, when they were pinched to induce them to break, which they did freely. In this way by planting time in early October sturdy tufts resulted, and before the end of the year these same plants were bristling with shoots over a 6-inch area, their progress often a matter for surprise. I have rooted many thousands of ordinarily-made cuttings, and while possessing the advantages of the knowledge of both systems, am bound to say that for good results as well as labour saving that I have endeavoured to describe is by far the better. What is of infinite importance to the gardener is the early flowering of these October-planted examples, and by March—even occasionally while snow remained—I have had them bristling with buds and preparing to flower. This, indeed, is one of the greatest advantages of early propagation and planting, though with it should be deservedly associated the hold such plants get of the soil and which causes them to endure in times of drought. Those who still are content with the old system of cuttings and late autumn propagation, or, worse still, are satisfied with the results which divided examples afford, have yet to see these Tufted Pansies at their best, either as carpeters or when, for weeks or months on end, they are covered with flowers.

E. H. JENKINS.

NOTES AND REPLIES.

A smother fire.—Will you be good enough to tell me how to make a smother fire to burn garden refuse and which will burn slowly for days without causing a great amount of smoke and flame?—R. H.

[The first thing to be done is to estab-

lish a good body of fire with the aid of old Pea-sticks, branches and dead wood blown from trees during windy weather, or, failing this, faggot wood. If you have any old tree-stumps with roots attached, place these in the centre and build the fire around them. When the fire has been well started, and a good body of fire obtained, cover it over with the roughest of the material, such as Cabbage stumps, prunings, and the like. Put on a good thick layer of this, and then cover the whole mass with the finer material, such as weeds, vegetable refuse, sweepings, etc. If you have any soil infested with spores of any kind of fungus, such as may have been used for Tomato-growing, for instance, or which contains eel-worms or other noxious insects, this will afford you an opportunity for sterilising the same, as by casting it over the heap both fungus spores and insects will in due course be destroyed. After the fire-heap or smother has once been fairly set going care must be taken to see that it does not burn through, and keep a heap of the finer particles ready to hand to cast over any part where this is likely to occur, and before there is an outburst of flame. Unless the outer covering of the heap is very wet and heavy no draught-hole should be required. If, however, such is necessary it should be opened on the side from which the wind at the time may be blowing. With the necessary quantity of refuse at hand to feed the fire with, and by keeping the flames under control in the manner described, such a fire can be kept going for weeks, and without giving off a great deal of smoke. It would require looking to first thing in the morning, again about the middle of the day, and to be well banked up or smothered over at dusk, as such fires always burn with greater fierceness and rapidity during the hours of darkness. It would be well to ascertain first if the order with regard to the obscuring of lights is in force in your locality before starting a fire of this description, as it would be impossible to guarantee its not burning through at night, however careful you may be. If such did happen you would, unless you make sure beforehand, get into trouble.]

Protecting Tree or Moutan Pæonies.

While one would not advocate coddling such noble plants as the Tree or Moutan Pæonies, there are many places where the full measure of their beauty is not attained without some protection. It is in spring when the plants are growing, and have formed, or are forming, their buds, that the crisis comes. Then, too frequently, a sudden frost comes, and the hopes of a season are blighted, the buds destroyed, and the foliage badly injured. In places subject to such calamities precautions are necessary, and these often take the form of mats supported round and over the plants. Sometimes these are left on too long and the leaves and buds are rendered too tender, and suffer from less frost than should harm them. Branches of Laurels or Spruce set in the ground round the plants, and allowing of light and air, yet checking cold winds, are very beneficial, and save the plants from injury.—Ess.

Tropæolum tuberosum.—A recent note on this plant reminds one of the question as to whether there are several stocks, some more free flowering than others. At one time I was inclined to doubt if there were several stocks, some free flowering and others not. I have come to the conclusion that *T. tuberosum* does vary, and that it is necessary to secure tubers of a good flowering stock. I have known gardens in which this plant has been culti-

vated for several years without its flowering at all satisfactorily. In some years it did a little better than in others, but in other seasons it failed to flower at all. A stock secured from a garden where it flowered annually and freely gave splendid results. In the course of some correspondence regarding this point I received a letter from a correspondent who had been cultivating tubers for sale, and who had found it desirable to select bulbs from those which flowered most satisfactorily. This proved that the question of non-flowering is not one of soil or climate.—S. ARNOTT.

The Winter Heliotrope. (*Petasites fragrans*).—In the interesting lists of plants in bloom at this time, given weekly by "E. M.," mention is made of the Winter Heliotrope. I think that both this name and its newer title of *Petasites fragrans* are apt to be misleading to those who may not be acquainted with the plant. The older name of *Tussilago fragrans* would probably convey an idea of its general undesirability to many. In wild gardening it may have some value, but let the plant be introduced into the garden, and in the course of a few years the question will be how to get rid of it. The Winter Heliotrope is as difficult to eradicate as it is easy to establish—rivalling in this respect the *Convolvulus* or Bishop-weed. Apart from the period at which it blooms, and the odour of its flowers, which, to some extent, resembles that of Heliotrope, it is of little value. Its foliage is not ornamental, and the flowers are dingy and insignificant.—W. McG.

Polygonum vacinifolium.—Your note regarding the propagation of *Polygonum vacinifolium* by layers, on page 718, will be useful to many, as I know a number of people who have been unsuccessful in propagation by cuttings. It is perhaps the most attractive of all the dwarf *Polygonums*. It greatly dislikes being planted in a draughty place, and some people find it difficult to establish. It evidently likes a rather moist, cool position.—S. ARNOTT.

Sundials.—It does not follow that because the sundial has been superseded in popular economics it is therefore useless. We can remember one striking occasion on which a household found itself in considerable difficulties. The clocks, for one reason or another, were out of action, being cleaned or repaired or not having been wound up, and the family of four was dependent on its watches, or rather on three of its watches, for the fourth was disabled like the clocks. For some extraordinary reason all three watches chose the same day for breaking something in their insides. The family agreed that it must be something in the weather; but, whatever it was, there were several people with a very vague notion of what was o'clock. There were old silver watches that could be dug out and set going, but that did not meet the case until they could be given a fair start, and a solemn expedition had to be made in search of the time. Of course there was no sundial in the garden. If there had been, and some sun, the family, with "Whitaker's Almanack" in its hands, could have settled its present place in time as near as need be. For though there is some divergence between clock time and sun time, it is never very great (about sixteen minutes is the greatest discrepancy in the whole year); on four days clock time and sun time agree, and "Whitaker's Almanack," and doubtless other almanacks, enable a dial-reader to adjust his reading to the accepted standard in a moment. It is obvious that this might be of considerable importance to people living miles from anywhere who have occasional trains to catch.—Field.

VEGETABLES.

HOT-BEDS.

ADVANTAGE will be taken of the next spell of hard weather to get a good-sized hot-bed made up. This will be sufficiently large to hold four two-light frames. The bed will, therefore, be built both long enough and wide enough to leave a margin all round some 3 feet in width, both for the purpose of walking upon and to allow of linings being built round the frames when the heat of the bed declines. The bed will be constructed in a sheltered position open to the south, so that the most can be made of solar heat. The materials will consist of three parts freshly-fallen tree leaves and the remaining part of stable manure. Time and labour will not permit of all being mixed intimately and turned beforehand, as usual. It is not anticipated that this will prove any serious drawback, as the leaves are moist, therefore fermentation will speedily take place. To ensure the heat of the bed being lasting, and as a good supply of material is at command, it will be made about 5 feet in depth. Firm treading of the materials as the making of the bed proceeds is essential. To prevent inequalities on the surface as far as possible as the mass subsides, the leaves and manure will be evenly spread or placed in equal thicknesses all over the bed in the making. The corners and the outside of the bed will be of stable litter alone, which enables the bed being built more firmly and with substantial sides and ends, besides preventing the escape of heat. The whole is left to heat up before the frames are placed in position; in fact the surface is levelled and well trodden beforehand and bricks laid flat to carry the weight at all four corners of each frame. As opportunities offer, suitable compost for placing therein will be prepared. G. P. K.

THE PROTECTION OF CELERY.

It would be both instructive and interesting if cultivators would give their experience as to what extent protection to Celery is needed, or if at all. According to my experience the decay of Celery is more often than not due to other sources than frost. During a severe or prolonged frost a little protection is of great assistance, but the continual covering and uncovering of the rows which some people subject their Celery to cannot but be positively injurious. It is very annoying after trouble has been taken to have good Celery to find that at mid-winter the greater part has decayed. There is no doubt that the form of earthing which is adopted has much to do with early decay. By earthing too early the blanching is done much too soon; consequently, after a time decay commences, let protection from frost be ever so efficient. I have noticed in Celery that is over-protected that fermentation sets in through want of air and close confinement. Celery, however, to keep well must be well moulded up. A careful workman will see that this is efficiently done, the sides well sloped up and made fairly smooth, the soil being also well worked around the tops of each plant, which should, when earthing is finished, be exposed about 6 inches. Heavy coverings of litter or Bracken laid along the tops of the rows cannot but have an injurious effect, and late Celery will be in a worse condition at the turn of the day than even if left freely exposed. The best plan, if the weather should become unduly severe and there is no covering of snow, is to lay some dry litter or Bracken Fern along the sides of the rows and then

to shake a little of the very lightest and driest loosely along the top. If a heavy covering be put on and snow were to follow directly afterwards it would lie very close, and afterwards when a thaw set in it would become a wet and sodden mass, and the Celery would suffer accordingly. Damp is the worst enemy to Celery.

Whatever form of protection is used it must be so arranged that both light and air can have free access. Covering over with a cap by having two boards nailed together thus Δ has been frequently recommended. This season, if occasion should arise, I shall use a covering which builders place along the tops of walls for keeping out wet and frost. Instead of being of wood it is made of corrugated zinc. This being fixed so that the tops of the Celery are not bent over, there is no danger of either light or air being excluded. In time of severe frost with a covering of litter along the sides so as to facilitate digging up and a little laid over the opening I do not think there will be any fear of injury either from frost or damp. Celery that has been forced into a coarse growth by heavy applications of liquid manure and the too free use of artificial fertilisers will be the first to succumb. A.

Asparagus beds.—I should be glad of advice about my Asparagus beds. About how thickly should the stalks be allowed to run up, and should these be the strongest and earliest? After leaving a certain number, a mass of very small wiry ones came up all over the bed, making growth very thick, and weeding impossible. Should the berries be allowed to drop into the ground? On digging up an old bed, I found it to be a thick tangle of roots, and have made a new one. Do you think that the second old bed, probably in the same condition, should be replaced also?—F. M. G.

[The general rule after cutting ceases is to allow all growths which push up to develop. Previous to this all should be cut both large and small. What we suspect to be the matter with your beds is that a quantity of young crowns is overlying the original or legitimate occupants of the beds, this condition arising from neglecting to cut the tops away in autumn before the berries are dead-ripe. If the latter are allowed to drop on the beds countless seedlings appear in due course, and if left undisturbed the surface naturally becomes in time closely beset with thin wiry growths, which, owing to want of light and air, impede the development of the shoots that push up from the older crowns beneath them. Seedlings should, therefore, be ruthlessly suppressed, but if the precaution is taken not to let the seed fall to the ground none will then appear, while the weeding of the surface of the bed can be conveniently effected. As these seedlings are no doubt in complete possession of the bed in question, we advise you to form another new one with the intention of destroying the former as soon as the latter is ready for cutting from, which is in from two to three seasons after planting, or according to the age of the crowns employed for the purpose.]

Parsnips may be dug up now and the ground got ready for the early Cabbages or Cauliflowers. The roots must be kept from air or they will soon become tough. When a supply is required up to April the best way is to store a sufficient quantity in the ground, where they will keep fresh until then.

Two good Cabbage Lettuces.—About the middle of October, when looking over a trial of vegetables made with a view as to their value for July sowing, I was impressed with Ideal and Supreme Lettuces. These with others were sown at the end of July in the open. For autumn use they stood out above all others for their compact, hard, solid heads, the leaves of a pale green colour with a slight tinge of red on the tips. Supreme is the larger.—J. C. F. C.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM DECEMBER 16TH.—*Strawberry-tree*, *Jasminum nudiflorum*, *Laurustinus* (various), *Honeysuckle*, *Daphne Mezereum*, *D. Dauphini*, *Andromeda floribunda*, *Ivies*, *Erica alpina*, *E. mediterranea hybrida*, *E. carnea alba* and new hybrids, the *Cornish Heath*, *New Zealand Veronicas*, *Osmanthus ilicifolius*, *Polyanthus*, *Helleborus niger*, and *Winter Heliotrope*.

WORK OF THE WEEK.—A quantity of the Pasque-flower (*Anemone Pulsatilla*) having come to hand during the week a position was selected where the plants will be shaded by large Hollies for part of the day. The soil was not specially prepared as it was desired to grow the plants as hard as possible in order to compare them with those growing on rich ground, where we usually get from 50 blooms to 80 blooms on a single plant. A number of *Gentiana acaulis* has been lifted from the front of dwarf Rose beds, to which the plants formed an edging, and planted between the stones of a low retaining wall, a few being put at the top with a flat stone over their roots to keep them cool during dry spells. I find this way of growing this *Gentian* very satisfactory. A group of the Californian Poppy (*Romneya Coulteri*) has been planted, and a small heap of leaves or ashes will be put round the base of each plant as a protection from severe frosts. Several varieties of Torch Lilies have been put out near a large collection of established kinds, the large varieties being planted 2 feet apart and the small-growing ones at a less distance. These, for safety, should receive a little protection during severe weather, otherwise they are liable to get killed, especially if newly planted. A border about 15 yards long has been edged with *Epimedium sulphureum*. The plants had become very large, having occupied the same position for a number of years. They were parted up into medium-sized pieces and planted a foot apart. This fine edging plant requires plenty of space, as on strong soil it will grow from 18 inches to 2 feet in height. The leaves in winter turn a lovely bronze colour, and are useful for decoration indoors. The old leaves should be cut off the plants towards the end of March, otherwise the blooms, which commence to appear very early, will suffer, whereas if taken off before the flower-spikes develop all risk is avoided, the satiny-like leaves and yellow blossoms appearing together. A further batch of *Blue-eyed Mary* (*Omphalodes verna*) has been planted in the Grass bordering some steps, where it is expected to naturalise, as it has done in various other parts of the garden. Clearing by the waterside has been carried on during bad weather, and a large plantation of Red Willows, which are grown for tying, has been partly cut. These are sorted on wet days and tied into bundles of different sizes. E. M.

Sussex.

SOUTHERN COUNTIES.

Cyclamens.—These will soon be in full bloom. Their requirements can be met in a far more satisfactory way when they have a house given up entirely to them. A house of *Cyclamen* in full bloom always, by reason of there being such a wide range of colours among the flowers, commands admiration, and they are then far more effective than when stood amongst other flowering plants. Each plant now requires sufficient space so that it stands just clear of its neighbour, as crowding leads to attenuated leaf-stalks and flower-stems. As the individual flowers fade, the stem

should be pulled clean out with a jerk and not cut off, otherwise the portion of stem left will rot and cause mischief among the buds on the crown of the corm. Another reason for ridding the plants of the flower-stem directly the flowers fall is to prevent seed-bearing and its exhausting effects. When gathering the flowers the stems should always be pulled clean out from the base and not cut. Care now has to be exercised when watering not to pour water over the crowns of the corms, otherwise decay among the flower-buds will set in.

Calanthes. — To prolong the blooming period these have been placed in a house where a mean temperature of 55 degs. is maintained, and arranged among other plants in such a manner that the pots are partially hidden from view. The flower-spikes in all cases are satisfactory, and when fully developed will be quite up to the standard as regards length and in being well furnished with flowers. The hybrid variety, *Bella*, is now producing its robust racemes, which will form a good succession to *C. Veitchi* and *C. vestita* and its varieties later on.

Carnations. — The young stock raised from layers last autumn has now been shifted into 5-inch pots. The usual rule has been to let them remain in the pots into which they are put when lifted from the layering-frame, transferring them to 7-inch pots in January. To have done so on this occasion would have led to their becoming pot-bound, and, consequently, ruined before the final potting could have taken place. This double shifting has entailed a greater expenditure of labour, but the plants will benefit by it and eventually yield larger blooms. Some dozen different varieties are grown, but care is taken to see that there is a preponderance of that fine old variety *Princess of Wales*, as it is undoubtedly still one of if not the best. The plants have been arranged on an open stage overlying another stage covered with coke broken small, which, on account of its absorbent nature, keeps the atmosphere about the pots cool and to a certain extent moist also, which tends to prevent the soil in the pots from drying out too quickly. Until roots begin to work into the fresh compost watering has to be done with the greatest care. The house is kept quite cool, frost alone excluded, and abundance of air admitted on every favourable occasion. Two-year-old plants have made very satisfactory progress and are now ready for staking out. Slender Bamboo stakes are employed for this purpose, from five to six being used for each plant according to the necessities of the case.

Border Carnations. — It has been deemed necessary, owing to the abnormally wet weather of the past few weeks, to remove the plants from the cold pit in which they were placed when first potted to drier and more airy quarters in case leaf spot should set in. This step is of a temporary nature only, as the plants will be returned again to the cold pit as soon as more favourable weather prevails.

Herbaceous Calceolarias. — The most forward plants are ready for their final shift into 7-inch and 8-inch pots. In this size of pots the plants, with careful treatment, will make handsome specimens which, when in flower, come in useful in the early spring months. The compost used consists of two-thirds fibrous loam pulled to pieces by hand, one-third flaky leaf-mould, a small quantity of dried cow-dung and fine mortar rubble, a little soot, and a liberal quantity of coarse silver sand. Clean, well-drained pots are very essential, and the compost should be made moderately firm only. The repotting of

the successional batch as well as a number of plants of *C. Clibrani* will be deferred till after the turn of the year. The house in which all are accommodated is kept cool and moist, and aired according to outer climatic conditions both at the top and front. The watering of this class of *Calceolaria* has to be done with care, as an excess of or the withholding of moisture, when necessary, is fatal to success.

Early Peaches. — The early house may now be closed, but unless severe or cold weather should set in no fireheat is required for the first two or three weeks, as the temperature may fall as low as 40 degs. without giving the slightest occasion for alarm. Although heat is, with the foregoing reservations, unnecessary at starting, the raising of the temperature of the border with a good soaking of tepid water is imperative, and this and the closing of the house should be done simultaneously. Beyond damping the pathways nothing further in this direction is needed until the period mentioned above has expired, when with a slight heating of the hot-water pipes at night and by day also when requisite to ensure a temperature of 50 degs. to 55 degs. syringing of the trees may be commenced, *i.e.*, when the weather is fine and bright, but limiting the supply of atmospheric moisture to damping alone when it is dull. Air may be admitted when solar heat runs the mercury up to 65 degs., but it should be reduced and finally shut off as soon as a fall in the temperature begins to take place. As there is always an uncertainty about "fly" putting in an appearance on forced Peach-trees when in bloom if fumigation is neglected, it is always wise to vaporise both when the house is closed and before the trees come into flower. If properly carried out this will carry them safely over the flowering period.

Pot Vines. — With everything in readiness these can now be started with a day and night temperature of 50 degs. and 45 degs. respectively for the first fortnight, after which a rise of 5 degs. may be allowed. The canes, with their points brought down on a level with the pots to ensure a more even break of buds, need syringing with tepid water once a day in dull, and twice in bright, weather. To promote the requisite degree of humidity the paths, etc., need damping, when the weather is bright, daily, especially in the morning and when finally closing for the day. The soil about the roots requires to be well moistened at the outset with tepid water, but afterwards it must be applied only when it is required, which can only be ascertained either by actual examination of the soil or by the more practical method of rapping the sides of the pots.

Early Vinery. — This will now be cleaned and put in order ready for starting early in the New Year. The Vines, having been pruned some time since, they merely require to be relieved of loose bark, scrubbed, and dressed with sulphur made into a thin paste with the aid of hot water and soft soap after the house has been cleaned down. This is best applied with a sash-tool and should be well worked into the bark and round the spurs. Until the buds break, the rods are loosely suspended from the trellis with the points hanging downwards to equalise the flow of sap. The border having been added to last year, only a top-dressing is now required. The border, being, if anything, on the dry side, will be moistened throughout with tepid water, which will also serve to wash in the artificial Vine manure sprinkled on the surface before spreading the top-dressing material thereon. Economy being the order of the day, fireheat will not

be resorted to for the first two or three weeks after closing the house, sun-heat alone being relied on to induce the buds to commence swelling. During this period the ventilators will remain closed to husband sun-heat as much as possible. When bright, damping of the floor and border surface will provide a sufficiency of moisture until the swelling buds demand more warmth, when both damping and syringing also must be done to counteract the dry heat arising from the use of the hot-water pipes which becomes necessary when this stage is reached. The temperatures then will be 50 degs. by night and 55 degs. by day. A. W.

MIDLAND COUNTIES.

Melons. — Seeds for an early crop will now be sown in 2½-inch pots filled with fine moist loam lightly mixed with leaf-soil. The pots are placed in a house having a night temperature of 65 degs. to 70 degs., and when the soil has become thoroughly warmed one seed will be placed in each. Plunge in a warm bed and cover with glass. Do not water until the seedlings appear. They should then be replunged in a shallow box filled with Moss or similar material, and put on a shelf near the glass. By careful attention to watering, daily syringing, etc., the plants will grow away freely. Although the earliest Melons can be successfully grown in pots, I find that the plants cultivated in beds are the more satisfactory. The earliest crop needs a hotbed, and the material for forming this should be prepared at once, using partially decomposed leaves and stable litter in equal parts. I have hot-water pipes under the fermenting materials, and it is, therefore, only necessary to have a small hotbed, the top of which is raised to within 15 inches of the trellis. On this hotbed is placed a bed of soil 18 inches wide by 9 inches deep. The soil is made quite firm. If the loam is of a retentive nature, the inclusion of some old mortar rubble will improve it, and poor soil may be enriched by the addition of bone-meal.

Cucumbers. — Young plants will now be raised to fruit in succession to the old plants now showing signs of exhaustion. The seeds are sown singly in 2½-inch pots containing a compost of loam and leaf-mould in equal parts. The soil should be warm when used, and sufficiently moist so that no water will be required until the seeds have germinated. Plunge the pots in a similar hotbed as advised for Melons. A hotbed will afterwards be required, as in the case of Melons, for forming the beds upon. An atmospheric temperature at night of 65 degs. to 70 degs., and an increase of about 10 degs. during the day will be suitable for Melons and Cucumbers.

Bouvardias. — As these go out of flower they should be removed to a cool-house, and watered sparingly. Plants which were rooted in spring, and are flowering now for the first time, may be expected to continue in bloom. Those which have already been cut back two or three times usually flower for a shorter period.

Hydrangea hortensis. — Plants which were rooted during the summer and autumn and are growing in 4½-inch pots need to be examined. Those showing the flower-buds may be placed in a warmer house, where they will bloom early in the season. Hydrangeas last for a long period in bloom, and the flowers are varied in colour.

Liliums. — A consignment of *Lilium auratum*, *L. longiflorum giganteum*, and *L. speciosum magnificum* has just come to hand, and will be potted up immediately. Pots to suit the size of the bulbs are used. The compost for *L. auratum* will consist

of equal parts of good fibrous loam and peat with the addition of a little leaf-soil and coarse sand; for *L. longiflorum*, three parts good fibrous loam, one part leaf-soil, a little manure from a spent Mushroom bed, and coarse sand; and for *L. speciosum* three parts good fibrous loam, one part peat, one part leaf-soil, and some coarse sand. A little sand is placed under the bulb, which is kept well down in the pot, placing a moderate layer of soil over it, leaving room in the pots for adding a top-dressing when the growth is well advanced, but before the roots have begun to develop from the stem. The stem roots are of great value to the bulb, and should be carefully looked after. After the bulbs are potted they are placed in a frame and plunged in a bed of leaf-soil, so that the pot is just out of sight and kept secure from frost. They are allowed to remain in this position until growth has commenced. *L. longiflorum formosanum*,

discretion. Well screened coal ashes are valuable for sprinkling among herbaceous and alpine plants. The planting having been arranged for the coming season, it is known approximately what number of the various plants will be required. The propagation of particular plants required in great numbers will be commenced forthwith. Rooted cuttings will shortly be removed from the boxes in which they were struck and potted up singly into 3-inch pots. All plants that were rooted in the autumn and intended to be trained as standards are kept growing steadily, and when necessary afforded larger pots, but care is needed not to overpot them, and watering must be done with care.

Violets planted in frames need great care at this season. All decaying leaves must be removed, and the soil stirred occasionally, especially if it has a tendency to become caked. Air must be admitted whenever possible, as Violets never suc-

any of the Brassica family be allowed to occupy the same ground two years in succession. Onions may be grown on the same plot of ground from year to year without any ill-effects, provided the ground is well prepared each year. Jerusalem Artichokes and Horse-radish will also do quite well on the same spot for a number of years, provided the ground is trenched and plenty of farmyard manure worked in. The

Selection of varieties of vegetables from the seed-list should be given very careful attention. Varieties that succeed in one locality may be, and often are, a complete failure in another district. The best of everything should be grown, as inferior sorts require just as much, if not more, attention as do the superior varieties. Good standard kinds should always be grown for the maincrop, but a few of the new kinds may be included, as they afford opportunities for comparison with the



A well-grown Cineraria.

potted early in October, has made good progress, and has been top-dressed. The plants are growing in a temperature of 60 degs. to 65 degs., and I expect the first batch in flower at the end of February.

General work.—Cleaning shrubberies and clearing away worn-out shrubs can be done in almost any weather. The ground should be thoroughly cleared of all roots, especially those of Nettles, Woodbine, and others which accumulate in neglected shrubberies. Any shrubs which require a severe pruning should be left until the spring, as there is danger of killing even the hardier species if they be cut hard back during winter. At this season close attention is necessary if good displays are to be realised in spring. Maintain a close observation upon the least robust of the spring-flowering plants. For affording a slight protection from frost, branches cut from Yew-trees are very convenient, but they should be employed with

cead in a close atmosphere. If water is needed it should be applied on mild, open days, for then extra ventilation can be given without fear of injury to the plants.

Kitchen garden.—With the New Year the work in this department must be proceeded with in earnest if the best results are to be obtained. A rough plan of the vegetable garden should be made, marking on it where each of the principal crops is to be grown. The preparation of the ground is of the utmost importance, more depending on this than many people imagine. I am a strong advocate of deep trenching, and each year I am more fully convinced as to its value. What are termed old and worn-out gardens can be improved, and new life imparted to the soil by bringing up the bottom to the surface and working in suitable ingredients.

Rotation of crops.—Except in a few instances, it is necessary to change the site of crops each year. On no account should

older ones, and whether they prove superior or not they are interesting.

F. W. GALLOP.

SCOTLAND.

Shrubberies.—Birds have worked considerable havoc among the various berry-bearing shrubs, Hollies having suffered severely, some of them, in fact, being quite cleared. Cotoneaster frigida has also paid toll, although in this case there has not been quite such a wholesale clearance, some of the pieces yet remaining highly effective. Stray pieces of the common Barberry still retain their foliage, this having assumed a beautiful ruddy tint, among which the berries are rather difficult to detect. This fact may account for their comparative immunity from the attacks of birds. Be that as it may, there are proportionately more berries upon these than upon other shrubs. *Leycesteria formosa*—relished by pheasants—has

berried fairly well, and, as yet, has not been interfered with. *Garrya elliptica* comes on apace. Lilacs are well set with buds, and now that the foliage of *Azaleas* has dropped it is possible to note that the promise of flower is exceptionally good. *Rhododendrons* of all kinds have grown well, and in their case, too, a good display may confidently be expected. *R. Noble-anum*, one of the earliest varieties, will apparently be later than usual. The withered plumes of *Spiraea arifolia* ought really to be removed, but being attractive they will, meantime, be permitted to remain. *Andromeda floribunda* is well covered with racemes which will expand before very long, and a rich promise is noted on *Hamamelis virginica*. *Skimmia japonica* and the Mexican Orange Flower (*Choisya ternata*), suited by their environment, continue to grow luxuriantly. Apart from its wealth of bloom during the flowering season, *Choisya ternata* is desirable on account of its dark green and glossy foliage. *Kalmias* are, at present, looking fairly well, and some colonies of *Bamboos* which were planted some years ago are now making shapely and attractive clumps. Here and there in sheltered places are to be found sprays of *Berberis Darwini* in bloom, and *Escallonia macrantha* is also bearing a few flowers.

Stove.—A useful plant is the variegated Screw Pine (*Pandanus Veitchi*), and young offsets taken at this time and placed in the propagating pit will soon root and form useful little plants. In the case of existing plants of some age, overpotting must be guarded against, for if too much root-run is given there is a danger that the variegation will not be clear; indeed, the leaves may turn entirely green. This plant is useful for rooms, and is valuable for that very reason during the winter months. The more tender Ferns are never, I think, more attractive than during winter in the stove. The delicate tints of the young fronds of *Adiantum Farleyense*, *A. Ghiesbrihti*, and *A. Henslovianum* do not suffer from the sun as they do, unless shaded, at a later date. Among other Ferns which thrive more satisfactorily in the stove during winter are certain of the *Davallias* and all the *Gymnogrammas*. In the absence of a regular forcing-house much use can be made of the stove, and bulbs and flowering plants intended for greenhouse and conservatory decoration can be rapidly brought forward in the desired numbers. For such a purpose, shelves are almost indispensable in order that the pots may be placed as near the light as possible. During the week a considerable number of well-rooted *Hydrangea* cuttings was taken from the propagating pit and put into 3-inch pots. The young plants were afterwards returned to the stove, in which they will be permitted to remain for a short time until the roots begin to move freely in the new soil, after which they will be placed in a cooler atmosphere. At the same time some promising young *Coleuses* were moved into 4-inch pots, with a view to maintaining growth until spring, when they will be grown on. *Fittonias* of sorts make useful furnishing plants, but they always appear to be very susceptible to damp in winter, and thrive better when grown in shallow pans than when pots are used. *F. argyoneura* and *F. Verschaffelti* are desirable varieties. The easily-propagated Indian Grass (*Panicum variegatum*) makes a good edging plant, as do some of the better *Tradescantias*. Watering must now be in careful hands. Syringing is, meantime, dropped, the necessary atmospheric moisture being maintained by damping the pathways occasionally.

Greenhouses.—The earlier *Chrysanthemums* are now on the wane, more, per-

haps, from the effects of damp than anything else. The late sunless spell has materially shortened the display, and although some heat has been maintained, it is dangerous to use too much, as, when *Chrysanthemums* are given more heat than they relish, the season is shortened quite as much as from damp. The late-flowering varieties will now be made use of—all bush plants. The ordinary run of winter-flowering stuff maintains variety and gives plenty of material for cutting. *Lygodium scandens*, *Medeola asparagoides*, and *Heliotrope* among climbing plants are useful. No attempt is, as yet, being made to hurry on bulbs, *Cinerarias* are being kept quite cool, and the flowers of the different *Primulas* are still being picked off as they appear.

Wall-trees.—In rather unfavourable weather some further progress was made with the pruning and training of wall-trees, a finish being made among Pears, while only a few Plums remain to be attended to. Upon certain portions of the walls there is a thick growth of such wall plants as *Linaria Cymbalaria*, *Erinus alpinus*, the Red Valerian (*Centranthus ruber*), and various species of Ferns. Where these are encroaching unduly some amount of thinning was done, but, on the whole, the presence of these plants does not seem to be prejudicial to the welfare of the fruit-trees. It might be inferred that *Linaria Cymbalaria* would, perhaps, be dangerous in respect of encouraging red spider, but such is not the case, observation extending over a considerable number of years proving that no evil effects result from the employment of this, and the other plants mentioned, in the interstices of the walls.

Hardy flower borders.—Cutting over of the ripened stems having now been completed, a steel rake was run through the borders to make them, meantime, as tidy as possible. Many of these borders are so full of bulbs that, at present, it would be dangerous to stir the soil, so that it will be delayed until their tips are visible. A little spent hotbed manure having become available, this and some half-decayed leaves will be utilised among the borders.

Parsley in frames.—The supply out of doors yet remains plentiful, but when, as has been the case upon two occasions lately, there is a heavy fall of snow, the value of Parsley in frames is apparent. On all suitable occasions a free allowance of ventilation is afforded, and water, unless when absolutely needful, is withheld. Any decaying leaves ought to be promptly removed, and should symptoms of damping be observed, a dusting of freshly-slaked lime will be found beneficial.

Vegetables continue to be fully adequate to the demand at present. The Cauliflower season was more prolonged than usual, the last heads of Autumn Giant from the open having been cut early in December. Jerusalem Artichokes are of good quality, Sprouts and Savoys will provide plenty of material for an extended period, while Leeks and Curly Greens yet maintain a certain amount of growth. Decayed or rotting leaves are removed as opportunity offers, and such things as Cabbages for spring use, Spinach Beet, and Winter Spinach are, from time to time, given a look over in order to prevent accidents as far as possible. In the course of the week roots in store were inspected, and Potatoes were picked over. These are, so far, keeping very well. Disease was practically non-existent, and, as a result, there has been little or no rotting among the stored tubers.

W. MCGUFFOG.

Balmie Gardens, Kirkcudbright.

BOOKS.

"SUGARLESS JAM-MAKING AND FRUIT-BOTTLING."*

WITH a view to further war time economies Mrs. Helen Wyldon has brought out a little work entitled "Sugarless Jam-making and Fruit-bottling," price 1s. The advantages of this system are said to be that fewer jars are required, less than the ordinary shelving-room is necessary, the cost is less, and the process takes less time and fuel. A certain amount of sugar is actually used in making the preserves, saccharine is used for flavouring, and gelatine or isinglass to stiffen them. There are in the book five recipes only. In these days of cheap printing and other economies the book strikes one as dear. We would have preferred that in preserving her fruit the authoress had not introduced bladders from the butcher and used here and there other animal substances, as these do not appeal to real fruit-lovers.

ROYAL GARDENERS' ORPHAN FUND. SPECIAL APPEAL.

IN view of the serious crisis through which the nation is passing, and the need now more urgent than ever for taking care of the child life of our country, the Executive Committee of the Royal Gardeners' Orphan Fund ventures to plead most earnestly with all interested in horticultural pursuits for some financial help to enable it to carry on the work of the fund during this time of great stress. The fund was established in 1887 to aid in maintaining and starting in life the helpless and necessitous orphan children of gardeners. It is entirely supported by voluntary contributions, and has only an assured income from investments of about £400. It depends for its main source of revenue upon the collections made in connection with the annual festival dinner, which usually takes place in the month of May. Last year the income derived from this source amounted to £1,060 17s. 7d. This year, owing to the war, the committee has felt compelled to abandon the annual festival, with the result that the fund is faced with a heavy deficit.

In 1914 the sum disbursed in weekly allowances and grants in aid to candidates awaiting election amounted to £1,868 2s. 6d., and as there are now 136 beneficiaries (including 16 elected in February last) in receipt of full benefits, and 19 candidates waiting for election and receiving compassionate allowances in the meantime, no reduction in expenditure under this heading is possible or desirable, for the needs of the unfortunate children are as pressing as ever.

Since the fund was established over £30,000 has been expended in befriending children left behind by men of a worthy, but often poorly paid, calling, and in this practical way the burdens of many poor widows whose breadwinners have passed away all too soon to make any provision for them have been mercifully lightened.

The committee most earnestly appeals to past supporters to kindly continue their contributions, and to the many who have so far overlooked the claims of the fund to subscribe at least something towards carrying out the purpose of the institution.

The treasurer will gratefully acknowledge any contributions sent to 19, Bedford Chambers, Covent Garden, London, W.C.

* "Sugarless Jam-making and Fruit-bottling," by Helen Wyldon. London: Polsue, Ltd., Gough House, Gough-square, Fleet-street, E.C.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Sediment on leaves of greenhouse plants (P.).—We think, if you will examine the Orange-tree, you will find that it has been attacked by brown-scale, which is evidently spreading to the other plants in the house. The plants have also been attacked by green-fly, which has caused the sediment on the leaves. The best cure for green-fly is fumigating with one of the many remedies advertised in our pages. You must wash the Orange leaves carefully with some insecticide.

Growing Agapanthus (C. H. C.).—Being a liberal feeder, the soil into which it is potted may consist of two-thirds good turfy loam and one-third well-decayed manure, with a sprinkling of rough sand. It needs plenty of water during the growing period, and, when the pots are full of roots, a little liquid-manure at that season about once a fortnight is very beneficial. The leaves die off in the autumn, and the plant needs to be wintered where just clear of frost, but nothing more. Throughout the winter only sufficient water should be given to keep the soil slightly moist. With the return of spring and renewed growth more water must, of course, be supplied.

Keeping Fuchsias in winter (C. H. C.).—Fuchsias put away in winter often suffer through over-dryness and too much heat, and, as a consequence, if they survive until spring, are often found to be in a debilitated and weak condition. A warm temperature is not necessary for them during a period which ought to be one of comparative rest, and the practice of packing plants under a greenhouse stage at the back of heat-pipes, where they get over much moisture and excess of heat, is not to be commended. The best place for them is a cool-house or potting-shed from which frost is excluded, and this is all they actually want until February, when they may be brought into heat, cut back, and growth encouraged.

Potting Lillium (G. B.).—Pot at once. The size of the pot will depend on the size of the bulb, and for your bulb you will probably want a 10-inch pot. After you have potted the bulb stand in a cold-frame and cover with about 6 inches of Cocoanut-fibre. If the potting soil be in a fairly moist condition, no water will be required until the plant starts into growth. Remove the fibre from time to time to ascertain if the bulb has begun to throw up a flower-spike. As soon as this is seen to be the case the fibre above the pot should be cleared off, and the plant either left to grow on in the frame or be removed to a cool greenhouse. Introducing into heat before the bulb has showed signs of starting should never be practised; indeed, cold treatment best promotes a healthy and vigorous growth.

Dahlias, lifting (R. H.).—When the frost has destroyed the foliage, cut off the stems 9 inches from the ground, then, with a fork, lift the roots, taking care not to break any of the fleshy tubers. Shake out as much soil as you can from among the tubers or pick it out with the aid of a pointed stick. Then turn the roots bottom upwards, to allow any sap or liquid that may be in the hollow stems to run out, and when the roots are fairly dry place them in shallow boxes, close together, and cover them up with fine, dry soil or ashes, well

shaking it in among the tubers. Stand them in some place where the temperature does not fall below freezing point, and where it is fairly dry and not under drip. So treated, your roots should keep well through the winter.

Plants for cold-house (Reader).—It is now too late to do anything in the matter. You should have purchased, early in the autumn, bulbs of such as Hyacinths, Tulips, Narcissi, etc., which you should have potted up and stood in the open air, covering with ashes, and when well rooted transferred them to the house you speak of. Azaleas (hardy), Prunus, Deutzias, Rhododendrons, and such like should also have been potted up and kept in the open air till you wanted to get them into bloom.

Growing Nerines (N.).—Nerines should, when flowering is over, be placed in a light position in the greenhouse and kept watered. This is owing to the fact that new leaves are pushed up at about the same time as the flower-spikes and growth continues throughout the winter and into the spring. It is at that time that the bulb is built up for another season's growth and flowering, flowers being ensured by withholding water and exposing the bulbs to the sun. Then by August a watch must be kept, and directly there are any signs of growth the plants must be watered. As a rule, the flower-spikes are the first visible signs of growth. These will make rapid progress if the plants are kept in the greenhouse, in which they will form a brilliant autumn feature. When Nerines are thoroughly established in their pots an occasional dose of liquid-manure during the growing season will be beneficial.

The value of mulching (L.).—There is no doubt that in heavy, retentive ground, a winter mulching of rich manure adds to the coldness of the soil and is harmful rather than beneficial to Roses, and with the greater dampness comes the more severe effect of frost. In warmer soils the consequences of the mulch are not so disastrous and there is doubtless benefit derived from a light, littery mulch early in autumn, which should occasionally be forked up and not allowed to settle into a sodden mass, as this retains the warmth of the ground, and is effective in preventing the frosts from penetrating soil to any depth later on, provided it is kept loose and not allowed to solidify. It is in the spring, when the plants are starting into vigorous growth, that the value of a rich mulching comes in. In heavy soils the best method of protecting Rose bushes is to heap a little of the surrounding soil about their roots.

The Throat-wort (Trachelium coeruleum) (J. L.).—This is easily propagated in the spring from cuttings taken from the base close to the soil, some of these possibly having roots of their own. Such plants will flower the same season in 6-inch pots, being afterwards kept to grow on the following spring, so as to provide, if need be, a set of larger plants. Seedlings can also be easily raised, but when this plan is adopted the seed should be sowed and sown as soon as it is ripe from plants that have flowered early in August. The seedlings can then be kept in a box or pan in a cool greenhouse during the winter. It is not necessary to devote house room to it from the end of March until the flowering season comes round. This plant will do good service at a season when any novelty is a pleasing change. The best trusses of violet-blue flowers are produced on the terminals, but the lateral shoots on strong plants are also very effective. The best soil is loam and leaf-mould, with a little sand, potting being done very firmly.

TREES AND SHRUBS.

Pruning Pyrus japonica (D. C.).—This will always flower better when allowed to grow naturally than when closely pruned. Such being the case, it should only be cut back so far as is really necessary to keep it within bounds. Any old or exhausted shoots should be cut clean out, as by so doing the young, clean growths on which depends a good deal of the future display is encouraged. A good time for doing this is as soon as the flowering period is over, as then there is a long growing season before it. You may, if you do not wish the plant to grow too far away from the wall, shorten in the season's shoots, and thus induce the formation of spurs or flower-buds. This can be done, of course, immediately after flowering. Lay in the best of the young wood, and spur back any that is weak. Cut away the weakest of the growths that spring from the base, and nail in as many of the others as you have room for.

Crataegus Pyracantha not fruiting (W. H. B.).—The reason of your Pyracantha not fruiting is that it grows too freely, hence it must be served as many of its relatives the Apples and Pears are when they produce wood rather than flowers and fruit. You may try root-pruning by taking out a trench at 4 feet from the main stem, cutting off the roots as you proceed till the lowermost that extend outward are reached. Where the soil is heavy, 3 feet from the stem will be sufficient for the trench, but in lighter soils the roots generally extend for some distance, and these are but few. We should not be surprised if you find that one or two strong roots have followed the footing of the wall and travelled for some distance. The pruning of the top may be limited to the thinning out of any overcrowded branches in order to allow light and air to play amongst them. If your Pyra-

cantha is treated as above detailed, we think it will lead to an ample display of flowers and fruit.

FRUIT.

Pruning Peach-trees (M. B.).—It is very difficult to advise you, as you give us no idea as to the age of your trees and the treatment they have received during the past summer. Early in the spring, when the young shoots are starting into growth, the trees should be gone over, rubbing out all the shoots which spring from the front of the branches or those right at the back. Then a little later at least one-third of the other shoots should be pulled out, carefully preserving those at the base of each branch. These shoots must be laid in as close to the wall as possible, so that the wood may get thoroughly ripened. After all the fruits have been gathered, any bare branches or old wood should be cut back and the young growths reserved to take their places nailed or tied in. This is best done in the winter after the leaves have fallen. It is very difficult to convey instructions as to pruning in writing, and we should advise you to call in the aid of a practical man in your neighbourhood. We do not reply to queries by post.

VEGETABLES.

Cabbages, etc., clubbing (A. T.).—The best remedy for clubbing is undoubtedly gas-lime. This should be applied to vacant ground at once at the rate of 2 bushels to 3 rods. After lying on the ground for from four to six weeks dig the gas-lime in. Plant Potatoes, Seakale, or Rhubarb on the ground, or sow Onions, Parsnips, or any other vegetable, but not any of the Cabbage tribe. You must bear in mind that you cannot crop the ground so dressed for three months.

MISCELLANEOUS.

Worms in pots (S.).—We think the best way of dealing with the worms in the pots is to get some fresh lime and make a solution of lime-water—say, put a quart of lime to a gallon of water. Stir it well and let it stand for a few hours until the water is quite clear, then pour off into a water-pot and give to the pots in which the worms are. This should be repeated two or three times in the case of plants with a large ball of earth attached to the roots. The lime-water will cause the worms to come to the surface, when they may be picked up and destroyed.

Making a hotbed (F.).—In making a hotbed a much steadier heat is obtained by placing the manure in heaps, turning it over several times before placing it in the pit or bed. If placed direct it heats very rapidly, and quickly gets cold again. Thoroughly mix all the materials together, and turn when heated through, not allowing the manure to get very hot. Make the bed as firm as possible to retain the warmth, and as soon as the steam has evaporated, or after two or three turnings. Much depends upon the quality of the manure, and if strawy, freshly-gathered leaves should be mixed with the manure. The heat is then retained much longer.

SHORT REPLIES.

H. L. Kent.—Your best plan will be to get a copy of "Vines and Vine Culture," price 5s. 6d. post free, from Mrs. Barron, 13, Sutton Court-road, Chiswick, London, W.

NAMES OF PLANTS AND FRUITS.

Names of fruits.—*M. D.*—Apples: 1, Golden Noble; 2, Alfriston; 3, Bramley's Seedling; 4, Sturmer.—*R. E. B.*—Apples: 1, Minchal Crab; 2, Winter Hawthornden; 3, Cox's Orange; 4, Waltham Abbey Seedling.—*D. W. W.*—Pears: 1, Beurré Clairgeau; 2, Vicar of Winkfield; 3, Beurré Bosc. Apple: 4, Blenheim Orange.—*W. D. P.*—Pear: 1, Glou Moreau. Apples: 2, Norfolk Beaufin; 3, Waltham Abbey Seedling; 4, French Crab.—*H. L.*—Apples: 1, Wellington; 2, Mère de Menage; 3, Alfriston; 4, Ribston.—*W. W.*—Pear Beurré Clairgeau.

CATALOGUES RECEIVED.

J. PEED AND SON, West Norwood.—List of Seeds, 1916; List of Chrysanthemums.
J. STORMONTH AND SON, Kirkbride, Carlisle.—Selected Vegetable and Flower Seeds.

Trials at Wisley.—Tubers of late Potatoes (twenty of each variety) and seeds of Clarkia, Godetia, annual Carnations, Indian Pinks, Mignonette, Larkspurs (annual Delphiniums), Sunflowers, mid-season Peas, Tomatoes, Celery, Celeriac, and Savoys, to be tried at the Royal Horticultural Society's Gardens, should be sent to the Director, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey (station for goods, Horsley, L. and S. W. Rly.) before January 31st, 1916. Those intending to send these flowers and vegetables for trial should apply for the necessary entry forms as soon as possible.

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FLOWER SHOW FIXTURES.
1916.

JANUARY.

- January 11.—Royal Horticultural Society Meeting and Lecture.
- „ 25.—Royal Horticultural Society Meeting and Lecture.

FEBRUARY.

- February 8.—Royal Horticultural Society Meeting, and Annual Meeting (3 p.m.).
- „ 22.—Royal Horticultural Society Meeting and Lecture.

MARCH.

- March 7.—Royal Horticultural Society Meeting and Lecture.
- „ 8.—Royal Horticultural Society General Examination.
- „ 14.—Royal Horticultural Society Meeting and Lecture. Show of Forced Bulbs (2 days).
- „ 28.—Royal Horticultural Society Meeting and Lecture.
- „ 29.—Perpetual-Flowering Carnation Society's Show.

APRIL.

- April 11.—Royal Horticultural Society Meeting and Lecture.
- „ 12.—Royal Horticultural Society School Teachers Examination.
- „ 14.—National Rose Society's Spring Rose Show.
- „ 18.—Royal Horticultural Society's Daffodil Show (2 days).

MAY.

- May 2.—Royal Horticultural Society Meeting and Lecture.
- „ 16.—Royal Horticultural Society Meeting and Lecture.
- „ 23.—Royal Horticultural Society's Chelsea Flower Show (3 days).

JUNE.

- June 6.—Royal Horticultural Society Meeting and Lecture.
- „ 20.—Royal Horticultural Society Meeting and Lecture.

JULY.

- July 4, 5, 6.—Royal Horticultural Society's Holland House Show. (Probable dates.) (3 days.)
- „ 11.—National Sweet Pea Society's Show.
- „ 18.—Royal Horticultural Society Meeting and Lecture.

We shall be glad if Secretaries of Horticultural Societies will kindly send the dates of their various shows to Editor, GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

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The latest day for receiving Advertisements is **FRIDAY, 9 a.m.**

TO ADVERTISERS.—Kindly note that the telephone number of “Gardening Illustrated” is **Holborn 731.**

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Founded by W. Robinson, Author of "The English Flower Garden."

JANUARY 8, 1916.

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Patrinia palmata.—I grow this in a moraine without limestone, and facing almost due south-east. It has thriven and increased, and flowers regularly. The sweet-scented flowers are small, and are redeemed from insignificance mainly by the number produced on the umbels.—S. ARNOTT.

Bagging Pears.—Are paper-bags better for Pears than those made of muslin? Birds cannot tear muslin. I used them last year and was pleased with the result. I made the bags of butter-muslin, and when the Pears were gathered the muslin-bags were washed, and are now waiting for the 1916 crop. Please say if paper-bags would be an improvement on my plan. Muslin admits sunshine, which I thought would improve the fruit. My Pears were never better than this year.—F. L. CLARK, *Yorks.*

Cardamine pratensis.—I enclose leaves of this plant, showing how new plants form at the base of the terminal leaflet. I was ignorant of this habit, and having cut off the flower-heads was surprised at its spreading. Now I see how rapidly it can mat suitable soil by the 5-inch steps of leaf from plant to plant. It gives evidence of its family resemblance to the bulbiferous Dentaria, and is a native exemplar of the habit which interests all who see it in Tolmiea Menziesii. Both plants revel in a damp or mossy situation.—H. R. B., *Attleborough, Norfolk.*

Lapagerias out-of-doors.—I think these plants are much more hardy than many think, provided they have their roots in suitable material. In S. Devon I have seen some fine plants as regards vigour and size of blossom growing on a church-wall facing east. Some growing on a porch 15 feet high were grand. These had a south-west aspect and had no shelter of any kind. The soil, of a peaty nature, was well drained, and I was informed the plants always flowered freely. The severe winter of 1895 killed the plants to the ground, but since then they have not suffered, a few of the young growths only being browned by late spring frosts. In Cornwall these plants are very beautiful in many parts.—M. C. R.

Lapageria rosea in Scotland.—It is well understood that Lapageria rosea is comparatively hardy in several districts, but it is not so generally known that there are a few Scottish gardens where it stands the winter well and flowers annually on a

wall. One of these is the garden of Mr. Wallace, of Lochryan, at Cairnryan, near Stranraer. At Lochryan, Lapageria rosea and L. alba are grown on the front of the house, and in a position as nearly south as possible. They are well sheltered and flower well in the summer and autumn.—S. ARNOTT.

Embothrium coccineum.—There are, I believe, few places in Scotland where Embothrium coccineum is hardy. On the west coast, however, a few plants exist, and not only thrive fairly well, but also flower. In Scotland, and in most parts of England and Ireland, indeed, it requires the shelter of a wall to enable it to stand our winters. Only a few plants are known to me in the south-west of Scotland. In one garden where it was cultivated for three or four years against a south wall it ultimately succumbed, but the garden was not in one of the most congenial situations. It was away from the sea and had no special advantages to enable this somewhat tender shrub to flower and live for long. The best places in Scotland are in the counties along the western coast line, where quite a number of other shrubs of more than doubtful hardness succeed when well sheltered.—S. ARNOTT.

Hardy Ferns in winter.—There can be no doubt that many hardy Ferns are yearly sacrificed in carriage-drives and in pleasure-grounds to the rage for tidiness. Under natural conditions the withered fronds fall over the crowns, and not only protect them from excessive wet during winter, but shield the tender young growths from the spring frosts as well. When the fronds are cut over as they cease to be effective it is little wonder that disaster follows, either from damp or from frost. The different varieties of the Lady Fern (*Asplenium Filix-femina*) are especially liable to suffer in this way, and some of the evergreen sorts are apt to suffer from cold winds. In the case of the latter a slight protection of dry Bracken will make the plants safe during the occasionally trying winds of March and April.—KIRK.

Begonia fuchsioides.—Like others of the older Begonias, B. fuchsioides is not now commonly met with. Considering its usefulness this is rather surprising, for the plant is evergreen, and, given good cultivation, may be had in bloom during the greater part of the year. Those who have a stove-house at command will find no difficulty in having pieces full of bloom at Christmas, and if these plants are then

removed to the cooler temperature of the greenhouse the display will be maintained through the spring. Neat little bushy specimens can be had in 5-inch pots, and large, well-furnished pieces may be grown in 8-inch pots. During the winter careful watering is imperative, any excess causing the blooms to drop, while any scarcity results in the falling of the leaves. B. fuchsioides is easily increased from cuttings, a little bottom-heat being desirable, but not absolutely essential. A proportion of peat should be used in the compost for this Begonia, but in my experience this is quite unnecessary, an ordinary every-day mixture suiting B. fuchsioides very well.—W. McG., *Balmac.*

Canarina Campanula.—Of the various greenhouse plants that flower during the winter this is one of the most distinct. From a stout fleshy root-stock are pushed up succulent stems, usually about the month of August, these by mid-winter attaining a height of a yard or thereabouts. They then flower freely, the blossoms bell-shaped, and the colour a soft tone of yellow veined with a reddish tint. After flowering is over, usually about the end of March, the foliage begins to turn yellow, when less water must be given, and when the plants are quite dormant it must be discontinued altogether. Then, if stood on a greenhouse shelf, or in some similar position, it will rest during the summer. As soon as the young shoots make their appearance a good soaking of water should be given, and the plants may be repotted soon after, taking away a good deal of the old soil. They may then be put into 6-inch pots, shifting them into larger ones later on. The growing points may be pinched out to ensure a bushy habit.—W. T.

Chinese Chestnut (*Xanthoceras sorbifolia*).—This small tree, although very handsome when in bloom, does not appear to be quite happy in our country—at least, with me. The group in question occupies a favoured position—a short distance from a high wall facing south—and I have noticed yearly that a great number of the small branches die. During the summer, when in full leaf, the trees are the picture of health, but in late autumn many of the branches are covered with a small brown fungus, such as is often seen on young wood cut during the summer and cast aside, and these branches are found to be dead. The trees referred to fruited this season, but the flowers are the great attraction. In "The English Flower

Garden" it is referred to as requiring a warmer climate than that of Great Britain, and this probably accounts for this unfortunate dying off of the branches.—E. M.

Rose Georges Schwartz at Nice.—Mr. E. H. Woodall writes of this Rose in *The Garden*:—

This autumn, for some inscrutable reason, I have never seen such glorious blooms of that capricious golden Rose Georges Schwartz as are now open. Grafted on various stocks to see which will prove the best, this year, at any rate, *Rosa bracteata*, the Macartney Rose, has proved the ideal stock, while the *indica* major stock, which has often given good results, is nowhere. I wish someone in England would bud it on *R. bracteata* under glass and give it a trial; it is still by far the most sumptuous of all rich golden Roses, with a fragrance all its own, but, being so capricious, it is little known or grown.

I was much struck with the beauty of this yellow Rose at Nice, and hope we shall some day see it thrive in England.—W.

The green Chrysanthemum.—"Kirk's" definition of *Chrysanthemum* (the Golden Flower) if taken literally would deprive us of the many exquisite shades of colour that the *Chrysanthemums* give in the later months of the year. Without question the one prevailing colour in Nature, both in our gardens and in all our varied landscapes, is green, yet how varied, of which one never tires, restful and beautiful in all degrees, from its darkest shade, like our native Holly with its scarlet berries which the deep green intensifies, to the palest green of the Beech in spring. The Snowdrop is purest white, lifting its head often amidst the snow, yet to many its beauty is in its transparent green. Again, think of the beautiful green lines in our Grass of Parnassus; none will deny the beauty of the green in these. Why, then, not admire it in the *Chrysanthemum* (though it be a freak!), which gives us such a pale sea-green with its exquisite translucency?—T. R. C.

The Apricot-tree.—That article signed "G. P. K.," in *GARDENING ILLUSTRATED*, December 18th, makes me ask why he wrote so much when nothing is said of the failure of the tree? For several generations of gardeners the Apricot has been a dismal failure in English gardens, the branches all dying away because grafted on the Plum. In the case of the Apple and the Pear we succeed because they are only grafted on their own kind, so to say, but it is very rarely one sees the Apricot thriving. This is one of the subjects the Horticultural Society might do something to settle for us. They might show us the wild form and see whether grafting on it would not give a better result, and they might also show the effect of it grafted on different kinds of Plum; and also trees from seeds of the best varieties. As some Peaches are raised true from seed so some Apricots might be worth trying in that way. This would be much more worth the Society's while than building laboratories to test questions of much less importance to the public.—W.

Violet Cress (*Ionopsisidium acaule*).—No garden should be without this attractive annual, which is so welcome at this time of year, and stands all kinds of weather. Early in the autumn a few seeds were scattered among newly-planted Carnations. The seedlings have been flowering freely for the past few weeks, giving great promise for months to come. Dozens of minute violet flowers are produced from the little fresh green tufts of Cress-like

leaves. The whole plant rarely exceeds 1½ inches to 2 inches in height, and is, therefore, about the smallest in cultivation. It is charming for scattering over empty crevices in the rock garden or for the margins of borders or paths, in which way its attractive little flowers are borne in great profusion. It is also useful as a groundwork to Carnations, etc., where, being so dwarf, it does no harm, but adds considerably to the beauty of the beds. If left undisturbed it reproduces itself in succeeding seasons, which is a great gain, as in this way a few plants are in bloom the whole year through. The best results are secured from autumn sowings, and a few seeds scattered broadcast during September or early October invariably give a welcome display of flowers two months later. Slugs do not touch it, therefore one of the greatest enemies of autumn-sown annuals is dispensed with, and once sown no special attention is necessary.—E. MARKHAM.

The Portuguese Heath (*Erica lusitanica*).—Although this is not hardy enough for general cultivation in the British Isles, it is an excellent plant for the southern counties, and for certain other mild places. It often grows 6 feet high, and sometimes as much as 12 feet, with a shapely, bushy habit. The white flowers expand in winter and early spring and they are usually at their best during February and March. In the bud stage they are pink, the combination of open and unopened blossoms being very pretty. In some places a really effective display of flowers is produced by Christmas. A native of south-west Europe, it is allied to *E. arborea*, but can be distinguished by its longer and scentless flowers, the blossoms of *E. arborea* having a very pleasant perfume. Although it grows into a pretty, isolated specimen it is seen to the best advantage when planted in large groups. Provided lime is not present in the soil it can be grown in either light loam or in peat, a mixture of sandy loam and a little peat forming an excellent rooting medium. For cutting for indoor decoration, the long branches are very useful.—D.

Sweet Peas.—"M. L. W.," in the issue of December 25th, writes pertinently upon Sweet Peas. The evil which lovers of the flower foresaw years ago is now an accomplished fact, and now there is the inevitable reaction in favour of smaller and more sweetly-scented blooms, and of a more natural method of cultivation. In short, there is again a revival in favour of Sweet Peas as they were before raisers and exhibitors transformed them from the favourites of the garden of a quarter of a century ago into the monstrosities of the show bench. It would be idle to deny that good has not been accomplished by the hybridist and the specialist, but when form and sweetness have been swamped by size and—to be quite candid—by coarseness, the lover of Sweet Peas is justified in protesting. Another evil which has crept in is the quite unnecessary multiplication of "too-much-alike" varieties—many of them of doubtful value at the best. The latter fact has been increasingly borne in upon me year by year when testing or experimenting with the novelties of the season. Sweet Peas, and, equally with them, Asters, now occupy so much space in catalogues that it is not only a weariness to read over the lists, but a source of perplexity to those unacquainted with the subject who may be desirous of making a selection. Like "M. L. W.," I look forward to the older and saner way of growing Sweet Peas, and, I think, in future seasons 1915 will be memorable as the year which saw the beginning of the great slump in Sweet Peas.—K. BRIGHT.

FRUIT.

TOO MANY APPLES.

MANY, no doubt, will agree with the note in November 13th issue (page 684) as to there being too many Apples. That there are so many kinds catalogued is no doubt due to the demand for them by, perhaps, a small section of the purchasing public. Trade exhibitions, too, contribute materially to the long lists of Apples. On the same page "Kirk" mentions Stone's, or Loddington, as being a disappointing Apple. This is undoubtedly true. This variety, which ripens during September and early October, has been encouraged, presumably, for no other reason than that it grows to a large size. If kept until November it is of little value. Remembering how many other Apples there are at this season, what purpose is there in retaining a kind that has such a fleeting season? If a dish of handsome fruits is needed for exhibition in early October, Stone's may supply it, but this is the limit of its usefulness. I was led to plant this from seeing it at a show in early autumn, but its short season has condemned it. The same remark applies to Warner's King, Lord Grosvenor, and Cox's Pomona, so often seen on the show table. Peasgood's Nonsuch comes into the same class. This is usually a very shy fruiting variety and does not keep well.

It would almost seem that the question of flavour in a cooked Apple has been left out, and it would seem, too, that sweetness has not been looked for. No better or more simple test of natural flavour can be made than when plain baked in a suitably heated oven. Another point in cooking Apples is that most persons regard size as all important. There are many cooking varieties of Apples that the average person could not possibly accept in a raw state as dessert. There are people who prefer a Wellington to a Cox's Orange Pippin or a Blenheim.

Mr. Ballard, in the same issue, alludes to what he describes as "the unhealthy demand for gaudy colours and huge size at the expense of all the really finer qualities." In this, again, there is much truth. The Worcester Pearmain has always remained a puzzle. Why there should be such a demand for this Apple for no other reason than that it has an attractive exterior I fail to see.

If there ever was a period when sweet cooking Apples were valued we should certainly expect that the almost prohibitive sugar prices now prevailing would bring them into prominence. W. STRUGNELL.

NOTES AND REPLIES.

Peaches and Nectarines.—It is customary to take these trees from the wall annually, so that the wood can be thoroughly washed and the walls cleansed, as many insects that infest these trees hibernate in any hole and crevice they can get into during winter. Where the trees are trained to wires (and this is by far the best method) the necessary pruning may be done before the trees are loosened, and it can be better determined what amount of growth can be dispensed with, especially in the matter of a large branch here and there, which at times is the better for removal. The shoots that will fruit next year are those that were made during the past summer, therefore reserve sufficient of these for refilling the wall space, when the shoots are replaced in their proper positions. Red-spider and the black aphid are the two worst enemies of the Peach. These are found on the

young and old wood alike, so that all the shoots need to be carefully washed, using a soft painter's brush or sponge for the purpose. In treating the fruiting wood be careful to work the sponge or brush towards the point of the shoot or many of the buds will get injured or rubbed off. Gishurst compound will be found a very suitable and effective insecticide for the purpose. Trees badly infested with these insects should be gone over a second time as soon as the first washing has dried, choosing a dry day for the work.—F. W. GALLOP.

Passiflora edulis.—This is easily grown and fruited under glass in a temperature

was more satisfactory where bottom-heat pipes were available to give warmth in winter to start the plant earlier into growth. Any good loamy compost will suit.—E. H.

Altering the garden.—Many are finding it necessary to make an effort to reduce expenditure, and the garden, being looked upon as a luxury, comes first. But in our garden making or altering we do not want to break away altogether from old associations, especially in connection with simplicity and nearness to Nature. I have seen the value of introducing fruit-trees into the precincts of the house, especially in the case of what I may term the wild

TREES AND SHRUBS.

OZOTHAMNUS ROSMARINIFOLIUS.
This pretty Australian evergreen shrub is by no means well represented in gardens generally. Unfortunately it is not thoroughly hardy in the British Isles, but if planted in a sheltered position will thrive in all but the coldest districts. It is by no means fastidious as regards soil and will thrive in rather stiff loam to which a little peat and leaf-mould have been added, provided there is good drainage, which is essential. The best position is one having a south or south-west aspect, as it is only when the wood becomes thoroughly ripened that the best results are obtained. On no account should the position be one exposed to cold winds or the plant will suffer in spring, when growth is tender. The flowers are valuable for cutting, as they can be obtained with long stems for vases, remaining fresh for a long time. The sprays can also be cut and dried for winter decoration.

F. W. G.

MISTAKES ABOUT IVY.

The Ivy is the most beautiful climbing evergreen of the northern world, and a precious gift for our land, as we can grow it everywhere. In other countries which are not so happy in possession of it, as in much of North America, they have to keep it in the greenhouse. It is a precious gift of Nature not always esteemed at its true value, and sometimes ill-treated. People in my part of the world are very careful to cut it off the trees, but this, I think, is a mistake. One would not, of course, like to strangle some new kind of tree, but in an ordinary wood or plantation it seldom does any harm. There are over fifty beautiful varieties of this plant. In the case of the Irish Ivy and some others, they have botanical names, which is needless and wrong, as they are all forms of the same plant which is wild in our woods. It is best, therefore, to keep to simple English names. Variegated forms are no good, but many of the green Ivies are beyond price. The wood is the place for the Ivy, which should not be much grown in gardens, as it is too vigorous, excepting the tree forms. It is such a vigorous plant that putting it on houses is almost always a mistake, though perhaps on houses on the sea cliffs it may serve to keep the wet out, but if it gets its little fingers under the roof or tiles it is a great destroyer, and many old castles and houses have been thrown down by it. There is room on the river sides and banks for Ivy without putting it on a house of any kind. Instead of destroying Ivy where it grows in a wood it is wiser to pick out some favourite form that has been admired in the garden, perhaps, and take the young shoots and put them at the bottoms of trees with a spadeful of earth, or a brick or something, and let them climb up the tree. Some of the nobler forms of Ivy, like the Amoor, are very fine in leaf, and give beautiful effects on trees, and so also the little and delicate kinds, and the bronzy ones. For bowers and screens it is very useful, but most beautiful by far in the woodland or shrubbery. The common kind abounds in our woods, and forms a carpet in many of them, and then climbs according to its own sweet will. Where there are no evergreen trees, as in our ordinary woodland, the effect of Ivy is a great relief, and the shoots make a welcome shelter for birds.

W.

Gordonia altamaha.—Flowers are still opening on this beautiful southern tree. They first appear in September, and open



Ozothamnus rosmarinifolius at Lilford Hall, Oundle, Northants.

of 60 degs. or so, but the best coloured and best flavoured fruits are grown in the warmest house. I had plants at the same time both in the stove and also in a large conservatory. The plant in the large cool-house bore well, but the fruits were thick in the shells and otherwise inferior. When the fruits in the warm-house were partially coloured I thinned them before they were ripe, and they were preserved whole in sugar and were much appreciated for the dessert. Young plants are easily raised from seeds, but do not fruit so soon as plants struck from cuttings of pieces of half-ripe wood in summer, or whenever they can be obtained. The fruiting

garden. The cottager understands the value of fruit-trees and bushes in the garden attached to his cottage. Amateurs are turning their attention more to fruit growing, and there are places suitable for cordons and other kinds of trained trees. In open places I should plant standards on free stocks of Pears, Apples, and Plums. I remember a garden in the country where an old Pear-tree formed a conspicuous feature all the year—in the spring and summer flowers and fruit, and in the autumn for the beautiful colour of its foliage when dying. It may be mentioned that the Pear is a long-lived tree.—E. H.

in succession for fully six weeks. *Gordonia* is related to the *Camellia*, and the pure white flowers, which vary from 3 inches to 3½ inches in diameter, although more cup-shaped, resemble single *Camellia* flowers. This small tree was discovered in 1765 near Fort Barrington, on the *Altamaha* River; it has entirely disappeared, however, as a wild plant, and it has only been preserved by the specimens cultivated chiefly in the neighbourhood of Philadelphia, where it was sent by its discoverers. There are well-established plants on Hickory Path, near Centre Street, and on Azalea Path, and in these sheltered positions the plants are doing well and have not suffered at all in recent severe winters. This *Gordonia*, however, grows more rapidly, and to a larger size, in the middle States, and there are many good specimens in Pennsylvania gardens. —“*Arnold Arboretum Bulletin*.”

The Manna Ash (*Fraxinus Ornus*).—This Ash belongs to the group popularly termed Flowering Ashes. It is a native of Southern Europe and Asia Minor, and has been grown in this country for at least 200 years. In a state of Nature it grows about 60 feet high, and there are trees in this country of a similar height. It usually has a rather short trunk and wide, shapely head, clothed with ample leafage. In May or early June large panicles of fragrant flowers are borne freely, the conspicuous part of the bloom being the narrow white petals. Fine clusters of yellowish or reddish fruits are borne during August and September. It is an excellent tree as an isolated specimen for lawn or park, as it thrives in a great variety of soils and gives little trouble. The best trees are usually found on loam of good quality that is permanently moist. Several forms have been given varietal names, but generally they are no improvement on the type.—D.

The Phillyreas.—The *Phillyreas* form a useful group of evergreen shrubs or small trees from the Mediterranean region. They are easily increased by cuttings of half-ripe shoots inserted in sandy soil in a close frame in summer, whilst seeds also vegetate freely. Four species have been described. Of these, *P. decora*, sometimes called *P. Vilmoriniana*, is the most distinct. At one time it was increased by grafting it upon stocks of the oval-leaved *Privet*, but plants so raised were short-lived and cuttings root quite well. It forms a spreading bush and bears fragrant white flowers from axillary buds in April or May, the flowers being followed by black fruits. *P. angustifolia* is a dense bush growing 6 feet to 10 feet high, and has white flowers. *P. rosmarinifolia* has very narrow leaves. *P. latifolia* sometimes forms a small tree 18 feet high, with a trunk a foot in diameter. It bears whitish flowers which are not very conspicuous. *P. media* appears to be little more than a variation of *P. angustifolia* or *P. latifolia*. There is little to choose between the various species, though *P. decora* is perhaps the most attractive.—W. K.

Kelreuteria paniculata.—When selecting trees for positions on lawns or other prominent places about the garden this summer-leaving species should be kept in mind, for it is attractive in leaf, flower, and fruit. Moreover, it does not outgrow its position very readily, for though fully developed examples may be 30 feet or 40 feet high, with a wide-spreading head, such dimensions are not attained until the trees are of considerable age. A native of China, it has been grown in this country for about 150 years, and fine specimens are to be found in various old gardens. A

very large one existed a few years ago on the slopes near Windsor Castle. In July large heads of yellow flowers are produced, the inflorescences being branched and often a foot or more long and nearly as wide. In very sunny years good crops of fruit are produced. It is a sun-loving tree and must be given a position sheltered from cold winds, but not shaded in any way.—D.

The American Mountain Laurel (*Kalmia latifolia*).—The various kinds of *Kalmia* are very beautiful and suitable for almost any part of the country where lime is not present in the soil in any appreciable quantity. Of the different kinds *K. latifolia* is one of the best. It varies a good deal in habit, and in some gardens scarcely exceeds 4 feet in height; elsewhere it may be as much as 10 feet high with a very wide spread. The flowers are white suffused pink or sometimes rose-coloured, a good deal of variation being noticeable in a group of seedlings. The flowering time is June, when it is certainly one of the most beautiful shrubs in the garden. Wherever *Rhododendrons* thrive it may be expected to give good results, but it is, perhaps, most at home in the moist, mist-laden valleys of the west. In Sir John Llewelyn's garden near Swansea a number of very fine examples exist. Although seedling plants grow very slowly for several years it is much better to rely upon seeds for propagation than to attempt any other method. The next best way is layering. Imported plants dug up from the hill country of the Eastern United States have been tried, but they are rarely satisfactory, growth for several years being very slow. Like other kinds of *Kalmia* this possesses poisonous properties, and plants and cut branches should not be so placed that they can be eaten by stock.—D.

The Tulip-tree on the lawn.—This is a very handsome tree, especially when in flower, but considering that it was introduced from North America in 1663, it is not so common as one might expect. I have seen some good specimens in the south and west of England, and I have met with it in the eastern counties, but I think more might be planted. Try it first in sheltered places where the drainage is right.—E. H.

PLANTS AND FLOWERS.

FERNS.

HARDY FERN NOTES.

THE COMMON HART'S-TONGUE.—I have just been looking at a plant of this which has occupied a shady position on rootwork for some years. It covers more than a square yard of ground, has about 100 fronds each some 2 feet in length, and exhibits a richness of verdure not, I think, to be equalled by any other member of a very numerous family. I doubt if the value of this native species is fully realised. The numerous crisped and lacerated varieties are favoured by growers of hardy Ferns, but the parent form is too common to find a place with them. Can, however, any reader of this paper name a Fern which in luxuriant verdure surpasses it? If it came to us now from a foreign land it would, without a doubt, be in great demand, but as it can be found growing in our hedgerows and woods it is not held in much estimation. There is, however, a vast difference in this Fern in its highest form and when there is an absence of culture. Because it is of an accommodating nature it is generally used as a kind of stop gap plant, any impoverished bit of ground being considered good enough for it. Let me plead, however, for better treatment. Give it some good nourishment—it dearly loves a bit of rotten dung—and you will not regret having spent a little time on the old Hart's-tongue.

HYPOLEPIS MILLEFOLIUM.—A pretty little Fern this for adorning bare spaces. It has the same manner of growth as the *Bracken*, and, when established, grows at a tolerably rapid rate. It also has an accommodating nature, thriving, of course, in the shade, but living and looking well when exposed to sun. I put some plants on a very dry border early in spring. They were not watered, but came along very well during the long dry spell, and now, under the influence of abundant rainfall, they look very nice and are covering the ground. It grows about 9 inches high, the fronds being finely cut and of a pleasing glaucous green. It ought to be useful for clothing bare spaces near and under trees.

THE COMMON POLYPODY.—Few, probably, know how impressive this Fern is when seen in large breadths and covering many square yards of ground. I have only once seen it in this condition, and came to the conclusion that its decorative worth is not fully recognised and that used in this way it is one of the finest dwarf evergreen plants we have. Broad and rather steep banks bordering the drive leading to the mansion and several hundred feet in length were completely carpeted with this Fern. I cannot say if it was planted or if advantage had been taken of the fact that it was indigenous. The *Polypody* was frequently found growing wild in the district, but it has almost disappeared, owing to the operations of the basket-men, as they are called here, who have rooted out Ferns, Primroses, and everything they could get to sell in the neighbouring towns.

FERNS AND LILIES.—A member of the household conceived the idea of converting a bare, rather unsightly corner into a thing of comparative beauty, and, I am bound to say, has succeeded. This place forms an angle between a tall *Privet* hedge, with big *Willows* at the back, and the dwelling, which is covered with old-established *Ivy*. Seeing that the soil was, in a great measure, filled with roots, the prospect of successful culture did not seem rosy. The ground, however, was well broken up and planted with Ferns, a variety of the *Hart's-tongue* named *projectum*, which has broad, upright fronds and is much dwarfer than the type, and some of a lacerated kind being chosen. The result is good. An unsightly spot has been converted into a verdant corner. Moisture was, of course, given as required, and the plants are now (mid-August) throwing up secondary fronds. The advantage of using the *Hart's-tongue* varieties is that they remain green all through the winter. It has occurred to me, however, that this would be an ideal spot for *Lilies*, which are always happier in intimate association with other forms of plant life. I think of planting *L. tigrinum*, *L. pardalinum*, *L. speciosum*, and *L. Szovitzianum*. They will have shelter from spring frosts, cold, rough winds, and hot sun, and ought, I should imagine, to be happy. BYFLEET.

NEW FERNS OF 1915.

ONLY three were honoured, and they are all varieties of British species. On October 26th a first-class certificate was given to a grand variety of our native *Hart's Tongue* bearing the name of

SCOLOPENDRIUM VULGARE CRISPUM SPECIOSUM.—The long, gracefully-arching fronds of this are beautifully crisped.

SCOLOPENDRIUM VULGARE PLUMOSUM PERRY'S VAR. is a very handsome plumose variety much divided at the tips. Award of Merit October 12th.

POLYPODIUM DRYOPTERIS PLUMOSUM has broad, overlapping pinnules of a particularly soft tone of green. Award of Merit September 14th.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

THE ROCK GARDEN AT BELLE ISLE.
 BELLE ISLE is a quaint, old-world place on Lough Erne, where the "Annals of Ulster" were written in the year 1498 A.D. (the ancient name was "Ballymacmanus"). When we came in for this "Land of Promise" twelve years ago the old house was partly surrounded by monster trees which kept out the view on one side, though towards the south stretched the lake, with its changing shadows and moods, four miles across to the rugged hill of Knockninny (the old deer park of Belle Isle).

It requires determination before daring to fell a fine old tree, but we had to harden our hearts, and my husband had several cut down. This opened out a slightly inclined stretch of rough parkland with a background of more old

(though not very large) stones arrived in cots from the islands, and then a beginning was made; a rough "stratum" was built up, and, as the ground there was swampy and held moisture (the subsoil being of stiff blue clay), my ambitions soared to having a rocky pool. So under this first "outcrop" of rock I marked the outline for the pool, each small bay or promontory having its "reason" or "cause" in some outjutting rock, etc., etc., opposite. This was the modest beginning of what has since spread into a very satisfactory piece of rock and water gardening, which, though not finished, is a decided feature now, as the brilliant colouring of *Erica carnea* (alpine Forest Heath) and *Erica hybrida* which were planted among, and falling over, the outcrop of rocks, reflects brilliantly in the pool beneath. The *Ericas* were planted in turf-mould and sand (which had to be carted several miles),

rocky steps up over the artificially-made heights (though I hope they look as if they had been there always) to the moraine I made last autumn (after having been fired by Mr. R. Farrer's description of one), and which has proved a safe home through last winter's torrents for some rather difficult alpinists. Here *Cotoneasters* crown the rock heights or are reflected in more pools below, and throw shadows over the rocky caves which I have found of such use in planning out my "picture." These *Cotoneasters* have been a great help to me, and I use all kinds, from the old *Cotoneaster microphylla* and *C. horizontalis* to the tiny *C. adpressa* and *C. congesta*, delightful little rock-hugging shrubs a few inches high. The prostrate *Junipers*, dwarf glaucous shrubs, with the larger *Cotoneasters* cluster over the rocks and satisfy the eye with their quiet, subdued colouring. The



Part of the rock garden at Belle Isle. From a photograph sent by Mrs. J. Porter-Porter, Belle Isle, Co. Fermanagh, Ireland.

timber, amongst which were gnarled Oaks shadowing what used to be "ye olde fish ponds" of Belle Isle and the old walk to the Temple Hill Wood. This felling of trees gave us air, light, and shadow, but we still wanted colour and "feature." I longed for a

ROCK GARDEN to be where the cattle now grazed; the site (looking S.E. and S.W.) was suitable, as were the surroundings, and before long my dreams began to be realised. I gave constant thought to the planning of this future rock garden, studying the lie of the land, the grouping of trees, the background, and the side views. My idea was to have a rough outcrop of rock, ending abruptly here and there, running up into miniature hills, and dwindling into valleys. I imagined them clothed with alpine Forest Heaths and with many others of my favourite rock plants, all growing in long, irregular drifts, or hanging over the boulders. The first loads of beautiful water-worn

and are yearly spreading. They were in glorious bloom last March. A little rocky promontory is a safe home for small *Primulas*, such as *P. rosea*, *P. involucrata*, and *P. farinosa*. Here also is a happy specimen of the weird Canadian pitcher plant—*Sarracenia purpurea*—and crimson *Mimulus* ramps about. The rough foreground is still very unfinished, but I hope before long to make it into a suitable home for low-growing, moisture-loving things, and to have the bank to the right aglow with tall crimson *Primula japonica* and *P. pulverulenta* among groups of *Elymus giganteus*, *Spiræas*, *Saxifraga peltata*, etc. This small beginning fired me with the ambition of having a wider rock garden. Here are more *Ericas* in long drifts among the Mossy grey rock steps and boulders, which also shelter *Ramondias* and all sorts of tiny treasures that love shade and moisture.

The illustration shows my ambitions partly realised and a continuation of the

rough, irregular steps (shown in the illustration and which I flatter myself look like the rocky, dried-up bed of some former mountain torrent) are clothed with *Arenaria balearica* and with my still more beloved *Arenaria purpurascens*. Dwarf Mossy crimson *Saxifrages* creep into the hollows, and trailing alpine *Phloxes* with their beautiful pink and mauve stars fall over the sunny sides of the rocks and mingle with the dwarf pink-flowered *Dianthuses*, such as *cæsius* and *arvensis*. Dwarf *Campanulas* ripple among the steps, and large, irregular colonies of mauve Mountain Violets rejoice your heart from the first days of spring well into the autumn (and some even into the depths of winter). I must specially mention a delightful one I got in February last (*Viola pseudo-gracilis*), which has flowered profusely ever since among stony débris. In the rougher parts of the rock garden these two useful Mountain Violets (*Viola cornuta* and *V. cornuta* Papilio)

clothe the waste spaces and seed themselves everywhere. Sea Pinks (or Thrift) are useful, especially the rose-coloured ones, and their evergreen, tufty foliage is bright in the winter. *Ionopsidium acaule*, a beautiful little annual sown at intervals through the spring and summer between the rocky steps and boulders, gives you rills of fascinating mauve flowers (about 2 inches high) for months at a time. Some were in flower here, constantly through the winter.

I allow no yellow, orange, or salmon-pink flowers in or near my rock garden. Some rock gardens are ruined by these colours mingling with the rose-coloured blooms of such things as *Erica carnea*, pale pink rock *Dianthus*, etc., etc., which, with an over-abundance of unnecessary rocks, give a fussy and incongruous look which is disturbing to the eye. Yellow reflects sunlight and is beautiful, but not when clashing with pink or rose colour. As many of the plants in my rock garden are *couleur de rose* I aim at large stretches of soft mauve, grey, white, and blue contrasting smoothly with, and running into, the brighter pinks and crimsons. Beyond the rock garden and over another pool is the other "vista" of my ambition, but as it does not belong to our subject I dare only say a few words about it. Here I have planned my

ROSE DELL, going off into the shadows of the trees in the far background, broken here and there by great waving colonies of the hardy New Zealand Flax (*Phormium tenax*), with their great glaucous leaves, bold clumps of tall, pale-blue *Delphiniums*, towering mauve-plumed *Thalictrums*, giant *Rheum tanguticum*, with its coral-red flower-spikes, or seed-heads, over 9 feet high. Here, too, in the far background (for the autumnal picture) are *Tritomas* between clumps of crimson and purple-leaved Japanese Maples. In the waste sunny spots are tangles of the common Sweetbriar and Honeysuckle, and to carry the eye further back are rugged poles here and there up which climb crimson and pink Penzance Sweetbriars, Blush Rambler Rose, and the glorious white, wild Himalayan Rose, *R. Brunoni grandiflora* (this is the only Rose on which I leave the seed vessels, as they brighten the long winter months with their glowing and abundant mass of hips, nearly as bright as Holly-berries), and a wealth of other Rambling Roses, with pale mauve and pink autumn *Phloxes* at their feet (*Selma* is one of my favourites). Long drifts or colonies of old, rather rugged Lavender bushes stretch here and there among the Roses and amalgamate all. Flat, water-worn stones from the lough side are used here and there to give dry footing. I find "Rambling Rector" another capital Rose for sending up a tree. I planted one three years ago to a tall old Spruce, and it is now half-way up, and is fighting there for supremacy with a *Clematis montana* and a Virginian Creeper.

Looking back on what used to be an uninteresting, nearly flat stretch of rough park land, this present rock garden (with Rose dell in the background), as it is now, is satisfying to the eye, and though still very unfinished is now a thing of joy. This rock garden is unlike any I have ever seen. A studied wildness has been my aim. I am thankful that my lot has fallen in a beautiful, unspoilt, old world place, and the labour of making this rock garden has been one of love. To quote from Mrs. C. W. Earle's "More Pot Pourri," "the best thing in old age is to care for nothing but Nature—our real old mother—who will never desert us, and who opens her

arms to us every spring and summer again, warm and young as ever, till at last we lie dead in her breast." J. P. P.

Tanakæa radicans.—Some experience a difficulty in growing this Japanese alpine. It should have a moist position if the best results are to be obtained, and delights in a damp, shady situation where it can grow freely. Peaty soil it prefers, but it will also do well in loam and leaf-soil, with a little sand.—S. ARNOTT.

INDOOR PLANTS.

POINSETTIA PULCHERRIMA.

FROM November to the end of January flowers are scarce and valued accordingly. However, during this dull time the Poinsettia is to be had in perfection. The gorgeously-coloured "bracts" of the most intense scarlet are attractive during the shortest days, and a few of them brighten up stove, conservatory, or rooms in the most pleasing manner.

CULTURE.—The flowers, as a rule, are over by the end of January, and from that time until the beginning of May the plants will remain dormant under the plant stage of a warm house. They will not need any water or other attention at all at this time. About the beginning of May they are brought out from beneath the stages, watered thoroughly, and then placed in a frame or house where the temperature is about 65 degs. Here they will speedily begin to grow, and emit young shoots all up the stems. When these are about 2 inches in length they are taken off as cuttings; each one is detached with a "heel"—i.e., a very little piece of the old wood attached—and they should then be inserted into the smallest-sized 2½-inch pots, filled with a half-and-half mixture of leaf-soil and sand. They are then plunged up to the rim of the pot in Cocoa-fibre in a hotbed or Cucumber-house, where the bottom-heat is about 70 degs. Here they are not allowed to suffer from want of water, although they do not require much of this until the roots are formed, and they are also shaded from bright sunshine. Roots are soon made, and they are then withdrawn from the bottom-heat and placed on a shelf in the pit, and in a week or so after this shifted into larger-sized pots. From 2½-inch pots they are generally put into 3-inch ones, and from the latter into 6-inch or 7-inch ones, and in this size they are allowed to bloom the first year. In

POTTING, use a rough mixture of turfy loam, sand, and leaf-soil. Proper drainage is of the utmost importance, and firm potting adds to success in culture. Poinsettias lose much sap when injured, and this, having a weakening tendency, must be avoided as much as possible. After potting, keep close and shaded from bright sunshine for a few days; afterwards they will bear all the light possible. From the last potting until the middle of September they do remarkably well in a cold frame, and they should never be grown in a strong heat at any time in summer, as this causes them to make long, straggling growths, which are neither ornamental nor useful. Dwarf, sturdy shoots always produce the finest heads, and short plants are always more valuable than long ones. Another way of securing serviceable plants is to cut the old stems down to about a foot from the bottom, and allow all the side-shoots which sprout out to grow. In this way some of them may have six, eight, ten, or twelve shoots, and as each of these will produce a showy head, very attractive plants are the result. When they are treated in this way it is best to repot the old plants as soon as the young shoots are a few inches long, and they

may be potted again when growth is more advanced. As a rule, those branching specimens flower well in 8-inch and 10-inch pots, and apart from allowing the shoots to remain on instead of taking them as cuttings, these plants are given the same treatment as those raised from cuttings. In the autumn they are taken into a warmer and drier atmosphere, and here they soon develop their brilliant heads. Throughout all the period of their growth the greatest attention should be given to watering Poinsettias at the roots, as allowing them to become dry in any way causes the leaves to fall prematurely, and then the heads are poor.

NOTES AND REPLIES.

Lasiandra macrantha.—Though this splendid autumn-flowering shrub is now by the latest botanical authorities called *Tibouchina semi-decandra*, it is far more generally known in gardens by that at the head of this note. At one time it was considered that the temperature of a stove was necessary for its successful culture, but it can be well grown and flowered in the greenhouse. The typical kind is of a somewhat rambling nature, and is seen to considerable advantage when trained to the end of a glass structure or in some similar position. The large salver-shaped blossoms are of a rich purplish-blue tint. There is, or was, a very distinct form, which appears to have almost, if not quite, dropped out of cultivation. In this, known as *Lasiandra macrantha floribunda*, the flowers are very large and richly coloured, while they are freely borne when the plant is comparatively small. This variety requires more careful treatment than the typical kind, which can be readily struck from cuttings. They need to be stopped when young in order to ensure a bushy habit.—W. T.

Garden hobbies.—Some years ago I had an amateur friend who possessed one small glass-house, and his ambition was to grow plants that he could attend to in his spare time, and after much thought he decided to try a few of the smaller Cacti, *Mamillaria*, *Cereus*, etc. Some of the last are suitable for baskets. Epiphyllums also may be grown in baskets or pots and suspended near the glass, and will flower in winter in a temperature of 50 degs., or between 50 degs. and 60 degs., and may be grown in a cool greenhouse. They can be placed in the open air in summer to ripen the growth, and will flower all the better for the change. They are usually kept rather dry in winter to prolong their rest, but this does not refer to the winter-flowering species of Epiphyllums, which require rather better compost than the others, though all require plenty of drainage in the shape of broken oyster-shells and crushed charcoal.—E. H.

Luculia gratissima.—This is one of the bright shrubs in the conservatory at this season, and it makes a better specimen planted in the border than when grown in a pot. It makes a good wall shrub, and is easily trained and kept in condition. Whatever pruning is required is done after the flowers fade, and a little shortening back then is beneficial. Some find it difficult to root from cuttings. When the shoots are getting a bit firm they will generally root under a bell-glass, with care in watering and wiping the damp from the inside of the glass every morning; but the surest way of obtaining a stock of young plants is to put a young plant into a frame where there is a little warmth and layer every young shoot.—Every bit will make a plant.—E. H.

The berried Solanums.—These are not now so popular as was the case years ago, Solanums having, to a great extent, been superseded by flowering plants. Yet, they are attractive in their way, and neat, bushy specimens in 5-inch or 6-inch pots are not without value. Plants lifted some time ago, potted up, and placed in heated, but airy, pits are now filling their pots with fibrous roots, and can be removed to the greenhouse at any time. Careful watch must be kept for aphids, to which the plants are subject, and which soon disfigures them.

OUTDOOR PLANTS.

CLEMATIS NELLY MOSER.

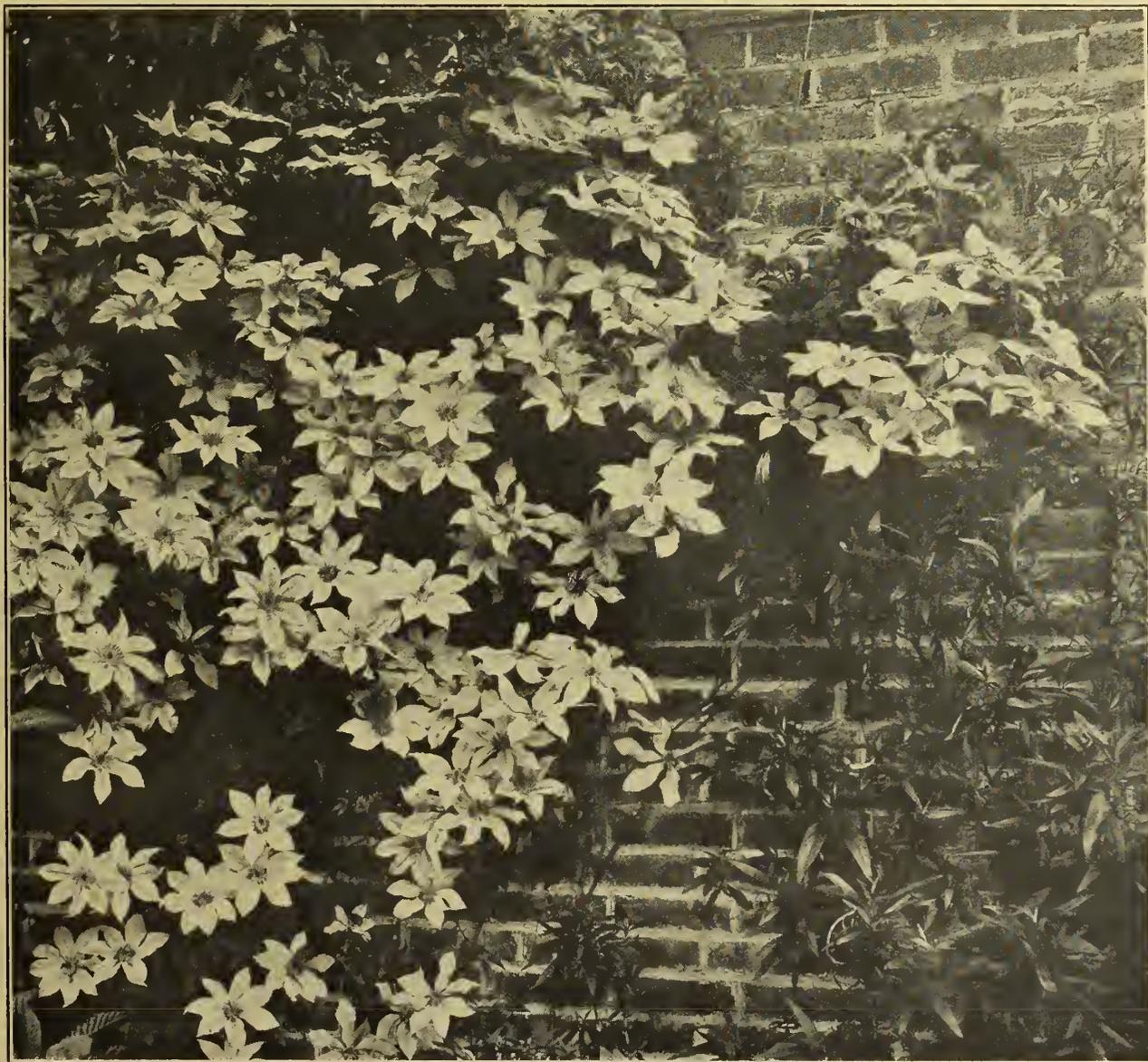
This Clematis combines all the good qualities of the lanuginosa hybrids, certainly the most aristocratic branch of the family. It is of vigorous growth and not prone to disease. The white flowers flushed with pinkish mauve have a striking red bar in the centre of each petal. Its early summer glory is followed by successional flowers on the secondary growths until the end of October. The plant shown in the illustration is growing on a west wall, in a 9 feet border, among dark-foliaged

greatly from *M. didyma*. The differences are noticeable in many respects, the height being greater, while the size and colour of the bracts and calyces vary from those of the more usually-grown sort. The corollas, too, are purple or reddish instead of the scarlet of *M. didyma*. It is, however, equally easy of cultivation, and attains to a height of nearly 4 feet; indeed, in the autumn I noticed in a Glasgow park plants which exceeded this height.—KIRK.

The Old World Dog's Tooth Violets.—Beautiful as are the New World species of Dog's Tooth Violets, as represented by such charming plants as *Erythronium*

varieties will give good results. A scarce Old World *Erythronium* is *E. sibiricum*, which has large flowers and prettily-mottled leaves. The colour of the flowers is a kind of pink. These *Erythroniums* flower in spring and do best in loam and leaf-soil. They move best just when the leaves die down, but are generally purchased with other early bulbs. With the exception of *E. sibiricum* these Dog's Tooth Violets are cheap, and should be planted about 3 inches deep, top-dressing with a little soil annually.—S. ARNOTT.

Replanting Montbretias.—One of the best arguments in favour of the biennial lifting and replanting of colonies of Mont-



Clematis Nelly Moser on a wall at Nymans.

shrubs. No animal manure has been used in its cultivation. A quantity of decayed refuse was dug into the border when it was made, two or three years before the Clematis was planted. A mulch of leaf-mould is given during the summer months. Little pruning is required, the dead points of the shoots being cut back to growing buds in February. Clematises love to cling by their leaf-stalks, and, when grown on a wall, strings should be strained from fixed wires or Bamboos to enable them to do so. J. COMBES.

Nymans Gardens, Handcross.

Monarda fistulosa.—This is sometimes styled the Wild Bergamot, and differs

giganteum and others from the American Continent, those from the Old World deserve consideration. They are charming flowers, even though their North American sisters have a still greater delicacy of appearance and more refined beauty. These *Erythroniums* are quite attractive in their season, their only fault being that they are rather too evanescent. *Erythronium Dens-canis* is the best-known Old World species. There are two forms of this, that known as the grandiflorum set being the finer. The flowers vary from deep rose-purple, through violet, rose, and pink to white. Some named varieties, such as Franz Hals and a few others, have been selected, but any of the grandiflorum

bretias came under my notice in the autumn. A border of perennials had been cleared out in the previous winter. Among the hardy plants were several good clumps of Montbretias, which, when the lifting was going on, were taken out as carefully as possible. Some stray corms escaped, and as they came up strongly in spring they were permitted to develop. The result was surprising. These Montbretias were the best in the garden, reminding one of miniature Gladioli. It would seem, therefore, that the more thinly the corms are planted the better are the results, and even when biennial replanting is resorted to it would appear that there is still a tendency to allow too little space.—K.

VEGETABLES.

FORWARDING EARLY PEAS.

It may be thought that this date (December) is full early for this work, but not so, as with cold frames the germination takes some time, and much depends upon the shelter afforded. We have no lack of excellent varieties for the work, as there has been a great gain of late years. I do not advise the very small podders, such kinds as May Queen, 2 feet to 3 feet high, an early Marrowfat and very hardy, will compare favourably with the smaller growers as regards earliness. From a warm border even in the Midlands I have had this variety, given the protection of a cold frame at the start, the third week in May. Other excellent early Peas are Early Giant, a 3 feet to 4 feet variety, and Ideal, of nearly the same height. Duchess of York is a little taller, but an excellent variety. Empress of India is a great gain on the older small round Peas, which have none too much flavour and age so quickly. Another very good cropper and of good quality also is World's Record. I do not think any variety can beat it for crop, but it is a few days later than May Queen. First of All is a favourite in many gardens for early work. This is just over 3 feet, but very early and a robust grower. There are others, such as The Pilot, 3½ feet, Laxtonian, a dwarf variety but excellent, only 18 inches to 2 feet in height, and useful where space is limited, and the older well-known Gradus, excellent if a good stock is secured. This is 3 feet to 4 feet in height. If even dwarf forms are liked there are good selections, but I prefer those noted above, as I think the quality better and they give large pods. Dwarf kinds, such as Little Marvel, Harbinger, Reading Wonder, Excelsior, Chelsea Gem, and Laxtonian, named above, are from 1 foot to 2 feet high, of good quality, and very early.

By giving protection at this season there is a great gain. I also prefer new seed, as the seedlings are more vigorous. For very early gatherings I have in some years sown in December, but with cold frame protection I advise sowing as early in January as possible. Even then a little care is required at the start. As most growers know, there is but little gain in sowing thus early unless frost is kept at bay, hence the many failures when seeds are sown too early in the open, even on a south border, as the ground is too cold to allow of free germination, and if this is too long about, the seedlings are much weakened. I am not at all particular as to the

MODE OF SOWING. I have had equally good results from sowing in boxes, pots, and in pieces of turf, the turf turned and a drill made to hold the seed. Doubtless 3-inch or 4-inch pots are the best, putting, say, six to nine Peas in each, according to size of pot. Even then, should they appear at all crowded the centre ones should be taken out. Boxes 5 inches to 6 inches deep do well, with boards or slates as dividing lines. From 3 inches to 5 inches space between each will be sufficient. When planting out it is an easy matter to remove one end of the box. The seedlings come out readily with the roots intact, and can be planted out without any injury if done carefully. For sowing in I prefer a good compost, using coarse manure as drainage. In boxes there must be ample drainage. For pots, one good crock will suffice, with plenty of coarse material over it. When turves are used these should be at least 4 inches thick. Moisture must be given sparingly till growth is active. The frames should be kept close at the start,

and the pots or boxes placed close to the glass on a hard coal-ash bottom, and ample covering given in severe weather. Dry Bracken is excellent. Do not cover when the weather is mild, and when the plants are well above the soil ventilate freely in fine weather and give more moisture, but early in the day. Early in March, according to the weather, plant out on warm, rich borders in deep drills. W. F.

POULTRY MANURE.

IN GARDENING ILLUSTRATED recently the value of this was referred to. I think we do not make nearly enough use of the means we have to enrich the soil at a time there is—and will be more so in the future—a scarcity of animal manures. A large poultry-keeper I know and who is also a market gardener finds the above manure of great value, but it is not used at random and is also well prepared, each week being placed in a large heap. Layers of soil are used to cover it when collected, and as it is mostly dug in from November to March the material is then like guano and of great value. I have found it of great value for all the Cabbage tribe. Some Brussels Sprouts planted at the same time as others, but not given any of the manure, are now only half the size. Similar results are found in other cases. Few manures are so valuable when properly prepared. Poultry manure should not be used too freely and should be well incorporated with the second spit. It is then readily taken hold of by the fibrous roots. For surface-dressing I have for years used it mixed with leaf-soil laid up some months before mixing.

Other manures often considered of no value used in this way can be made most useful. By the addition of soot and lime in the case of soils that require them a lasting and not at all costly food is to hand. When we consider the enormous amount of money spent on guano—some of it inferior in quality to the above—it will be seen that we can do much to meet our own wants. In these days poultry-keeping will be a valuable asset to the garden if the best use is made of the manure, which may be increased by a liberal use of dry soil weekly in the runs. F.

REFUSE HEAPS.

Now is the time for dealing with the accumulation of garden refuse, which is usually put into some out-of-the-way corner. It is a good plan to separate the matter, placing all that is in a partly-decomposed condition in one heap, and the remainder, such as hedge trimmings, prunings, cabbage stumps, and the like in another, to be burnt. The latter when so treated are valuable for a variety of purposes if kept dry. The ashes should therefore be placed under cover before rain falls and renders them less valuable. The former, when turned two or three times, may be used in lieu of manure, but as such matter contains myriads of weed seeds and a host of insects lime should be freely mixed with it while the turning is going on. This, combined with the fermentation which usually follows the mixing together of such a variety of refuse, is the means of disposing of both. Where the total quantity of refuse is but small the whole is then best treated by fire. Work of this description can be done when wet weather causes a suspension of ground work in the kitchen garden, as at present. G. P. K.

Lettuces to stand the winter.—A large number of the Hardy Winter White will now be planted at the foot of walls facing

south and west, after the soil has been lightly loosened with a fork. From three to four rows, 9 inches apart, with the same space between the plants, are accommodated in this way, and the plants, especially those nearest the wall, turn in early in the spring and supplement those grown in frames. In former seasons it has been the rule to wait until the fruit-trees have shed their leaves, but as the Lettuces were quite ready for getting out it was adhered to this year. As the variety named always stands the winter without any material damage a good lot will at the same time be planted on a border. The remainder, or the smallest of the plants, will be left in the seed drills to be planted as early as circumstances permit next spring.—G. P. K.

Forcing Asparagus.—Asparagus is easily forced when one has strong, well-grown roots. When I had much forcing of this and other things in hand, part of the garden was given up to the growth and preparation of the plants. A certain portion of land to meet contingencies was trenched and manured every year, and seeds sown in drills 18 inches apart, and the seedlings thinned to become strong. In the course of three or four years it was lifted for forcing, as it was strong enough to produce Grass of good size and quality. The tops were cut down early in autumn for early forcing on specially made hot-beds with tree leaves and stable-manure, the latter being chiefly used to hold the leaves together. The beds, as soon as the frames were on, were made up till the heat rose to 75 degs. or 80 degs. The roots were then packed close together on the bed, and covered with light soil 4 inches deep, and the mats put on again till the Grass was coming through the soil, when the covers were removed and air given to colour the Grass at the same time without lowering the temperature to check growth. Of course, there are other ways of forcing Asparagus. I have forced it when planted thickly in flat baskets or boxes in the Cucumber-house or in other places where the conditions are suitable. The main thing is to have a stock of suitable roots and suitable warmth.—E. H.

Mercury, or Good King Henry.—This is the subject of a note at p. 614. Having grown this largely in Lincolnshire a few words as to its use may not be out of place. It was mostly used as a spring vegetable as soon as the young growth could be had, and to get the best results the leaves must be gathered when quite young. I cut the plants over twice a week. It was cooked in much the same way as Spinach, taking care to reject any old shoots. Used thus there is a total absence of bitterness. It is well when not using the growths to go over the plants occasionally and remove the old shoots. I think its chief value is as a spring or early summer vegetable; at least, growth is more rapid and the produce of better quality at that season.—F. K.

Protecting vegetables from frost.—Care will now have to be taken that Lettuce and Endive which are being preserved in frames are not injured by frost, as where these are of fairly large size decay sets in very rapidly if frost is allowed to reach them. In the case of severe weather the lights should have a thick covering of litter or Bracken placed upon them, and if the frost continues, allow it to remain on until this has passed away. The sides of the frames will also have to have some litter placed around. On the other hand, ventilation will have to be attended to on all fine days. Parsley will also require attention. Once let Parsley become injured by a severe frost or beaten down by snow, decay will rapidly set in. Parsley

must not upon any account be coddled, a free circulation of air being essential during damp or mild weather. Protection from frost and snow and a free circulation of air at other times are what is needed.

French Beans are by no means a profitable vegetable forced in what may be termed mid-winter. Unless the demand must be met, I would not advise sowing seeds till early in the year. On the other hand, with close attention to cultural details and the use of small pots, a small supply may be secured in February. The usual mode of sowing in 7-inch or 8-inch pots is not advisable for this very early crop, as the root-space is too great. The best results are obtained if sown in 6-inch pots, and these will need bottom-heat from the start. A light compost and ample drainage are a necessity. Avoid crowding the plants—three to four plants in each pot being ample. It is best to sow in the fruiting pots, filling the pots nearly to the rim, as later top-dressing is of no value at this season of the year. It is important to use seed of this season's growth, such seed being more vigorous. Grow as near the light as possible, and in a temperature of 65 degs. to 70 degs. Water must be afforded with great care.—F. W. GALLOP.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM DECEMBER 23RD.—*Jasminum nudiflorum*, *Genista hirsuta*, *Erica mediterranea hybrida*, *E. alpina*, *E. carnea* (in variety), the *Cornish Heath*, *Strawberry-tree*, *Daphne Mezereum*, *New Zealand Veroniceas*, *Andromeda floribunda*, *Laurus-tinus*, *Daphne Dauphini*, dwarf *Goose*, *Osmanthus ilicifolius*, *Viburnum rhytidophyllum*, *Winter Heliotrope*, *Hellebore*, *Violet Cress*, *Tufted Pansies*, *Polygala Chamæbuxus purpurea*, *Aubrietias*, and *Polyanthuses*.

WORK OF THE WEEK.—The majority of the Michaelmas Daisies having been replanted in a newly-formed border it was found that a large number of surplus plants was available for naturalising, therefore a few groups were planted by the waterside where others previously planted are doing very well. A mixed lot has been put out on the ridge of an old lane, breaking in among the trees and shrubs wherever possible and forming a loose border to a neighbouring pathway. A start has been made with the digging up of vacant ground among shrubs. It is essential that the vacant spaces required for seeds later on should be well exposed to the weather. Where this is not required it is advisable that the ground should be forked over in order to bury the leaves, and for the good of the shrubs, at the same time improving the appearance of the garden. Any pruning or thinning of shrubs should precede this, in order to avoid the treading of the freshly-turned-up soil. A house used for the storing of vase plants, as well as growing Peaches, has been overhauled, cleaned, and a start made with the pruning and putting into shape of the varied collection of plants. Repotting, staking, and such work will be reserved for wet weather. A start has been made with the pruning of Clematises. Where these handsome climbers are growing on tripods they are thinned out, leaving four or five growths only to a pole, as these are found to be quite sufficient to form a well furnished column. If left too thick, the plants become congested and are not so attractive when in bloom. Where a tripod only has to be furnished, it is an excellent plan, especially with strong plants of the lanuginosa type, to cut the plants down to within 8 inches of the ground level. These will, in spring, throw up strong young

growths, which quickly reach the top of the tripod and fall over, forming beautiful masses of colour. Evergreen species are thinned out carefully, leaving sufficient growth to furnish their supports. The little red Mexican species (*C. coccinea*), which invariably dies to the ground each winter, is cut right down. Another large batch of *Erica mediterranea hybrida* has been planted to extend the Heath garden. Roots of *Tropæolum speciosum* have been planted at the base and on the shady side of Hollies and other shrubs. A few hundred bulbs of *Scilla sibirica alba*, having come to hand, they have been dotted among an existing broad band of the blue form. E. M.

Sussex.

SOUTHERN COUNTIES.

Potatoes for forcing.—As planting will shortly have to be carried out, attention will now be directed to the selection of tubers. Those of medium size are preferred, the varieties being Duke of York and Edinburgh Castle. As Potatoes for forcing always succeed best when forwarded in slight warmth beforehand, the tubers will be placed in seed-boxes and stood in a greenhouse. A little fine soil is first put into the bottom of the boxes, and on this the tubers are stood on end close together, eyes upwards. As each box is filled a little soil is dribbled between the tubers. As the eyes are already on the point of starting it will not be long before they are in fit condition for planting. Not only is it necessary to get the soil in beforehand, but this should be done sufficiently in advance of planting time for it to become warmed through. The compost consists of loam and leaf-mould in equal parts, with some old potting soil added, and the mixture, when the bed inside the frames has been levelled, will be placed thereon about 9 inches to 10 inches deep. The lights will then be put on and the frames kept close until the tubers are ready for planting.

Early Carrots.—As these are in request early in the season an effort is made to produce them as quickly as circumstances permit. Frame culture, with the aid of a hot-bed, is resorted to, and the same kind of compost as that used for Potatoes, with a small quantity of lime rubbish added, is employed. When this has been in the frame long enough to become warm, sowing will take place at once, and until the plants break through the soil the frame will, with the aid of mats thrown over the lights, be kept dark to hasten germination. For this first or early sowing a quickly-maturing Short Horn variety is preferred.

Rhubarb.—After the recent frosts Rhubarb will now force readily outdoors when subjected to the genial heat obtained by the mixing together of a quantity of tree leaves with a little fresh stable manure. Old boxes and barrels with the heads knocked out answer just as well for keeping the fermenting material from coming into contact with the crowns as the proper kind of pots. The bed should be built somewhat higher than whatever is used for covering the crowns with, but openings immediately over the covers must be left so that the latter can be got at readily both when the bed begins to heat and when the Rhubarb is ready for pulling. The materials should be firmly trodden round the pots, etc., as the building of the bed proceeds, and to hold the leaves more readily in place, as well as to conserve heat, the outside should consist largely of stable manure. When fermentation commences the covers should be lifted sufficiently to allow of steam escaping, and a little loose litter cast over them

will, in very cold weather, obviate the risk of the heat being lowered more than is desirable. Unless a great deal of stable manure is made use of in the construction of the bed there is no likelihood of its becoming overheated and the crowns scalded. Such a contingency must therefore be guarded against.

Pea-sticks.—On wet days these should be overhauled, rejecting such as are of no further service and repointing those that can be made to do duty again. The lifetime of Pea-sticks depends on the kind of wood they consist of and the amount of care bestowed on them when not in use. Hazel-boughs form the best support for Peas when they can be had, and if taken care of will last for two seasons. Of Elm, Ash, Hornbeam, and Beech, the two last-named are the most durable and most suitable. Stakes of the first two-named species of wood are seldom of any service the second season.

Bean-sticks.—These, if of Ash or Spanish Chestnut, will serve the same purpose two years in succession. They afterwards come in handy for the making of stakes of different sizes and lengths for the supporting of fruit-trees, etc. An overhauling of the general stock should take place when the haws, owing to inclement weather, cannot get on with outside work, when all that will again be serviceable should be repointed and placed close together in an upright position ready for use. The rejected ones should then be cut up into convenient lengths, and, after pointing them, tied in bundles and stored away in a dry place for future use. The order for any new Pea or Bean sticks that may be required should be given without delay, so that they can be cut and placed on one side while the felling of coppice-wood is going forward.

Young espalier trees.—These, which are as yet, so to speak, in the making, require careful treatment. When the trees are received from the nursery each tier of branches is as near as possible of similar length. To preserve an even balance of growth the same process should be continued until the branches have filled their allotted space. Therefore, when shortening the leading growths situated at the extremities of the existing branches to where the wood is firm and ripe, care should be taken to leave each of a nearly equal length. With regard to the stem portion, which has to be continued in a vertical direction until a sufficient number of tiers of branches has been obtained, this must be cut back to a point just above the wire where the next tier or two horizontal branches are required, and continue in this way until a sufficiency of such branches has been secured. The topmost bud on these cut-back vertical growths, when it breaks, will produce a shoot to extend the stem in an upward direction. The two buds below this will produce shoots which, as they develop, should be utilised for training out, one to the right and the other to the left to form the foundation of the new tier of branches. All shoots which push out below them should be rubbed off. Young wood produced during the past season on the lowermost or existing branches should be cut back to four buds.

Training.—As wired trellises are the usual means employed to support the trees, training simply resolves itself into the tying of the branches and young wood—the latter as straight as possible—to the wires, using fine, soft, tarred twine for the latter and that of a stouter texture for the former. Old ties should be examined every winter, renewing all that are likely to cut into the bark before another season comes round.

Bedding plants.—These require looking to occasionally, when dead or decaying leaves, etc., should be removed. Calceolarias, Pentstemons, and other subjects in frames also require picking over now and again, especially after frost, as the leaves are apt to damp, while the severity of the weather precludes the possibility of admitting air for days together.

Cucumber seed.—Where winter Cucumbers are not grown, and the fruit is in request as early in the year as it is possible to produce it, it is an advantage, if the house is not yet at liberty, to sow seed at the present time and grow the resulting plants on in a stove until they become established in 7-inch pots. Then if transferred and planted out in the house intended for them they will come into bearing much earlier than if sowing is deferred until near the time the structure can be made ready for them. The seeds are best sown singly in small pots filled with light, rich material, as this obviates the necessity for disturbing the roots, as is the case when several plants are raised in the same pot. A propagating-frame is a suitable place in which to raise the plants.

A. W.

MIDLAND COUNTIES.

Hardy fruit.—The pruning and training of hardy fruit-trees should be completed as soon as possible. The planting of fruit-trees has been delayed, owing to heavy rains, 5.30 inches of rain having fallen within the last six weeks. In replacing old wall-trees the old soil to a depth of about 18 inches and 4 feet wide is entirely removed. If the sub-soil is wet and cold, measures must be taken to provide drainage by using broken bricks, covering these with a layer of lime rubble. Cover the drainage material with turves, Grass-side downwards, and fill in with good, roughly-chopped loam; or, failing this, good garden soil, adding lime rubble and charred refuse to heavy soils, especially when planting stone fruits. No manure should be used at the time of planting. Any extra care bestowed at the time of planting will be well repaid later by fruitful trees. Prune all damaged roots and any that are extra long. Place the tree in position and spread out the roots carefully at varying depths, working in amongst them some of the finer soil and making the whole firm as the work proceeds. The topmost roots should not be more than 4 inches below the surface when planting is completed. In planting standard and pyramid trees on heavy and wet ground it is necessary to provide drainage, and the soil should be well broken up. All freshly-planted trees should be staked and a permanent label attached to each. Mulch the trees with some litter or other suitable material, but do not employ animal manure.

Fruit-room.—Examine carefully all Apples and Pears, and remove any which show the least signs of decay. If any are found to have decayed so badly as to cause a damp spot on the staging see that it is made thoroughly dry before placing more fruit thereon.

Perpetual-flowering Carnations.—In the Midlands and further north the main batch of Carnation cuttings should not be struck later than the month of January, and the sooner they are in the better. A good way to strike them is in an ordinary cutting-box filled with silver sand which has been previously washed. Place the box in a house with a bottom-heat of about 60 degs. and an atmospheric temperature of 55 degs. Care should be taken that the cuttings are free from red spider. A good plan is to put the cuttings into a tank of cold water for the night, and next morning insert them in the sand with an

ordinary dibber, afterwards watering them with warm water applied through a rose-can. Repeat the warm water daily for about eight days; after that period spray with a syringe overhead in the ordinary way until the cuttings are rooted, which at this time of the year will take from twelve days to fourteen days. When well rooted pot off singly into very small pots, using a light, sandy compost. The plants of

Euphorbia pulcherrima (Poinsettia) which have finished flowering should be encouraged to ripen their stems by gradually decreasing the amount of moisture at the roots. When all the foliage has fallen and growth is dormant they should be placed in their resting quarters. Examine them occasionally to see that the bark is not shrivelling.

Begonia Gloire de Lorraine.—Plants which have finished flowering will provide a supply of early cuttings, which usually produce the best specimens. Select the finest plants for stock and cut back the old flower-stems, retaining a fair amount of foliage. Afterwards place the plants in a structure having an atmospheric temperature of about 55 degs., arranging them near to the glass. Keep the plants moderately dry until the new shoots appear. Plants of this Begonia and its varieties may be propagated from leaves, but I prefer basal shoots.

Forcing.—To maintain a continuous supply of bulbous and other forced flowers it is necessary to place a fresh batch of plants in heat every week. Azalea mollis, Lilacs, Viburnums, Wistarias, etc., may now be forced with satisfactory results.

Flower garden.—Vacant portions should be thoroughly broken up, leaving the surface as rough as possible, that a good tilth may be obtained when the time arrives for sowing or planting. Deep cultivation is as necessary in the flower garden as it is in the vegetable garden. Therefore turn up the ground to a good depth either by trenching or deep digging, and work in a liberal quantity of rotten manure where the ground is poor, giving the surface a good dressing of soot as the work proceeds. The soot will have stimulating properties and prove a valuable agent in cleansing the ground. These remarks specially apply to those quarters intended for such as Delphiniums, Pentstemons, Phloxes, Sweet Peas, and other summer-flowering plants that require rich soil and a deep-rooting medium. If these conditions are provided and a good mulching given the plants they will the better withstand drought. In some instances there are beds which have to be used for similar plants year after year, and therefore become partially worn out. In this case the old soil should be taken out to a depth of at least 2 feet and some fresh manure placed in the bottom, refilling the bed with fresh soil. If available the best soil for filling the bed is loam cut from an old pasture and stacked for twelve months before use. If the loam is of a fairly fibrous nature little else will be required during the first season, but if of a heavy, tenacious character some well-decayed vegetable matter or leaf-soil and coarse sand should be added to lighten it. Make the soil firm in the trench and place sufficient so that it will be fairly level when it has settled. This work should not be done in wet weather.

Planting shrubs.—Every opportunity should now be taken to carry out any planting that is contemplated. In preparing the ground for trees and shrubs it should either be trenched or dug deeply. Shrubs should be selected not only for their flowers, but for their autumn-tinted

foliage and their coloured bark, which brighten up the landscape when the plants are bare in winter.

Hotbeds.—It is necessary in many gardens to augment these considerably during the present month, as there are many choice vegetables which can be brought forward with the aid of hotbeds and portable frames. They are invaluable to the gardener who has to supply large quantities of forced vegetables. Not only are frames of use during the spring, but they can be utilised with advantage every day in the year, and with the aid of freshly-fallen leaves much less expense is incurred in providing the requisite heat. The chief danger in hotbeds lies in getting too much heat, and before adding the soil one must be quite sure that the heat is on the decline, for if once the soil becomes baked (as it most assuredly will if the heat is excessive) no crops will grow in it satisfactorily. Asparagus, Carrots, Turnips, Radishes, Potatoes, and such crops are all suitable to this kind of treatment.

Carrots.—Late sowings made either in heated pits or on hotbeds, for supplying young roots early in the year, should be thinned sufficiently to prevent the young plants becoming drawn. The soil should be stirred between the rows and air admitted to the frame whenever the weather is mild. On bright days syringe the plants and close at 1 p.m.

Cauliflowers.—If the stock of autumn Cauliflowers is short a sowing of some early variety should be made about the middle of January. Raise the plants on a hotbed. If the young plants are pricked off as soon as they show their second leaf, and liberally treated, they will be ready for planting out on a south border early in April.

Tomatoes sown at the end of October are now good, strong, sturdy plants, ready for shifting on into 6-inch pots. The pots must be well drained and the soil should be moderately light and porous. Do not pot too firmly. The soil should be nicely warmed and great care taken not to give the plants a check. It is advisable to pot them in the house in which they are growing. Do not over-water, rather err on the side of dryness at this time of the year. Keep them in a temperature of about 60 degs., and as close to the glass as possible. F. W. GALLOP.

SCOTLAND.

Current Work.—During the week outside work has been entirely stopped by wintry weather. A heavy fall of snow was followed by a brief but severe frost, which, in turn, gave way to heavy rain, which lasted until almost the end of the week. It is worthy of note that the snow-fall experienced in this locality since November 11th is already greater than the aggregate fall for the winters of 1913-14 and 1914-15 combined. In addition, too, the separate falls have lain over longer periods, and the frosts which followed were more intense than usually experienced. When conditions were at all favourable during the week, progress was made with the carting away of leaves, which had been previously collected in heaps at suitable places. A portion of these is kept in the neighbourhood of the garden, the remainder being put where they are out of sight. The older collections of leaves, now half or wholly decayed, were turned over in order to make room for the freshly-gathered ones, and in order that when time and weather permit some leaf-mould may, after having been sifted, be got under cover in anticipation of the spring repotting. The manure-heap was also re-turned and tidied up. Returning always helps in the process of de-

composition, and any accumulations of turf-parings, wood-ashes, and similar things, if added during the re-turning, always add to the manurial value of the material. Label-making occupied some time during the stormy weather. Many prefer to buy their labels ready for use, but when special sizes are needed it is better to make them during the winter months at spare times. For this purpose I find nothing better than plasterers' laths, which are inexpensive, easily smoothed, and can be cut to any required length without waste. After being made the various sizes are collected, painted, and bundled

crocks sifted and sized; in fact, the odds and ends of work which accumulate in the potting-shed in favourable weather for outside work were put to rights.

Boilers and flues.—In the course of the week advantage was taken of a sunny forenoon to overhaul flues, valves, and hot-water apparatus generally. No matter how carefully flues may be cleaned every week there is always a gain in looking over them in a thorough way periodically. As a rule this inspection is undertaken twice a year, at about six-monthly intervals. In the present case a furnace which had not been giving satisfaction was

think, the same tendency as there was at one time to rush cuttings in at the earliest date possible. At the same time, when good and firm shoots are obtainable, it is just as well to utilise them. A mellow, sandy compost suits them perfectly, and on the top of each pot about a $\frac{1}{4}$ inch of sharp sand is allowed. Opinions differ as to the temperature which is best suited to the needs of Chrysanthemums in the cutting stage. Personally, I incline to the belief that they emit roots more quickly when given a heat of 50 degs., or even a trifle over, but care is essential in watering. As soon as roots are formed a slightly cooler atmosphere will render the growth of the young plants more sturdy and afford less opportunity for insect pests to do damage. In the case of varieties grown for cutting or decoration the cuttings are put thickly into 5-inch pots; but when specimens are required for special purposes it is better to put them singly into thumbs, so that there may be no disturbance of the roots when the plants are ready for potting. I like, when possible, to keep the cutting pots on a shelf near the light. There is not often excessive sunshine at this time of the year, but should the cuttings show signs of flagging a dewing over with the syringe will soon freshen them up.

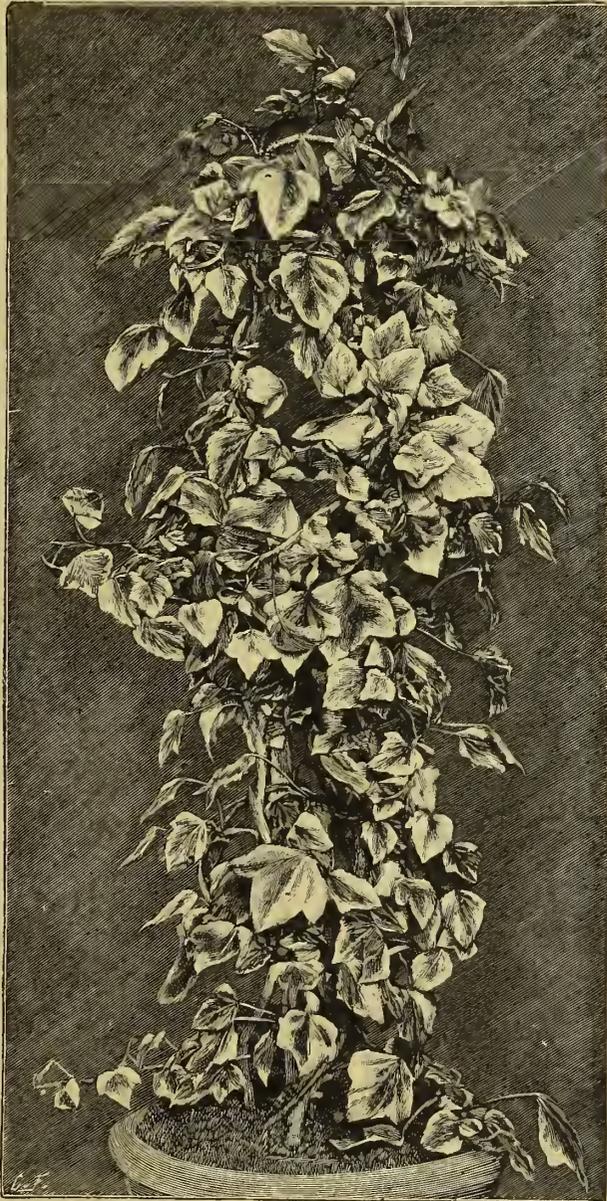
Adiantums—chiefly *A. cucuatum* and *A. gracillimum* which were cut over in late autumn—are again well furnished, and, with Asparagus, provide fronds for cutting. Fireheat is being kept as moderate as possible.

Malmaison Carnations.—Advantage was taken of the stormy weather to look over and clean down some Malmaison Carnations. These are two-year-old plants—that is, they bore a single bloom last spring, and were potted on into 8-inch pots afterwards. In a short time these will spindle for flowering, and will prove useful. Having been grown in a comparatively low temperature the plants are clean and thrifty, no signs of rust being, as yet, visible. I think it is now generally accepted that rust is induced, if not caused, by coddling Carnations in their younger stages, and as rust is highly infectious, the less fire-heat the plants receive the more likely are they to escape infection. Newly-received plants ought always to be closely inspected, and, when it is possible, to be quarantined for a time. Plants may appear to be perfectly clean when they arrive, and yet may develop rust, or something equally undesirable, very shortly afterwards. Meantime, only sufficient moisture to maintain the plants in a healthy condition is given; indeed, to a casual observer it might appear that they were altogether too dry.

Stove.—The latest addition to the flowering plants in the stove is the blue Coleus thyrsoideus, which, if for no other reason, is very desirable at this time for its cobalt-blue sprays. It is generally recommended that this plant be not pinched back after the end of August. In order to test this, half-a-dozen stout, well-grown plants, carrying from six to eight shoots, were pinched back on September 28. The result fully justifies the recommendation. The shoots broke well enough, but the growth is weak, spindly, and altogether inferior, while the symmetry of the plants has been spoiled. They will, by and bye, be cut back and used for the production of cuttings. Other flowering plants continue to be effective, and show no sign of deterioration. Over-crowding is a fault most of us find difficult to avoid, but presently it will be rectified. A light vaporising was given in the course of the week.

W. MCGUFFOG.

Balmie Gardens, Kirkcudbright.



An Ivy in a pot.

in readiness for use. Of course, these home-made labels are merely for general purposes—pot-plants, seed-beds, Beans, Peas, Onions, in fact for stuff of annual duration. A better type of label of more enduring wood, and carpenter-made, is used for perennial and special plants. A little net-mending was also done. This is interesting work if a little tedious in the case of large nets. At any rate it is always much better to do such repairs as can be effected at this time, for much loss of time and worry are frequently experienced just when the nets are needed if they are found to be badly holed. All dirty pots were washed up and graded,

found to have a flue partly obstructed by a piece of brick which, owing to the mortar becoming brittle, had fallen, and which had lodged just out of reach of the flue-rake. This being taken out the full draught was restored and the heat is now raised in a quick and satisfactory way. This illustrates the advantage of these periodical inspections, and as clean flues and good heating go together it is just as well to see that everything is right, with fuel at its present price and with a prospect of further increase.

Chrysanthemum cuttings.—During the week a few cuttings of various Chrysanthemums were put in. There is not now, I

BOOKS.

"CORNERS OF GRAY OLD GARDENS."*

This is a curious little book with a rather affected title and drawings in colour by Miss Margaret Wakefield, far better done than most of the colour work of the day. The rest of the book is made up of reprint matter that has already appeared so far back as Sir Walter Scott and so late as Mr. Le Gallienne. The article on old-fashioned gardening is really a copy of Parkinson, which most of us have already read. There is not much difficulty in book-making of this sort, but, on the whole, the result is a handy and pretty little book, though disfigured by a binding the most vulgar in design I have seen so far. It would scare the birds from a cornfield if only large enough. W.

"LES PALMIERS DE LA COTE D'AZUR."†

As Palms are seen in our country we get little satisfaction from them. The place where they show their real dignity and grace is perhaps the South of France, where in some of the little valleys or in warm gardens it is amazing how well they will do. This book is very well done, and the printing is good, and not on the elayed paper of the day, but as regards the subject we distinctly think that such things as Palms are better omitted from the garden, even if we succeed in growing a feeble specimen here and there. Such things never consort properly with our own vegetation.

LAW AND CUSTOM.

Dispute about hedge (J. W.).—It is not easy to advise fully on this without being on the spot. To begin with, your tenant is bound to let you enter the premises for a reasonable purpose, but we think you are wise to hang the matter up until you are rid of him. Then you will be quite justified in properly cutting the hedge and the saplings down to the level of the hedge. In view of what has occurred we think you would be wise not to make any further approach either towards the adjoining tenant or his landlord. Maintain firmly your right. That is your only line in a case like this. With regard to the Plum trees everything depends upon whether they are on your land or on the land of the neighbouring owner. It is probable that strictly your land extends beyond the roots of your hedge, because when a man plants a hedge he digs a ditch at the extreme limit of his land, throws the soil inside, and plants the hedge on the bank thus formed, so that if there is a ditch on either side of your hedge that would belong to you, and if the Plum trees are within the furthest line of that ditch the presumption is that they would be yours. We think, however, that the safe course to adopt is to assume that your wall is your boundary line, and to continue an imaginary line from that and treat this imaginary line as your boundary. If the Plum trees are outside that on your neighbour's side treat them as his, and do not interfere with them except to this extent, that you may cut off any portions of them that overhang on your side the imaginary line suggested. Of course, the hedge being your hedge, you are entitled to cut that on both sides, and may for that purpose enter on your

neighbour's land, subject to this, that you must not do any avoidable damage to his land in doing so.—F.

Trespassing cats (G. J. B.).—Your only practical remedy is to chase them out or erect wire netting in such a way that they cannot enter your garden. If the cats do actual damage, and you request your neighbours to prevent a recurrence of the trespass and they ignore your request, you may, on proof of the facts, recover damages in the County Court.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Tropæolum tuberosum not flowering (S. B.).—The abundance of foliage and absence of bloom indicate over-luxuriance of growth, due to excessive richness of the soil. We should try it another year, when the soil will, to some extent, have become exhausted, and you will probably be rewarded with bloom.

Culture of the blue Cornflower (E. Y.).—The blue Cornflower is a hardy annual which sows itself in autumn and grows well all the winter. It may be sown from gathered seed at any time during the autumn or early spring—autumn being best, as the plants will be stronger. Seed is offered in nearly all catalogues; its botanical name is *Centaurea Cyanus*. It is grown in large quantities for the London and other markets.

Plants for small conservatory (J. Arthur).—During the summer your house may be kept gay with ordinary flowering subjects, as Fuchsias, Heliotropes, Lantanas, Calceolarias, Begonias (tuberous-rooted), Pelargoniums of various sorts, etc. In the autumn you can have Chrysanthemums and Lilliums. A few hardy Ferns may also be included, as also a few of the hardier Palms. When you have gained experience you may increase the list, but do not overcrowd in any way.

Cestrum aurantiacum (C.).—For training on pillars or rafters of a greenhouse this fine climber is exceedingly well adapted. It is an autumn-flowering plant, and one of the simplest culture. It should be planted out in a bed of rich, well-drained soil, and be cut hard back in spring. Thus treated, it will not fail to produce every autumn a profusion of rich golden blossoms in long, drooping terminal bunches, which contrast finely with the deep-green foliage.

Vallota purpurea (A. B.).—Potting should be done as soon as flowering is over, giving a compost of three parts rich loam and one part well-rotted cow manure, leaf-mould, and coarse sand. The plants should be given a light place in a warm greenhouse and kept steadily growing, but until February very little water will be required. As the days grow longer more moisture will be required, and from June till they throw up the flower-stems a cool pit facing south will answer well for them. A mistake is often made in drying off the bulbs in winter, this doing much harm, and is almost certain to prevent the bulbs flowering the following year.

Poinsettias losing their leaves (Grower).—This useful winter plant has an inveterate tendency to lose its leaves before the flower bracts are fully developed. Probably the plants have become root-bound, or they have

been placed too closely to each other. They require good soil to grow in, and had better not be planted into their flowering pots until the end of July or early in August. They should also be kept in a well-aired house, or even out-of-doors during the summer months; and in winter a temperature of 55 degs. to 60 degs. would suit them better than one of 50 degs. But however well they are grown in other respects, if they are too much crowded together, or crushed in amongst other plants, the stem-leaves will drop off.

Pruning Clematisses (J. Arthur).—The lammigosa section (to which the variety Lord C. Neville belongs) must be pruned in February or March. This consists in removing the weak and overcrowded shoots. As the Clematisses belonging to this set flower on the old or ripened wood, the strong one-year-old shoots should be nailed in as far as they have become well ripened, cutting away the sappy points. Train the shoots that may be left in such a way that all vacant spaces are filled up. The varieties belonging to the C. Jackmani set flower on the young or summer shoots. The old growths in this case are cut back each season, as soon as the frosts have disfigured the plants, to within about 6 inches of the soil. In order to encourage a vigorous growth mulch the plants with rotten manure when growth is well on the move.

MISCELLANEOUS.

A poor lawn (Wm. Brooke).—From what you say, we should fancy that the soil is in a very impoverished condition. In such case the only remedy is to have the lawn remade. Dig it deeply, and as this is being done incorporate plenty of rotten manure and carefully pick out all the bad weeds. If you can procure good turf, then have it laid in the early spring. If you cannot get good turf, then have it sown down in April after the soil has been carefully levelled and made firm. The only way to get rid of Plantains, Daisies, etc., is to spud them out, afterwards applying a dressing of rotten manure, loam, and wood ashes, letting this lie during the winter and then working it into the soil. In the spring apply sulphate of ammonia, at the rate of 3 lb. per square rod, so as to encourage the growth of the various Grasses. Basic slag is also very good, applying this at once, if its effect is to be noticeable next summer, as it is very slow of action. If the Grass is very weak, then you may apply the basic slag at the rate of 5 lb. per square rod, giving in the spring a further dressing of nitrate of soda or sulphate of ammonia at the rate of 3 lb. per square rod. In any case you must first get rid of the weeds.

SHORT REPLIES.

Rev. E. Hackett.—Kindly send a specimen of the Apple to which you refer, and we will do our best to help you.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*F. G. Lyne.*—We cannot undertake to name *Horist* flowers.

Names of fruits.—*Miss Strong.*—Pear *Beurré Hardy.*—*F. I.*—Impossible to name with any certainty from the poor specimens you send us.—*A. R. C.*—Your Pears are *Glou Morcean* and *Josephine de Malines*, but as you have not numbered them it is impossible for us to specify which is which.

CATALOGUES RECEIVED.

SUTTON AND SONS, Reading.—*List of Vegetable and Flower Seeds, 1916.*

ALFRED DAWKINS, 408, King's-road, Chelsea, London, S.W.—*Book of Seeds, 1916.*

DOBIE AND Co., Edinburgh.—*Catalogue for Spring, 1916.*

Book received.—*Vinton and Co., Ltd., 8, Bream's Buildings, Chancery Lane, E.C.—"Agricultural Almanac and Diary, 1916."*

Admission to Kew Gardens.—We learn that on and after New Year's Day the following fees will be charged:—On Monday, Wednesday, Thursday, Saturday, and Sunday, 1d.; on Tuesday and Friday (students' days), 6d. The admission of photographic apparatus, 3d. Bath chairs will be permitted to enter the gardens during public hours when the condition of the paths is suitable, on payment of 1s. on students' days and 6d. on other days. On written application to the director by students and artists, season tickets will be issued on payment of a fee of 5s. These permits will cover free entrance on students' days and before public hours on other week days. On payment of a fee of £1 season tickets can be obtained on written application to the director. These tickets will cover admission on any day during public hours.

* "Corners of Gray Old Gardens." London and Edinburgh: T. N. Foulis, publisher. 3s. 6d.

† "Les Palmiers de la Côte d'Azur," by B. Chabaud. Paris: Librairie Agricole de la Maison Rustique, 26, rue Jacob.

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PRUNING CLEMATIS.

I was interested in the note on Clematises at Nuneham in the issue of January 1st (p. 1), having the same kind (Nellie Moser) in different positions—on a wall, on tripods, and on a pergola, and have a fair result in all these cases. The best effect I have is from a plant growing on a Chinese Lily Tree (Magnolia Yulan). I planted it at the base of the tree some years ago and forgot it. Forgetting about things is a useful aid to picturesque gardening. In flower it looks out at one with the beautiful foliage of the tree all round it, and it prunes itself. No one touches it, and it may be the rich foliage of the tree keeps it within bounds. While telling of this I may as well speak of a few other experiences I have had in pruning, or rather not pruning, Clematises.

In putting a fence round an orchard many years ago I threw some seeds of the European Virgin's Bower (*C. viticella*) into the fresh-dug bank and forgot them, and now, every year, the plants come up and throw a delicate foam of flowers over the fence, which is a live fence—the only one proper to the work. Every ten years or so the fence is cut down without any harm to the Clematis. The Indian Mountain Clematis (*C. montana*), when it climbs up an Oak or a Pine to a height of 40 feet, does not want pruning—indeed, could not well be pruned, though I dare say if one believed all that is told about pruning in books one might make the flowers a little larger with pruning. But they are large enough as they are. This beautiful climber needs no care of any kind, as it runs over house or tree, and spreads itself everywhere. I put it on Apple-trees and it really was too much for them. They looked in flower like fishing-boats with white sails, and I had to give way!

The kinds that flower on the islands of the Mediterranean do not want, or get, pruning, and they do very well. So with the yellow-flowered *C. tangutica* and *C. orientalis*, which never look so pretty as when one neglects them.

Anyone who has seen the Clematis wild on our own chalk hills will not need to be told that it is the most vigorous and hungry climber that exists. In some parts of the Home Counties the men call it Devil's Guts, and this Saxon name for it was no doubt devised after some vain attempts to get rid of it. So all the kinds of Europe that one sees are vigorous climbers, and I say trust them in that way

when you can. See the way they seed, so freely that one can get the seed of the wild kind for a few pence. They can also be naturalised in copses or shrubberies, or on fences, by sowing the seeds on a bit of broken, bare, or recently-burnt ground. Throw the seed on and kick it in. I have had some failures, I may say, from seed thrown where there was a covert of rough Grass, as that prevented the seed from taking hold of the ground.

Think of the vigour of the wild kinds of Clematis we may see. On the north Downs the native kind is more vigorous than the stoniest Briars; my mountain Clematis on Oak, Yew, and Pine-trees, 30 feet or more high. Such Lianas, as we may name them, prove to us the natural habit of the wild species, and they are easily increased by seeds or layers; yet we may see in nurseries men propagating them by grafting one thing on the other with disastrous results, as one may see in gardens. The grafting as carried out reminds one more of a physiologist joining nerves together in some animal's flesh, and it is a short-sighted plan on the part of nurserymen to allow this footling when increase is so easy by layers and seeds.

W.

NOTES OF THE WEEK.

The Winter Heliotrope.—"W. McG." is not kind or just to the Winter Heliotrope. He has no business to speak of it in a garden at all. It is a plant for a rough, sandy, or gravelly bank, and will not flower in good or ordinary soil; but put it on a cinder heap or poor piece of railway bank and it will flower beautifully in winter. No one has any need to put it in garden soil. It is a charming plant, and as I write I have a large bowl of it before me, where it has been for the last ten days. It is the best mid-winter plant we have and deserves no abuse.—W.

Trees and shrubs in storm.—These have always had a charm for me, and in the gale of New Year's Day I enjoyed them to the full. Cedar of Lebanon, old Scotch Fir, and trees of Yew of natural form and growth are lovely in storm. Among the shrubs beautiful in storm, the evergreen Oleasters (*Eleagnus*) are handsome, the silvery-leaved and the large-leaved the best in our country so far—fine evergreens at all seasons. When the shoots are tossed by storm we see silvery and old gold colours at their best. They are as yet little planted considering their

merits, and that it is only in our own time Mariés introduced the fine *E. macrophylla* from Japan.—W.

Roez's Lily.—Sir Herbert Maxwell, writing in *Country Life*, says this is easy to grow. It is, he says, "one of the innumerable varieties of the Panther Lily (*L. pardalimum*). The flowers, which are most liberally produced, are of a beautiful light orange colour with claret spots. All the Panther Lilies grow from rhizomes instead of bulbs; but Roez's Lily does not spread in the free manner of the others, and must be propagated from seeds or scales. Like its congeners, it is a lover of a moist, indeed a boggy, soil, relishing peat, sand, and leaf-mould, and abhorring lime."

Storing Apples.—I think a good deal of unnecessary fuss is made over storing Apples, as they are put on dry, arid shelves, and lose their rich juices far sooner than they ought to do. I frequently pick up beautiful, sound fruits in the orchard that have lain all the winter exposed to rains, etc., with only a covering of leaves and Grass, yet they are invariably more juicy than those stored on shelves. I think we might take the hint and store our late-keeping sorts of fruit in cool quarters, where the moisture arising from the soil will keep them from shrivelling, for it is useless blaming the varieties for their non-keeping properties, if we do not treat them rationally.—T. P.

Root-pruning.—I dissent quite from "E. H.," on page 2 of GARDENING ILLUSTRATED, January 1st. My soil in which I grow the standard Pear is as stiff and cold as any in Britain. All this footling about root-pruning comes from confining the tree in small forms, which require very constant and careful pruning. It is often forgotten that the Pear is a forest tree, and a much bigger forest tree than the wild Apple. The attempts to confine it to small forms are against Nature and must be paid for. The ceaseless and elaborate pruning of the dwarf tree is against its fertility, half of it really preventing the tree fruiting at all. Let the tree grow in its natural way, thin out the branches, and do not cut back the main shoots, and you will get a much better return.—W.

Mrs. Wilson's Barberry (*Berberis Wilsonae*).—Of the numerous Barberries that have been introduced from China within recent years this is one of the best. It is a low-growing species of graceful habit,

whose thin branches are more or less spiny. The flowers are small, pale yellow, and not particularly showy, but the roundish coral-coloured berries, borne in great profusion, are of a somewhat translucent character, and are seen to advantage when in an elevated position so that the sun shines through the bushes. For this reason, and also owing to the fact that it is of neat growth and in no way of an aggressive character, this Barberry is particularly suitable for planting as a rockwork shrub. Some individuals are quite deciduous, while others are sub-evergreen in character. Seedlings can be easily raised, but there is at times a certain amount of variability about them.—K. R. W.

Calceolaria deflexa.—This pretty, winter-flowering species of *Calceolaria* is also known by the name of *C. fuchsiaefolia*. It is of a neat, freely-branched habit of growth—in fact, quite a little shrub. The flowers are of a rich yellow colour. Attention was first directed towards it during the late seventies of the last century, and for a time it was largely grown. It is now, however, not often met with, one probable reason being that it is rather more particular in its cultural requirements than some of the *Calceolarias*. Like many other Chilean plants, it is seen at its best in districts where the atmosphere is fairly humid. This *Calceolaria* is interesting as being one of the reputed parents of *C. Burbidgei*, a hybrid now extensively grown. This hybrid was raised by the late Mr. F. W. Burbidge, at the Trinity College Botanic Gardens, Dublin. He always regarded it as a cross between *C. deflexa* and the somewhat coarse-growing *C. Pavoni*. Judging by appearances, there is no doubt about *C. Pavoni* being one parent, but it has been suggested that *C. amplexicaulis* was the other.—W. T.

The hardy Heaths in winter.—Those who grow hardy Heaths to any extent and who take great pains to see that they receive their annual shearing immediately their flowering period is over do not realise the beauty which is sacrificed by this practice. During the rough and stormy weather of the past six weeks no part has been so pretty as the Heath garden, where the plants have been allowed to develop naturally and display their charming soft grey-brown seed-vessels sprinkled here and there with a few late blossoms. This especially holds good with the Cornish Heath and its varieties, the Dorset Heath, various forms of the common Ling, among which is the Copper Heath, a fascinating variety which, under the sun's influence, assumes a charming crimson tint at the tips of its branches. The *Menziesias*, too, are very attractive when left in this way, and take on pretty tints. With the turn of the year these plants are visited by scores of bullfinches and the little blue-grey titmouse in search of the seeds, for which they appear to have a special liking. Groups of the fresh young *Asparagus-green* growths—laden with buds—of the Portuguese and Southern Heaths are beautiful at this season of the year. Beautiful, too, are those just bursting into bloom, of which *Erica mediterranea hybrida* is an easy first. This delightful variety is partly open and will shortly be a mass of colour. Rapidly opening, too, are *Erica alpina* and the various forms of the alpine Forest Heath (*E. carnea*), including its charming white variety which is usually a little in advance of the type. Where these hardy Heaths are used for edgings to other subjects the winter effects are missing, as it is only by extensive grouping that such are obtained.—E. MARKHAM.

VEGETABLES.

WINTER TOMATOES.

I HAVE noticed that the Tomatoes grown especially for the summer and early autumn supply have given a lighter crop than usual. At any rate, so far as I have seen, there were fewer home-grown Tomatoes in October and November than usual. The excessive rainfall in many parts of the country may in a great measure account for slow ripening, owing to lack of sunshine. This applies with equal force to plants grown under glass. In cold-houses the crop was later than usual, and the fruits ripened slowly in consequence of the above cause, and again the early frosts also greatly influenced them. For many years I endeavoured to have home-grown ripe Tomatoes all the year round if possible. With small houses, and sufficient heat at command, it was possible, by careful culture, to have Tomatoes, say from January to April. For years I relied upon cuttings struck late in the summer, one cutting in a 60-pot, and grown quite close to the glass to get them as sturdy as possible from the start, only giving a 6-inch or 7-inch pot for fruiting. For winter work good loamy soil was necessary, with ample room left at the final potting for feeding when a good set was secured. Those who have grown Tomatoes from cuttings well know how soon the plants commence to show blossom. I admit the yield cannot compare with that of the summer fruiters, but, on the other hand, when the number of plants that can be grown in a small, close house is taken into account, the crop for home supplies should not be despised.

For many years for this work I grew Conqueror and Large Red, but neither of these can compare with Winter Beauty as regards shape and quality. The Large Red is often of poor shape, but it is a reliable cropper grown as advised. To be a success the plants must set their fruits before the dark days. At no time, no matter what variety is grown, should there be too much heat; indeed, in mild weather I found it advisable to always have a little space open at the top ventilators. White-fly, one of the worst pests of winter plants, is readily destroyed by fumigating before it gets much headway. Of course, no one would now think of growing Conqueror for winter work, but it had its merits. It was a very early setter, made less useless growth than the other variety named, and though the fruits were not large—indeed, many under medium size—they were liked for winter salads. With Winter Beauty there is no need of so much preparation in the way of propagation from cuttings. Excellent results can be obtained by sowing seed in August or even a little earlier. The seedlings should be grown as hardy as possible at the start. I found cold frames best. On warm nights the glass was removed to secure sturdy plants. The seedlings must be potted on early and kept close for a time, and even with this variety for winter supplies I would not give a larger fruiting pot than advised above. The fruits are of fair size and splendid colour, and set freely in the autumn. Provided good plants are secured, grown as hardy as possible at the start, and with no delay in getting them into their fruiting pots, it will be found that Winter Beauty can be grown to advantage for winter fruiting. Grown as advised, fruits will have set freely by the end of October, when the plants should be placed in their winter quarters.

W. F.

NOTES AND REPLIES.

Treatment of peat.—Owing to scarcity of manure through the advent of motors I have had to look elsewhere for a substitute, and find that within a short distance of the gardens there are millions of tons of peat for the getting. How can I treat this, so as to get the best out of it, and what influence would lime or basic slag have on it, and what elements would be liberated for the successful culture of vegetables? The soil here is gravelly, so the addition of peat would help in retaining the moisture and improve the texture.—LUCKY HALFPENNY.

[As you remark, the adding of a certain amount of peat to your gravelly soil would act beneficially by rendering it more conservative of moisture, but you must be careful not to overdo it or you will make the staple too light and thus defeat the object in view. With regard to its employment in the place of manure, it must be fortified with some artificial to render it effective, and to correct the sourness that is present in most kinds of peat a certain amount of lime should also be added. Therefore, to each ton of peat $\frac{1}{2}$ ton of lime and 1 cwt. of bone-meal should be added, and mixed intimately with it. The way we recommend you to use it is to spread it on the surface of the soil as thickly as you would do if you were using manure. The mixture should be incorporated with the staple without delay, and the earlier it is applied the more satisfactory should the after results be.]

Turnip Golden Ball.—We rarely see this excellent winter Turnip on sale or much grown in the south; indeed, I may go farther and say in many parts of England, excepting the north. There is no lack of variety even in the yellow-fleshed Turnips, but, in my opinion, the one noted above is the best garden form for winter work. A good sample should have a rich golden colour and not be at all coarse. I think roots the size of a cricket-ball just the size for home use, and there is no waste. The quality, too, is excellent. This variety being a quick grower, need not be sown too early. July is quite early enough; indeed, in the south I prefer August. One need not be afraid of a few degrees of frost, as this is one of the hardiest Turnips grown and one of the best keepers. Readers in Scotland will think southern growers peculiar in not growing such an excellent winter vegetable. Many object to the colour when cooked, but I think Golden Ball has no equal as regards flavour, while its excellent keeping properties should make it a favourite, as, given cool storage, it may be had quite sound till the early spring-sown Turnips are ready.—C. R.

Tomato notes.—This, on the whole, has been a paying crop under glass this year. There is a tendency to build very large houses for Tomatoes, but as far as I have seen the best crops have been grown in houses of moderate size. My best crops have been grown in houses 100 feet long, about 12 feet or 15 feet wide, and well ventilated. The plants along each side were trained under the glass till they met under the roof in the centre. I have tried many kinds, but can find nothing better than a good selection of Sunrise. All things have a tendency to wear out, but with care in selection and as the seeds will retain their reliability more than one year, there should be no difficulty in the matter. Where the cool houses are filled with *Chrysanthemums* after Tomatoes the soil is not so suitable for Tomatoes the following year. This I have noticed repeatedly. Tomatoes do best in firm ground both indoors and outside. Where the borders are used for plants in pots and a sprinkling of ashes added the latter are an advantage rather than otherwise to the Tomato crop.—E. H.

TREES AND SHRUBS.

JAMESIA AMERICANA.

This, native of Western North America, has been grown in English gardens since 1862, and was originally discovered about twenty years before. It is not very much like other shrubby members of the Saxifrage family in general appearance, and is quite distinct amongst hardy shrubs. Of dense habit, it is usually met with as a shapely bush 3 feet to 4 feet high, although it sometimes grows twice as tall. The leaves are coarsely toothed, and are covered with greyish hairs, especially on the underside. The white flowers are produced in May in upright panicles, and most closely resemble those of *Deutzia*. When in full flower it is a very attractive shrub. It can be increased by seeds, cuttings, or layers, and grows well in moderately light, loamy soil. A position exposed to sun is, however, essential to success. As it is apt to become a dense thicket of branches, it is wise to thin out



Jamesia americana.

some of the older wood occasionally, the younger branches producing the most and best flowers. The accompanying illustration gives a good idea of the inflorescence, whilst it also shows the woolly or felty character of the young shoots, which is a peculiarity of the plant. D.

Idesia polycarpa. — This ornamental-foliaged tree is worthy of extended cultivation in the south of England, for it is quite distinct from anything else in the outdoor garden, and, although the flowers are not very showy, the fruits are very attractive. It is a native of China and Japan, and was introduced from the former country about 1865. In its native country it grows 40 feet to 50 feet high, with a spreading head. The greenish-yellow flowers are borne in fairly large panicles, male and female blooms appearing on different trees. The latter are followed by small round fruits which are dark red or almost black when ripe and hang from the branches like bunches of Grapes. It is increased by seeds, and gives the best results when planted in well-

drained, loamy soil in a moderately sunny position. In a seedling state it is not very hardy, owing to the shoots being very vigorous and growing late.—D.

TREES WITH ORNAMENTAL BARK.

THE showy bark of various kinds of trees and shrubs has often been referred to, yet its beauty in winter is such that attention may well be directed to some of the more conspicuous subjects as a guide to intending planters at the present season. Perhaps when this colour is seen in the vicinity of water it is most highly appreciated, for on a sunny day there is the double effect of the mass of colour on the bank and the reflection in the water. This is particularly noticeable in the case of the yellow and red barked Willows and in *Cornus alba*, *C. Baileyi*, and *C. stolonifera*, the last three having red bark. Although the bark of mature plants is very bright, the colour is never so good as that of year-old shoots, hence many people cultivate them solely as one-year-old stems, cutting

them hard back near the ground-line just before growth begins in spring. *Berberis virescens* is another red-barked shrub, the young shoots having a decided ruddy glow in winter. A very rare red-barked tree is a variety of *Acer pennsylvanicum* called *erythrocladum*. In this case the bark is almost crimson, with occasional silvery marks. A yellow-barked Dogwood is found in *Cornus stolonifera* var. *flaviramea*, the variety thus differing very widely from the type, the bright red bark of which has suggested the common name of Red Osier Dogwood. *Alnus incana ramulis coccineis* is a form of the grey Alder, with reddish bark on the youngest branches and reddish buds.

There are many shrubs with bright brown bark, particularly *Ribes spectabile*, *Stephanandra flexuosa* and *S. Tanakæ*, the various kinds of *Philadelphus*, *Ribes sanguineum*, the *Hypericums* and *Neillias*, *Spiræas*, and many other subjects. Bright green is very noticeable in the *Brooms*, *Spartium junceum*, *Leycesteria formosa*, the *Ephedras*, and *Diostea juncea*, whilst white bark is conspicuous in *Salix daph-*

noides, *S. acutifolia*, *Rubus biflorus* and its variety *quinqueflorus*, *R. Giraldianus*, *R. lasiostylus*, *R. coreanus*, *R. thibetanus*, and various other kinds. Of the *Rubi*, *R. biflorus quinqueflorus* and *R. Giraldianus* are specially worthy of mention, the former by reason of its vigorous, erect stems 12 feet or more high and 1½ inches through at the base, and the latter by reason of the graceful poise of its long branches. *R. biflorus* is known by the common name of "Whitewashed-stemmed Bramble."

SILVERY STEMS are very noticeable amongst the Birches, the white trunk of *Betula verrucosa* being very attractive, especially when associated with Pines or other dark-leaved conifers. *B. papyrifera* (the Paper or Canoe Birch of N. America) and *B. Ermani* are other effective trees. Quite distinct from these is *B. nigra*, with very rough, reddish-brown bark, and *B. Maximowiczii*, with yellowish-brown bark. A yellow-barked tree is found in *Fraxinus excelsior aurea*, whilst the bark of the young shoots of several *Limes* is reddish-brown.

Less conspicuous than the Birches, but noticeable amongst other trees, are the Beeches, Hornbeam, and *Liquidambar styraciflua*, which have silvery-grey bark, whilst the green and brown bark of *Acer pennsylvanicum* and *A. rufinerve* is striped with silver and is very attractive. Bark-shedding trees like the Planes, *Arbutus Menziesii*, *A. Andrachne*, and the Lacebark Pine (*Pinus Bungeana*) are curious by reason of their piebald appearance due to the bark falling in patches. Amongst the *Roses* are several with reddish stems, *Rosa alpina* being specially noticeable. In addition to those mentioned, other attractively barked trees and shrubs will be called to mind, but those referred to are sufficient to direct attention to the merits of the class. D.

BRITISH TIMBER.

WHEN we consider that the total area of woodlands in this country is only a little over 3,000,000 acres, that fully 15,000,000 acres of waste lands exist, and that we annually import over 10,000,000 tons of timber at a cost of nearly £30,000,000, the necessity for an increased area of woodlands will be apparent to all, and the more so as a dearth of timber is imminent and outside supplies are being rigidly conserved, while our home demands are ever on the increase.

Taken as a whole, Europe has not enough timber to meet her demands, about 4,000,000 tons in excess of what she produces being annually required, and stringent laws have been passed regulating the output. This is the case with Norway, Sweden, Finland, and Russia. The Canadian forests and those of the United States are both nearly exhausted, and by a competent judge it has been said that in fifteen years little or no timber will be left if depletion goes on in those countries as at present. But the worst is that there are no forests to fall back upon, for the timber of those of Africa and India and South America is unsuited generally to our wants. Australia, China, and Japan require at present more timber than they produce.

Under such conditions the question naturally arises: What is the most feasible way to overcome the difficulty? In answer, and without the slightest hesitation, I would say that suitable waste lands at the rate of 40,000 acres should be planted annually, for a period of, say, twenty-five years. Such lands could, in England, Scotland, Wales, and Ireland, be gradually and cheaply acquired when the owner himself was unwilling to plant,

and in Ireland vast tracts of bog land would be willingly handed over at the present moment at a small sum per acre. Quite recently, in Wales, 7,412 acres of upland, described as "rough grazing and sheep walk," were sold by public auction for £15,670, or at the low rate of £2 2s. 3d. per acre. The land was particularly suitable for the growth of Larch, as the highly remunerative plantations adjoining clearly pointed out. But numerous similar cases could be given, so that the excuse of no available land is not tenable. They could be dealt with by a waste land reclamation society.

After careful computation I have no hesitation in saying that the area of plantations in the United Kingdom could at once be doubled by the planting of waste lands which at present do not bring in over 2s. per acre of rent annually, with infinite benefit to the country generally and a vast increase in the value of land, both to the owner and farmer who cultivates it. I have already suggested that altogether 1,000,000 acres should be planted over a period of twenty-five years at the rate of 40,000 acres per year, which would be an outlay of about £290,000 annually—a small sum, it will be admitted, when compared with the £25,000,000 yearly expended by this country on supplies brought from abroad.—A. D. WEBSTER, in *Country Life*.

ORNAMENTAL VINES.

A VINE-CLAD pergola is a charming addition to the garden, providing shade and coolness in summer and a gorgeous display of colour in autumn, especially if the top as well as the sides come under the eye. Unfortunately, in many cases the most attractive part of the pergola—the top—is obscured, owing to lack of foresight at the time of its erection. On undulating ground the whole of the pergola may be seen from various points, be the top flat or otherwise, but on level ground the gently-arching top helps the Vines to display their large and brilliant leaves from a distance. The Vine-covered pergola provides a cool, shady retreat during hot summer days, all the more if the path beneath is formed of old flagstones and not gravel, which is in constant need of repair through the continual drip in winter. The flagstone path, once properly laid, gives no further trouble. A climbing Rose or Clematis introduced at intervals increases the beauty of the Vines in summer before the leaves develop their rich colours. The pergola does not, by any means, exhaust the uses to which Vines may be put. Large tripods made of peeled Oak or Chestnut branches form excellent supports, which, on becoming furnished, stand out in striking contrast to the things around them, their noble foliage developing, under the sun's rays, gorgeous colours. I remember having seen *Vitis Coignetie* in Mr. Waterer's nursery at Knap Hill, where it had assumed enormous proportions. Planted near a large tree whose branches almost reached the ground, and threading its way among the lower branches, it had taken possession of the whole tree, which was of considerable height and spread, and in autumn gave a gorgeous display of colour. This treatment is not always possible, excepting in gardens of considerable extent. Where it can be done it is an excellent way to plant near the stem of the tree, training the Vine up through the centre and along the main branches until the whole tree is lightly furnished, after which its growth should be restricted. This is easily done when the leaves have fallen by pruning all side shoots back to two or three eyes each year, leaving only the main canes secured to the branches.

In this way the natural grace and beauty of the Vine will be preserved and the supporting tree—be it Apple or Pear—will lose none of its usefulness. The Japanese Vines are of the utmost value for this purpose and give delightful results.

The same treatment as regards pruning is necessary wherever the Vines are used, as otherwise the plant becomes a tangled mass which, in a few years, is beyond control and has lost much of its value. Where the Vines come into contact with a neighbouring tree they are almost sure to take possession of it, often with unexpected results. The Vines will flourish in any fairly good soil, although it is advisable to prepare the spot intended for them by digging a hole 2 feet square, filling with good loam to which have been added some well-decayed leaves, a little manure, and some lime-rubbish. A plant used here and there in a neighbouring hedgerow flourishes admirably and furnishes a beautiful splash of colour, usually a little earlier than in those grown in rich soil. On walls a large amount of their beauty is sacrificed, owing to the restriction usually found necessary to keep them in bounds. Unless a high wall, where all the growth made during the early part of the year can remain for its autumn effect, is available, it is unwise to grow Vines on walls.

Vitis quinquefolia (Virginian Creeper), *V. inconstans* (Ampelopsis Veitchi of gardens), and *V. Engelmanni* are usually grown on walls, etc., but they are extremely beautiful when allowed to ramble among evergreen-trees, such as Thujas, Ivies on fences, etc. The long, trailing growths hang from the former in autumn like crimson chains, whereas on fences of Ivy the growths may be allowed to fall like a curtain over the dark green Ivy, which is not injured in the slightest degree. I have planted large quantities of these Vines at the base of Oaks, Ashes, and Willows in the home woods, and in years to come these should form pictures of more than passing interest. A selection for the garden for autumn colour should include the following:—

VITIS ARMATA VEITCHI is a vigorous grower having large leaves of a brilliant colour in autumn. The long growths are thickly studded with short, thick spines, which look very pretty just as the leaves are falling.

V. COIGNETIE, a well-known and remarkably beautiful form, is one of the very best, and in the forests of Yezo is said to climb to the tops of the largest trees.

V. THUNBERGI is similar to the above, and for which it is often mistaken. It is distinct in its rather smaller leaves, which are deeply lobed.

V. VINIFERA VAR. PURPUREA (Teinturier Grape) is too rarely seen. The leaves, which with age develop a deep claret colour, remain on the Vine a long time and are about the last of the genus to fall. The sprays of leaves are lovely for cutting and using indoors.

V. HENRYANA is a rapid-growing kind with green cut leaves which are silvery-white down the mid-rib and veins. Usually this form is considered self-supporting, but I have found it, when a few years old, fall away from walls.

V. THOMSONI is a charming species, the leaves bright purple in a young stage, afterwards becoming a deep reddish-purple. It is of slender growth and could be used where the stronger-growing kinds are unsuitable.

V. FLEXUOSA WILSONI.—For low walls and limited spaces this is a charming variety, its tiny, smooth, glossy leaves being peculiarly attractive. Falling over a boulder in the rock garden it is happy.

V. MEGALOPHYLLA is a rampant climber, which, with me, has made in a season 14 feet of growth. Its leaves, more like those of an Aralia, are of a deep green colour which does not change. It is astonishing how rapidly it will ramble over a good-sized tree. If pruned to the ground each year it will, when well-established, run to the top of a 7-foot tripod and fall gracefully over, touching the ground on the opposite side. Its only drawback is that it possesses no great autumn beauty.

E. MARKHAM.

FRUIT.

GATHERING AND RIPENING LATE PEARS.

Good Pears are often spoiled by being gathered too soon and neglecting to help them with a little heat to bring up their flavour later on when their season for use draws near. This more especially refers to late Pears, which are supposed to be in season from Christmas onwards. During October and November there are generally in most gardens where Pears are grown more than can be consumed, but when the Christmas festivities are over there is not infrequently a scarcity of really good fruit. Late Pears should be left on the trees to the last hour they are capable of holding on. Early gathering means early ripening, if the fruits do not shrivel; in the latter case, of course, they are useless. Easter Beurré especially must be left on the tree as long as possible, as it has a habit of ripening before its proper season, though soil and situation have something to do with this. All late Pears should be kept in a dry, cool, dark room till about a fortnight before they are required for use, and should then be placed in a temperature of 60 degs. to ripen as required. If not the best Christmas Pear, Glou Morceau is certainly one of the best, and it rarely fails to bear on a wall. This should make a profitable sort to plant against the gable end of a lofty building in a good aspect, with the roots kept out of the cold subsoil, especially where this is clay, though I have found a subsoil of sand as injurious to Pear-trees when the roots penetrate it as clay. An excellent old winter Pear will be found in Winter Nelis, valuable not only for its excellent flavour, but also for its long time in season. If kept in the dark and taken into a temperature of 60 degs. a few at a time as required, its season will last for pretty well three months. Knight's Monarch is another old Pear that is excellent in point of flavour, and will keep in condition for several months. This is not much grown now. It never carries a very heavy crop, as when heavily laden it will generally cast some of its fruit. I have often seen the ground beneath the tree strewn with immature fruit. Doubtless a mulch of manure would check this habit of parting with its load. Olivier des Serres is an excellent late Pear, and deserves a place in every garden, its season being from February to March. Ne Plus Meuris generally bears freely, both on espaliers and also on walls. The finest and best samples come from a good aspect on a wall facing preferably south or southeast. Perhaps one of the most uncertain late Pears is Beurré Rance. I have had it delicious, and I have had it hardly so good as a Turnip. Bergamotte d'Espereu sometimes bears freely, especially on the Quince, but, though a well-flavoured Pear, it has not yet established its reputation as a free-bearing kind. Doyenné du Comice comes in before Christmas, and can, therefore, hardly be called a late Pear, but it is one of the best mid-season sorts and suc-

ceeds well on the Quince. Josephine de Malines has received a high character in the past, but it does not do well everywhere. Some years ago I tried it on the Quince, but it was not a success. The tree did not grow well and the Pears were gritty. This might have been due to the soil of the locality, as certain Pears are gritty on particular soils. H.

MORELLO CHERRIES.

I HAVE three trees on walls. They have been neglected, and are full of wood, which has grown irregularly and outwards. How should they be pruned?—J. ARTHUR.

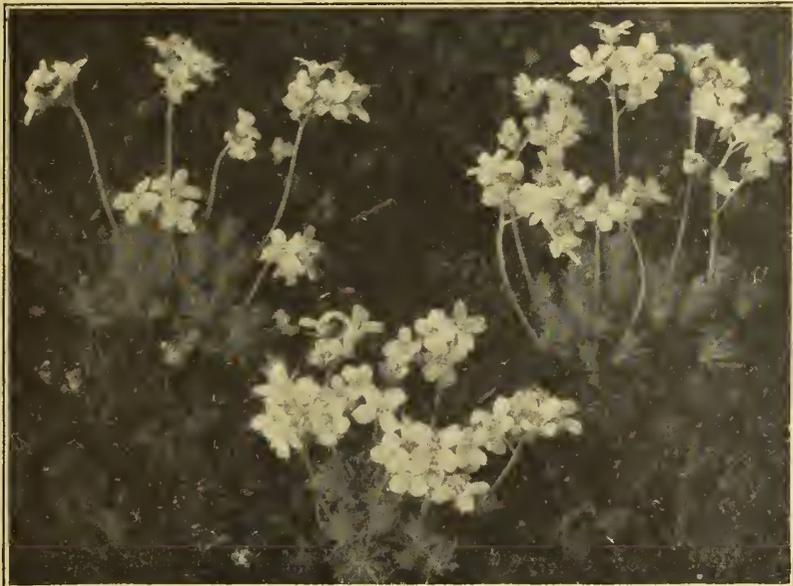
[Like the Peach, the Morello Cherry bears principally on the young wood made during the previous season. It is therefore imperative when pruning takes place to bear this fact in mind, and that care is taken to leave sufficient of it to furnish the trees in all parts both to yield fruit and to produce a further supply of young wood for future needs. The first thing to do in your case is to get rid of weak, decrepit, and dead wood. Then, as far as circumstances allow, cut away what in gardening parlance are termed "fore-

deficient of lime. Sometimes the bearing of a heavy crop of fruit will rectify matters when trees are inclined to produce a rather exuberant growth, but if they are really gross habited then root-pruning is the only efficient remedy.]

PEAR-TREES.

I HAVE two trees (bushes)—Pitmaston Duchess and Louise Bonne of Jersey. They are covered with bloom in the spring, but shortly after the fruit is formed it shrivels and falls off, apparently from frost. How can I protect them?—J. ARTHUR.

[Bush Pear-trees, if not of too great a height, can be protected to a great extent from the effects of frost with the aid of hurdles covered or thinly thatched with straw. In the case of young trees of no great height, these hurdles, if stood on end, can be made to meet, or lean one against the other at the top, and no further support is required, but in dealing with taller examples stakes are then needed to lean them against. Ordinary-sized hurdles are 8 feet in length, therefore when they are stood on end all round they afford protection to a considerable



Group of *Draba bruniaefolia* var. *incana*. From a photograph in Miss Willmott's garden at Warley Place, Great Warley, Essex.

rights"—i.e., shoots which grow out from the front part of or at right angles to the branches or wall, as these, owing to their position, are very difficult to lay in and secure to the face of the wall. After this give the remainder of the young wood a thinning, rejecting the strongest and weakest, and retaining that which is of medium strength and carrying an ample quantity of bloom buds. This thinning should be carried out to an extent that, when completed, enough young wood and no more remains to stand about 4 inches apart between the main and subsidiary branches when it is trained and nailed or tied, as the case may be, to the face of the wall. If the wood produced during the past season is excessively strong then root-pruning should follow the carrying out of the foregoing suggestions. To do this open out a trench some 3 feet to 4 feet distant from the stems of the trees and sever all roots met with when so doing. When no more roots are to be found pare the wounds on the severed roots smooth with a sharp knife and then refill the trench, mixing with the staple a little fresh loam and a liberal quantity of old lime rubbish also if the former is at all

portion of the tree in a vertical direction as well as laterally, or so that the upper portion alone would be left exposed. It is possible even then, when the height of the tree does not greatly exceed that of the hurdles, to protect that portion with scrim canvas or tiffany, or a few boughs of evergreens lightly disposed among the upper branches would effect the same purpose. The employment of the last-named in lieu of thatched hurdles would, if not used too liberally, ward off a considerable amount of frost, but owing to this kind of protection partaking of the nature of a permanency for the time being, or while the trees are in flower, and leading as it does to the exclusion of a certain amount of light and air, the method is not to be compared for efficiency with that of the use of hurdles. If you afford the trees protection this coming season on the lines indicated, and the result is of a negative character, then you may rest assured that the cause of failure lies at the roots and is not due to adverse weather conditions during the blooming period. The remedy in that event is to lift and replant the trees, or if too large and old for this to be done to root-prune them next autumn.]

NOTES AND REPLIES.

"Incision annulaire" on Vines.—I have been experimenting this season with the French method of ringing the current year's growth below the bunch of Grapes, and when the berries were just set and quite small. I tried the process on one bunch each of Muscat of Alexandria, Alicante, Madresfield Court, and Mrs. Pince, using the "Inciseur Pradine." In no case can I trace that it produced any definite result. It is claimed by some French growers that it tends to make the berries large, as the sap flow is stopped on its return and is concentrated in the bunch; also it is said to secure earlier ripening. Presumably, the "Incision annulaire" is applied to open-air Vines in France, and that may make the difference. My Vines are, of course, under glass. Have any of your readers any experience of this matter, and, if so, would they be good enough to impart it through your columns? The bunches which I operated on were just as good as those not treated, but neither better nor earlier, when ripe. I intend making a more extensive trial next year, and will report the result.—FREDERICK BOSTOCK, *Springfield, Cliftonville, Northampton.*

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

DRABA BRUNIAEFOLIA, VAR. INCANA.

THIS is not the *D. incana* hitherto known in commerce (which has white flowers), whereas *D. b. incana* has flowers of a lovely deep yellow on slender stalks 2 feet high, rising from a cushion of small hirsute rosettes forming a mossy green growth. The plants figured were growing at Warley Place. Seeds were, I believe, first sent in 1912 by W. Siehe, and, according to him, were collected in the Cappadocian Taurus. It is one of the first of all the *Drabas* to come into blossom, and is certainly an acquisition.

R. A. MALBY.

NOTES AND REPLIES.

Achillea tomentosa.—I think this is a satisfactory plant for the rock garden. It flowers twice in the year, and when crowded with its flat, deep-yellow heads of blossom is lovely, and, moreover, the flowers remain fresh and beautiful for weeks. It is almost as beautiful when out of flower, with its soft, ferny foliage of a lovely fresh green. I had a large patch of it in blossom up to the end of November, when there was little else in flower in the rock garden. It is a hungry feeder, and unless top-dressed each year will very quickly deteriorate. It does very well in sandy soil in a hot, dry position.—N. L.

Asperula hexaphylla.—Among hardy plants which can be safely divided and replanted at the present season may be mentioned this useful Woodruff. Of a moderate height, it is very desirable for cutting in the late spring months, its light and elegant panicles being well adapted for associating with cut flowers of various kinds, resembling as they do to some extent those of the popular *Gypsophila*. It will flourish quite as well in a shallow, sunny medium as in more retentive soil. Quite small pieces will in a season or two grow into useful clumps.—KIRK.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3½d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

FERNS.

THE COMMON HART'S-TONGUE

(SCOLOPENDRIUM VULGARE).

It is extraordinary how few people in Great Britain, except, perhaps, in the Midlands, seem to be aware what a capital window plant the common Hart's-tongue is given a little ordinary care, since it is at once quite hardy and quite evergreen. That its merits as a garden plant are more widely known is evident by the fact that at the autumnal holiday time an immense number of plants are to be noticed at the railway stations amongst the impedimenta of returning holiday-makers, who have gathered them during their stay in places where it is plentiful as a wild wayside plant. Its beauty under such conditions where it grows beneath the shelter of Devon and Dorset hedgebanks, to say nothing of the many other shires in England, Wales, and Ireland where it forms a prominent feature, is such that many—far too many, indeed—have been tempted to make such vandalistic raids upon it as to render it rare where normally it would be plentiful. To the true Fern-lover, however, it is pitiful to think how small a proportion of such acquisitions find subsequent proper treatment, while probably not one in a million finds a congenial home as a cherished window plant in the way I am advocating.

The Hart's-tongue is almost unique among British Ferns in having simple, undivided, strap-like fronds, smooth-edged, with a blunt tapering terminal, the blade commencing a few inches from the soil with two rounded lobes. At the back of these fronds in the autumn we find, as a rule, two rows of sausage-shaped brown masses, which are the spore heaps, and are arranged herring-bone-fashion on each side of the midrib, like the legs of a centipede (*Scolopendra*), whence the botanical name.

As an example of what can be done even with the common plants, I once saw a presumably very old specimen in a window facing the east, which filled it entirely with scores of fronds about 2 feet long with beautiful effect, the still green fronds of the previous season spreading loosely all around, and the new ones forming a promising mass in the centre. There are, however, innumerable abnormal forms of this species, which are far more beautiful, and consequently more worthy of such a place of honour, while equally hardy and easy of culture. Of these I would particularly call attention to the beautifully frilled varieties known as "crispum." In these, instead of a flat shape, each frond represents a deep frill, and is much broader, forming thus one of the handsomest decorative plants conceivable. Even more beautiful than these are the fringed *crispum* forms, in which the frond has fringes to the frills, greatly enhancing their charm. Some of the *crispum* forms, too, are tasselled or crested at their tips, the weight of these tassels bending over the fronds and thus imparting an additional graceful habit, which must be seen to be appreciated. Most of these charming types have in recent years been so far appreciated that several of our important trade growers have propagated them freely, and hence can supply them at very low prices—a shilling or so—thus permitting the acquisition of a specimen which, properly treated, will outlive the owner, and thus be "a thing of beauty and a joy for ever" so far as that owner is concerned. All that is needed in the way of culture is potting in a well-drained pot, not too large, in ordinary good garden soil containing plenty of leaf-mould, and kept well

watered. If the plant thrives as it should do it will, when obviously pot-bound, require a shift into a larger receptacle. In time the plants will form a number of crowns, or centres of growth. These, if carefully detached, will form independent plants, but, of course, if a large specimen be aimed at it is best left undivided.

I have only alluded here to one section of the varieties as being undoubtedly the most beautiful, but there are many more well worthy of cultivation, being varied in many ways by branching and tasselling, bunching and dwarfing, but these may well be left until the acquisition and successful culture of a "crispum" has converted its owner into an enthusiast.

CHAS. T. DRUERY.

GARDEN FOOD.

COOKING SPINACH BEET.

(REPLY TO "C. B.")

I HAVE always cooked Spinach Beet in the same way as ordinary Greens—in plenty of boiling water in which a very small pinch of bicarbonate of soda has been dissolved. When the Spinach is done the leaves sink into the water. It should then be turned into a colander and all the water pressed out with the back of a saucer; chop finely and return to the saucepan, adding salt and pepper and a little butter. Toss over the fire until very hot and serve in the same way as ordinary Spinach. The long, white stalks are nice if they are cooked separately and then chopped finely. Melt a little butter in a saucepan, and fry a dessertspoonful of butter for three minutes, then add a cupful of boiling milk, and simmer until smooth, add the chopped Beet stalks, and serve on slices of plain toast. Another method of cooking the Spinach Beet stalks is to boil them until tender, then take up and drain. Mix a pinch of cayenne pepper with a little salt, the juice of a Lemon, and a tablespoonful of Olive oil. Cut the stalks into 3-inch lengths, and lay them in the mixture of Lemon juice and Olive oil, taking care that all are equally covered with it. Mix a batter with two tablespoonfuls of flour, one egg, and sufficient milk to make the whole into a moderately thick batter. It is difficult to tell the exact amount of milk required, for eggs differ in size, and some kinds of flour absorb more moisture than others, but the batter should be thick enough to completely cover the pieces of stalk. Dip each piece of stalk separately in the batter and fry in deep fat until nicely browned. Drain on kitchen paper, and serve piled in the centre of a dish. White pepper can be used instead of cayenne if preferred.

The stalks are also nice if cooked *au gratin*. Boil them in plenty of salted water until tender, then take up and drain. Butter a fireproof dish, and lay the stalks in it. They should be cut into 4-inch lengths. Melt a dessertspoonful of butter in a saucepan, stir in a dessertspoonful of flour, and cook for five minutes, stirring the whole time, then add a cupful of boiling milk and continue stirring until the sauce is well blended. Mix in a tablespoonful of grated cheese, stir well, and pour over the Beet stalks. Mix half a cupful of fine bread-crumbs with a tablespoonful of grated cheese, a dessertspoonful of Parmesan cheese, a pinch of salt, and sufficient white pepper to flavour. Spread this mixture over the top of the sauce and stalks, dot with a few tiny bits of butter, and place in a hot oven until nicely browned. Serve very hot. This is a nice supper dish. Spinach stalks never get sufficiently tender to be rubbed through a sieve, the green parts of the leaves, however, if cut away from the

thick main ribs and cooked separately, could be easily passed through a coarse sieve in the same way as ordinary Spinach.

H. THORBURN-CLARKE.

NOTES AND REPLIES.

Poor Pears.—A Surrey man writes me a letter praising Pears that I know to be second-class, and as that is done in every catalogue I will not print what he writes. Among the Pears he likes are Souvenir de Congrès, Catillac, and Durondeau, which are not more than second or third class. He should compare Beurré d'Amanlis and Mme. Trevey. The Pears I praised as worth growing I grow, and my correspondent is quite welcome to see them.—W.

Poor Pears for market.—"E. H." says of the Pitmaston Pear:—

"Pear-growers know this Pear is no better than a Turnip, but it is a market fruit pure and simple. Its size and colour when ripe sell it, and I expect will continue to do so."

If this seems to justify growing a bad Pear it is wrong. What deserves a better fruit than the market? It is by growing a first-class fruit like the Newtown that the Americans have won the best market in the world for an Apple. So it would be far better for growers and the public if we supplied the markets with first-class fruit, as easily grown as the poorest. The term "a market fruit" should be dropped altogether; it now often seems a term implying the poorest quality. This should not be.—W.

Unleavened bread.—The *Lancet* for November 13th contains the following extract: "The fear of an exacerbation of the wheat crisis in Italy has interested not only those concerned in the manufacture of bread, but also medical hygienists in the search for an economical bread. The harm resulting from leavening bread has been made a special study by Professor A. Romano in the *Giornale della Reale Società Italiana di Igiene* for July. He states that the process of leavening makes bread too soft and renders it liable to be badly masticated and imperfectly mixed with saliva, especially when taken in milk or soup or dipped into various liquids according to prevailing Italian custom, when it is apt to be rapidly swallowed. The digestion of bread under these conditions is more or less imperfect, even though it does not necessarily reach the point of causing dyspeptic symptoms, and it is assimilated in less proportion to what it would be in normal circumstances. Moreover, the added yeast preserves part of its activity even after baking, and continues to ferment in the stomach, giving rise to the production of acetic and lactic acids, among other substances, which are harmful to those subject to an irritable state of the mucous membrane. Professor Romano insists, therefore, that the use of white leavened bread is a serious error in alimentary hygiene, while it also constitutes an enormous loss in domestic and national economy. He advises that bread should not only be made with wholemeal, but that it should not be subjected to the process of leavening.

The Walnut.—I was interested in reading the note by Mr. Farmer on the above in a December issue of *GARDENING ILLUSTRATED*. In this district (Highgate) I know of only one old garden where two or three Walnut-trees exist. In the West of England (Herefordshire in particular) they are quite numerous on old estates. My experience of the Walnut is that it crops—when established—regularly and freely, especially every second year. This being so, it is strange that it is not more freely planted. Gardeners should do their best to get a few specimens placed in or near fruit plantations, or elsewhere on the estate.—C. TURNER.

OUTDOOR PLANTS.

**LION'S TAIL (LEONURUS LEONITIS)
AT GARDEN DOOR.**

THE brilliant colour of this plant cannot be very well shown in an illustration.

rather a late bloomer, should make it one of the finest things one can have for the early autumn.

W.

ENGLISH PLANT NAMES.

[To the Editor of GARDENING ILLUSTRATED.]

SIR.—There is not the slightest doubt

to urge people to use Latin names to such an extent that it becomes pedantry in its most abhorrent form. Children and women and even those who are supposed to be botanists will never admit that *Bellis perennis flore-pleno* edging a border of *Centranthus ruber* sounds as nice or is as



The Lion's Tail (Leonurus Leonitis) in flower in a porch. October 20, 1915,

I just put it outside the south porch and between its shoots saw the landscape. It is a plant that should not be difficult to cultivate, though we do not always succeed with it. Greenhouse protection in winter and early growth in summer, as it is

that it would be a great pity to lose some of the fine English names, such as Wallflower, Sweet Sultan, Sweet William, Primrose, Snapdragon, Columbine, Daisy, and the like, and there is also no doubt that it is extremely foolish

easy to remember as Double Daisies edging a border of Valerian. I think Mr. Hornibrook wrote his article to be a warning to amateurs, and so far as I can see, after very carefully reading it over, there was nothing in it to try to persuade readers

to use Latin names to the extent of pedantry.

I quite agree with "W. R." that some Old English names are good, but I think that they want using with caution and not overdoing. I do not agree with any writer, and am afraid I shall never be persuaded to, who conscientiously advises the use of New English plant names instead of Latin ones. The catalogue referred to by Mr. Hornibrook is a marvellous production certainly, but it is stepping out in the wrong direction. Single Old English names are very good, such as Wallflower, etc., and I should defend others which lay claim to be Old English if they were not double or treble in meaning, but I severely denounce the efforts made to coin new Old English names.

I venture to say that amateur gardeners will find it nearly as hard to learn some of these New English plant names as they would to learn the Latin ones, and more than one amateur who is taking gardening seriously has told me that if he learns the English names he has to learn the botanical names first. If he does not, he gets into a muddle when he buys plants. If he asks for a Sneezewort he may get either an Helenium or an Achillea; if he asks for a Fleabane he may get an Erigeron or an Inula; if he asks for a Bellflower he may get anything out of the hundreds of species of Campanulas ranging in height from 3 inches to 6 feet or 7 feet; if he asks for a Campion he may get an Agrostemma or a Lychnis, and so on. Of course, it is all right if he does not care what he gets, but that is playing at gardening, and surely no readers of GARDENING ILLUSTRATED can be accused of that. I do not condemn good English names, but I do condemn the bad New English names, and I regard the Latin names of plants almost essential to the serious study of gardening.

E. T. ELLIS.

Westwood, Ecclesall, Sheffield.

[There is no word in the above that is against the right use of English names for plants, which is essential in our country. The belief that new English names are not good is a fatuous one. The Shamrock Pea and the Plantain Lily are examples of new English names. It is as reasonable to invent an English name as to coin Latin ones, and very dreadful ones are coined nowadays—double and treble ones—for hybrids, Orchids, and other plants. Whoever considers the question seriously should read the chapter on the subject in Mr. Ruskin's "Proserpina." We can give it no more space.—Ed.]

NOTES AND REPLIES.

Iris reticulata and its diseases.—Is not "Kirk," in his interesting note on page 1, assuming a little too much? The ravages of *Mystrosporium adustum* (Masse) appear in apparently all soils and positions, and are not easily checked when this Iris bulb scab once takes hold of a stock. The late Sir Michael Foster spent a considerable amount of time and thought in trying to cope with it, and found that lifting and setting aside bulbs which showed signs of the disease were necessary. Dr. M. C. Cooke says of it that: "Soaking the bulbs in a solution of one part formalin to three hundred parts of water will destroy the fungus, so long as it is external and has not penetrated deeply into the bulb." Mr. W. R. Dykes recommends the same treatment. This disease is frequently present in purchased bulbs, and it is always wise to examine these carefully. If black spots are present, I remove as much of the outer coating as is possible and destroy any bulbs which ap-

pear to be deeply affected. I have tried dipping them in flowers of sulphur, with apparent benefit, but the formalin treatment is more likely to be of real value. While soil and position must certainly have a great influence, I do not think that these alone will suffice once the disease gets a hold. Wherever it appears, annual lifting should be practised, all affected bulbs kept apart and either destroyed or planted away from the others after treating as suggested.—S. A.

Bellis cœrulescens.—It is unfortunate that this, referred to by E. Markham on page 7, is of doubtful hardiness, and that it is so frequently lost in winter. I have found that it is helpful if the blooms are cut off as they go past their best, and that plants thus treated have a better chance of surviving. Where self-sown seedlings appear it is not worth while doing this or wintering plants in a frame, but otherwise it is well to protect a few young plants under glass.—S. ARNOTT.

GARDEN PESTS AND FRIENDS.

SILVER LEAF IN FRUIT-TREES.

In recent years fruit-growers have suffered severe losses from a disease of fruit-trees which from want of a better name is known as Silver Leaf. Affected trees appear to be in perfect health and to present no external appearance of disease, except that instead of the vivid green commonly associated with healthy plants, the leaves—sometimes of a single branch only, at other times of the whole tree—have a silvery or leaden sheen, especially when looked at from an angle. Many kinds of trees are liable to be attacked, and in addition to fruit-trees it has been recorded in Horse Chestnuts, Sycamores, Laburnums, Portugal Laurels, Walnuts, Mock Oranges, and even in the white Dead Nettle and other herbaceous plants. The disease, however, is much more frequent in fruit-trees than other kinds of trees, and commoner in Plum-trees than in Apples, Cherries, Apricots, Peaches, Red Currants, and Gooseberries. The shade of silveriness varies, and not only is the colour of a silvered Apple leaf slightly different from that of a silvered Plum leaf, but a variation may be noticed in the foliage of a Victoria Plum and that of a Czar when attacked by the disease.

CAUSE OF THE DISEASE.—Although this disease is now very common in some parts of England and is known on the Continent of Europe as well as in South Africa, New Zealand, and Canada, the cause is not fully understood as yet, in spite of the scientific investigations into its nature which have been made both here and abroad. Most authorities are now agreed that in fruit-trees and certain other woody plants typical Silver Leaf may be caused by the presence of the fungus, *Stereum purpureum*, in the wood of the affected tree, and all the symptoms of the disease have been produced by artificially inoculating a healthy Plum-tree with a living part of this fungus, and even with the spores, under conditions which preclude the possibility of infection from other sources. But while we may assume that, unless there is evidence to the contrary, most cases of Silver Leaf in fully-grown Plum and Apple trees and perhaps also in other fruit-trees are due to this fungus, the following points must be remembered:—(1) The silvery appearance of the leaf is chiefly caused by the presence of air spaces immediately beneath the skin, which has a tendency to break away from the cells which lie beneath it. The change in the colour of the leaf, therefore, is due to the change in the light reflected from the surface, and not to the presence of the fungus in the leaf tissues. Where silvering is due to *Stereum purpureum* these changes in the leaf are to be attri-

buted to disturbances in the normal life of the branch induced by the presence of the fungus below. (2) In the case of certain plants, such as the Dead Nettle referred to above, and of certain seedling Plums, which have come under observation, no trace of fungus attack could be found, so that it is clear that silvering may be due to other causes than the presence of the fungus. (3) Leaves of many kinds of plants are often bleached by insect attacks and by other means, in such a way as to resemble Silver Leaf superficially. A little experience of true Silver Leaf in Plums, however, enables the observer to detect differences between the disease in question and these attacks without much difficulty.

PROGRESS OF THE DISEASE.—The usual course of an attack of true "Silver Leaf" in the case of a Plum-tree is as follows:—(a) A single branch of the affected tree develops the characteristic silvery sheen, the other branches remaining normal. (b) Several branches bear silvered foliage, often marked with brown flecks and streaks. Sometimes the leaves die as the summer advances. (c) Silvering becomes general, and the branches which have been affected longest die back. Sometimes a whole branch will die suddenly. (d) Several branches die and the tree bears a sickly appearance. Shoots low down on the trunk and suckers, both of which may or may not be silvered, often appear. These suckers cannot be successfully used for propagation. (e) The whole tree dies. Shortly after the death of a large branch the fructifications of *Stereum purpureum* generally appear on the bark, and after the death of the tree the fructifications appear on the trunk. According to Brooks, who has made a careful study of the disease, in the early stages of attack the wood is the only part affected, and frequently a narrow zone of the youngest wood remains uninvaded for some time, though sooner or later both this and the bark become affected. The fungus spreads much more rapidly lengthwise than across the wood, and in the case of the larger branches and trunk of the tree it may spread for a long time in the wood without any sign of injury to the bark being evident. The wood and the bark which are invaded by the fungus become dark brown in colour, chiefly owing to the presence of a gum-like substance in the cells. So abundant is the gum produced by the fungus in Plum-trees that large masses of it sometimes force their way out from the bark. The fungus may spread from the trunk into the roots of the tree. The amount of discoloured wood, as seen in the cross section of a silvered branch, varies according to the length of time the tissues have been affected by the fungus. The disease does not always appear in that part of the wood immediately adjoining the affected leaves. If, however, search be made further down the branch or in the trunk of the tree the brown stain will probably be found. It must be remembered that *Stereum purpureum* grows normally as a saprophyte on

DEAD WOOD, and that most of the wood of a healthy tree, though enclosed by a ring of living tissue, consists, especially in the inner and older part, of dead cells. It is on this part that the fungus begins its development. External development of the fungus takes place as the branches of the tree die so that fructifications of *Stereum purpureum* appear on the bark. These bodies are variable in shape and change their colour with age, so that they are not always easy to recognise. They usually appear in one or other of the following forms:—(1) Sometimes the fructifications appear as incrustations

several inches long covering the under surfaces of the branches or on the sides of the trunk. (2) At other times they appear as projections from the bark, of $\frac{1}{4}$ inch to 1 inch in width, and arranged in crowded rows one above the other. In this case the upper surface is hairy, but the spore-bearing surface beneath is smooth. When young and moist they are purplish in colour and leathery in consistency, but when dry they become dingy in colour and shrivel up. A spell of wet weather causes them to expand again, and each time that they do so they give rise to countless minute spores which spread the disease. These fructifications may appear at any time of the year, but they are commonest when the heavy rains which usually occur in autumn make the air and wood wet. When the spores of the fungus are liberated they are carried by the wind and may alight on a wound on another tree. There they would germinate, and the developing mycelium would live first

CHRYSANTHEMUMS.

SINGLE CHRYSANTHEMUMS.

Few who have grown single Chrysanthemums to any extent, or seen them grown by others, will deny that they are growing in public favour, and it is a wonder that they are not as extensively grown as the Japanese or incurved kinds. For cutting we have nothing better in the late autumn, and that fact alone should warrant their more extensive cultivation. Under good management the plants produce an immense quantity of bloom, and the flowers being light and graceful are admirably adapted for working into all kinds of floral decorations. For table decoration, too, single Chrysanthemums are unique. When lightly arranged with a spray or two of Fern or a sprig of autumn leaves or berries, they produce an exceedingly pretty effect. A few blooms thrust loosely into a vase with a spray of Asparagus

a practice cannot be too strongly condemned. When bushy plants some 2 feet or so in height at the same in width, and covered with trusses of bloom, are placed in a conservatory, they produce a pretty effect. The variety we figure to-day, a fine type of single, in colour pure white, was shown by Messrs. W. Wells and Co., Limited, at the meeting of the Royal Horticultural Society on December 7th of last year.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM DECEMBER 30TH.—*Winter Sweet (Ohimouautilus fragrans), Genista hirsuta, Hamamelis arborea, Daphne Mezereum, D. Dauphini, Strawberry-tree, Laurustinus, Garrya elliptica, Andromeda floribunda, Jasminum nudiflorum, Osmanthus ilicifolius, Erica mediterranea hybrida, E. m. glauca, E. alpina, E. carnea (in variety), Ivies, Polygala Chamæbuxus purpurea, Violets, Snowdrops, Winter Heliotrope, Polyanthus, Aubrietia, Violet Cress, Tufted Pansies.*

WORK OF THE WEEK.—Some good plants of *Arbutus Unedo Croomei* and *A. hybrida quercifolia* having come to hand a place has been given them on the fringe of the Heath garden; they have a carpet of *Erica mediterranea hybrida*. The *Arbutus* does well here, and apart from the wealth of blossom, the plants are, in most seasons, laden with the attractive red fruits. Several new varieties of Michaelmas Daisies have been added to a newly-planted border. A small group of *Ceanothus Veitchianus* has been planted on a rather warm piece of ground in the open, and others have been given the shelter of a wall. A few bulbs of the narrow-leaved Lily of the Field have been added to an existing group, which seems quite happy at the base of a wall facing south. A small batch of *Erica vagans rubra* has been planted in the Heath garden, and some old plants of *E. vulgaris Alporti* have been cleared away to make room for a few *Cistus algarvensis*, a distinct form of the Rock Rose. A group of *Deutzia Willsi* which had become uninteresting has been grubbed to make room for a colony of *Acer colchicum rubrum*, a beautiful autumn-tinted tree. A small group of *Andromeda floribunda* has been planted in a favourable position, and a number of *Eremuri* has been grouped among Himalayan *Rhododendrons* growing under Apple-trees. This position has been selected in order to try and extend the flowering season as much as possible. Pruning is now being pushed forward as rapidly as possible while the weather is mild. The various plants growing on the walls of the house are dealt with first. Climbing Roses are pruned back to three or four eyes, the old wood removed where necessary, and replaced by young, well-ripened growths. Clematises are merely thinned and extended where necessary. The young, thin growths of *Wistarias* are shortened back to about six eyes except where required for extension. E. M.

Sussex.

SOUTHERN COUNTIES.

Late Grapes.—These are, considering the adverse weather for weeks past, keeping remarkably well. To counteract the damp more fire-heat than usual has been employed. This keeps the internal atmosphere dry and buoyant, and prevents damp settling on the berries. In the case of a thin-skinned Grape like *Gros Colman*, damp speedily sets up decay. One effect of the use of this extra amount of fire-



Flower of single Chrysanthemum Flossy.

of all on the dead wood, but, as has already been explained, it attacks eventually the living wood. The spores, however, that give rise to the disease need not necessarily come from a tree of the same kind as the tree attacked. *Stereum purpureum* from a silvered Laburnum, for instance, may cause Silver Leaf in a Plum, and spores from the fungus growing as a saprophyte on Birch, Beech, Sycamore, or any other forest tree which has died from other causes, may infect another tree in the same manner. The presence, therefore, of this fungus on any dead wood in an orchard may be a source of infection even though no case of Silver Leaf is present. The wounds through which the fungus can enter may be quite small, but if a large surface is exposed, such as when a tree has been cut back and regrafted, or a branch has been broken by the wind or the weight of the fruit, the risk of infection is greater—*Leaflet No. 302, Board of Agriculture and Fisheries.*
(To be continued.)

plumosus will also produce an effect not altogether unworthy of notice. Apart from their value as cut flowers they are equally serviceable for conservatory decoration. When properly managed, plants of a dwarf, bushy growth can be obtained, and these literally covered with bloom. In addition to this, too, very dwarf plants can be grown that would be suitable for standing in vases in rooms or for table decoration, and it will thus be readily seen by those who have hitherto slighted Chrysanthemums how admirably adapted they are for all kinds of floral decoration. The treatment necessary to the successful cultivation of single Chrysanthemums is, of course, pretty much the same as is given to the ordinary kinds. No barbarous training should, however, be adopted, but the plants let grow in as natural a manner as is consistent with tidiness. The best way is to grow them as bushes in a similar manner to that practised in the case of Pompons. Occasionally disbudding is practised, but such

heat has been to improve the flavour of the last-named Grape, and in the case of a rod which resulted from the working of this variety on Madresfield Court Black Muscat some few years ago no fault could be found in this respect even by those who have an objection to Gros Colman when grown under ordinary conditions. The leaves, being ripe, are falling fast, and must be gathered up daily. Care is also taken to remove any berries showing the least sign of decay. Until an improvement in the weather takes place and drier conditions prevail bottling will be postponed.

Vine-pruning.—As fast as the foliage on other Vines matures this matter has attention, which leaves the rods ready for being relieved of loose bark and scrubbed when opportunity offers. The washing down of the structures and the necessary whitewashing are left for the outside hands on wet days.

Peach-house.—The trees in a house to be started six weeks hence will now be undertaken, so that the house can be cleaned the first convenient opportunity. Washing of the trees with an insecticide, and the subsequent dressing of stems, branches, and young wood with sulphur wash can then be done as time permits. With regard to the training and tying of the trees to the trellis the more experienced of the hands or such as train and nail fruit-trees outside will be pressed into the service to assist with this. It is only by arranging matters in this way that difficulties arising through the prevailing shortage of skilled labour can be overcome.

Pot Figs.—These may now be started, and if they are plunged and stood on something solid to prevent them moving out of place and surrounded with a good quantity of tree-leaves to afford a gentle bottom-heat the latter alone will suffice for some little time to come. If the bed is not provided with piping beneath it to afford a regular supply of artificial warmth when required later on a much larger body of leaves must be employed and be added to from time to time as becomes necessary. Leaves alone rarely become overheated, but at the same time if the trial stick or plunging thermometer indicates too great an amount of warmth the leaves must be removed from around the pots for a time, to be again replaced when the heat has begun to subside. A temperature of 50 degs. and 55 degs. suffices until the point buds begin to swell and the leaves to develop, when a further rise of 5 degs. to 10 degs. must be afforded. If well soaked at the start with tepid water but little moisture at the roots is required until new rootlets are emitted. Their appearance on the surface of the balls is the time to afford a top-dressing of turfy loam with a little old Mushroom-dung and bone-meal mixed with it, placing strips of zinc 4 inches to 5 inches wide just within the rims of the pots to hold it in place and to allow for ample supplies of water being given when the trees are in full growth. To induce the trees to break quickly syringing with tepid water twice daily is necessary, this to be accompanied by a damping of walls and paths at the same time. On bright mornings a little fresh air admitted at the top of the house is beneficial, but it should be shut off not later than 1 p.m.

Hardy fruit garden.—Owing to bad weather and other causes work in this department has fallen of late somewhat into arrears. An effort will now be made to expedite matters as far as possible so that spraying can be done before the season is too far advanced. With the exception of Peach-trees, which will be unnailed and loosened from the wall as usual, the amount of time expended on training, nail-

ing, and tying, as the case may be, will now be curtailed as much as possible in respect to wall-trained fruit-trees which have not yet been attended to. Pruning is, fortunately, well in hand, and will not take long to finish. The pruning of Peaches is usually left till last. These will have the young wood, where necessary, well thinned out, so that it will, when the trees are retrained, stand from 4 inches to 5 inches apart in all parts of the trees, which leaves space for the laying in of the current season's growths and admits of its becoming properly ripened. The young wood is, wherever possible, left full-length, but when shortening back cannot be avoided care is taken to do so either where there is a single wood-bud present or where one is situated between two flower-buds. As some small amount of brown scale is present on the older wood this will be got rid of before the trees are refastened to the wall. With the exception of the larger branches, which are tied with tarred twine, this is done with the aid of "medicated" shreds. These are preferable to ordinary shreds for the purpose, as insects avoid them and they can be used again and again or until they are no longer serviceable. For this reason the old shreds are taken care of when detaching the trees and again used when the retraining takes place. The latter operation is not and should never be done in a perfunctory manner, as nothing looks worse or detracts so much from the general upkeep of a garden as badly-trained Peach-trees. When properly done it is then time and labour well spent.

Seed orders.—Catalogues are now to hand, and the season's requirements, so far as they can be ascertained at this early date, will shortly be listed and the order dispatched. Although well-proved and standard varieties of both vegetables and flowers will continue to be grown, novelties to a certain extent will, as heretofore, be given a trial.

Broad Beans.—Where autumn sowing was omitted, or if the plants resulting from the latter do not look very promising, seed should be sown in pots or boxes. One of the early Longpod varieties answers well for this.

Cauliflowers.—With the exception of exposing the plants to a heavy downpour of rain they should be afforded all the air possible, otherwise growth will become drawn and too far advanced for the plants to be of service later on. In the event of their not wintering well it is advisable to make a sowing now under glass of one of the quickly-maturing or forcing varieties as they are termed; also of Early London and Walcheren, one pan or box of each, according to the number of plants required, sufficing. The receptacles should be placed in a greenhouse and covered with paper until the seeds germinate, after which a position on a shelf close up to the light to keep the plants dwarf and sturdy is necessary. Thin sowing is also very essential, otherwise the stems of the young plants will be liable to damp off.

Lettuce.—If the supply for salads is likely to run short Cos Lettuce seed should be sown thickly in boxes and cut afterwards when of the height of or in a similar manner to Mustard and Cress. Seed should also be sown of the varieties named Winter Gathering, Earliest of All, and Golden Queen to afford plants for cultivating in frames on a gentle hotbed for early spring use. The raising of the plants should be conducted in the manner mentioned with respect to Cauliflower seed. The varieties will succeed each other in the order named.

Radishes.—A sowing should be made in

a two-light frame on a hotbed of a very early variety, such as Early Rose; also of Early Frame, the one being oval in shape and the other long-rooted. A. W.

MIDLAND COUNTIES.

Peach-trees in bloom should be afforded a temperature of 50 degs. at night. Pollinate the flowers daily with a camel's-hair brush or small rabbit's-tail. Give the trees a constant circulation of air, avoiding cold draughts, and discontinue syringing the trees until the fruits are set, damping the paths and borders only. Succession-houses should now be kept closed, but without raising the temperature much for a week or two. See that the borders are moist and syringe the trees lightly on bright days. The cleaning and tying in late-houses should now be pushed forward. If the proper thinning out of the shoots was attended to as soon as the fruits were all gathered very little pruning at this season will be required. Both the trees and the houses should be thoroughly cleansed and the walls freshly lime-washed. If the trees are healthy and robust the border need only be watered before starting, otherwise the surface of the border should be removed and a dressing of fresh soil with artificial manure added.

Mignonette.—A small batch will now be sown in 4½-inch pots, using a compost of fibrous loam, leaf-mould, lime-rubble, and sand, placing the pots in a warm pit.

Chrysanthemum cuttings should be examined carefully and any that are rooted stood near the roof-glass, where air can be given. If cuttings of certain varieties were not obtainable earlier suitable shoots should be inserted without delay.

Cyclamens.—The first batch of these is now in full flower. Maintain a buoyant atmosphere of about 55 degs., and afford weak stimulants occasionally. The later batches will be benefited by a light top-dressing of loamy soil containing a little chemical manure. Remove a little of the surface soil with a pointed stick, taking care not to damage the roots or corms. Seedling Cyclamens which were sown during September have made three or four leaves, and are potted off singly into small 60-size pots, the compost consisting of equal parts loam, peat, and Oak leaves rubbed through ¼-inch sieve, adding a little coarse sand and charcoal. The young plants are kept close to the glass in a temperature of 65 degs., sprayed on fine days and fumigated occasionally.

Seed-sowing.—Seeds of certain plants for planting out in the late spring will be sown during the present month. These include Antirrhinums, fibrous and tuberous rooted Begonias, *Verbena venosa*, *Gilia coronopifolia*, *Pentstemons*, including *P. speciosus* and *P. heterophyllus*, *Salvia splendens* var. *Zurich*, *Delphiniums* for autumn-flowering, *Hollyhocks*, perennial *Lobelia* *Queen Victoria* and *cardinalis*, *Cannas*, and other sub-tropical plants. All these seeds need a stove temperature to cause them to germinate quickly, and the seedlings should be pricked out as soon as they are large enough to handle.

East Lothian Stocks are valuable for the flower garden. Sow the seeds in boxes or pans from the middle to the end of the month, and place in gentle heat, ainery which has been started about a month being a suitable place. Cover the boxes or pans with glass and shade with paper till the seedlings appear, then place them where they will get plenty of light. As soon as they are large enough to handle prick them out singly into 3-inch pots, place them again in a warm house to give

them a start, and they will soon make a little growth and begin to fill the pots with roots. They should then be placed in a cold frame, which should be kept close for a few days and covered at night if the weather is frosty. Afterwards air should be given whenever the weather is favourable. Gradually harden them off until they are ready for planting out early in May. The soil in which East Lothian Stocks are planted should not be too rich, or they will grow very strong and not flower so well.

Early-flowering Chrysanthemums.—The clumps which were dug up in the autumn and placed in cold frames have developed plenty of shoots suitable for cuttings. The

pot, and room should be left when sowing for an inch of top-dressing when the pots are filled with roots. Place the pots in cold frames or cool houses. When germination has taken place abundance of light is essential or the seedlings will become drawn. All the air that the weather will allow should be given, in order to harden them in readiness for planting out when the weather is suitable. I always treat the first two sowings in this way, as by so doing I have them under control from the ravages of vermin, such as rats, mice, birds, and slugs, and they are easily protected during severe weather. If carefully handled when planting no perceptible check will be given, and if staked and

sown every fortnight in pots measuring 7 inches or 8 inches in diameter, using a compost of a moderately light texture mixed with a fair amount of road grit. Water the seeds immediately they are sown, and start them in the forcing-house. Earlier-raised plants must be afforded all the light possible, and for this reason the plants should be stood on shelves near to the roof-glass. Maintain a temperature of from 60 degs. to 65 degs. The shoots should be stopped immediately they are long enough. Whenever the weather permits, the foliage should be syringed once or twice daily to keep the plants free from red spider. The growths should be supported by placing fine twigs from old birch-brooms in the pots. Ne Plus Ultra, Canadian Wonder, and Masterpiece are excellent varieties for forcing.

F. W. GALLOP.

SCOTLAND.

Wall-trees.—In spite of weather drawbacks the work upon the walls was completed in the course of the week, with the exception of the training of Peaches and of Nectarines. These generally make their best growth during the autumn, consequently their period of ripening is delayed, and, from that, it follows that pruning and training must of necessity be later than is the case with fruit-trees which mature their growths at an earlier date. Meantime, a look-round has been given to the trees, obtrusive and evidently superfluous growths were removed, and, so far as possible, the forthcoming work of training was anticipated. The majority of the walls upon which Peaches and Nectarines are grown is now wired, this making the usual yearly work more speedily overtaken.

Shrubberies and snowfalls.—As has been indicated in previous notes, the snowfall of the later months of 1915 has been in excess of the average. Heavy snowfalls are all to the disadvantage of the finer shrubs, Yews, Bamboos, Choisyas, Pampas Grasses, and so on. The practice followed here is to shake off the accumulations of snow as soon as possible, and for this purpose long, light poles of Bamboo or of Ash are unequalled. During the week a considerable bulk of snow was dislodged from the shrubs above mentioned, any possible damage being thereby averted. Permanent erections of wire-netting over Gooseberry and Currant breaks should be similarly attended to. The snow gathers much more quickly than is realised on such erections, and the weight on the posts is apt to be dangerous. In this case, although it is a wet and very unpleasant job, the best plan is to beat the netting from the inside of the erection, and for this purpose the use of wooden rakes is to be preferred. The snow is readily dislodged by light beatings with the head of the rake, keeping, of course, the teeth downward.

Gesneras.—The latest batch of Gesneras has been gradually dried off and will now be kept without moisture for a time. I wonder why these accommodating plants are so often passed over in favour of others which are much more difficult to manage and which do not give the same satisfaction. Apart from their blooms the foliage of Gesneras is not unattractive, but, of course, to see the foliage at its best the temperature of the stove is needed. Gesneras will bloom well in the greenhouse in the summer, but they are more useful in December and January when grown as stove winter-flowering plants. I prefer to raise my stock annually from leaf cuttings. The corms—which are freely produced—from the old plants are apt to be deficient of vitality. This I have proved



Michaelmas Daisies in a vase.

roots may be divided and potted up, or cuttings may be taken and inserted in boxes of sandy soil placed in a frost-proof pit. I prefer to propagate from cuttings, as I find these make the better plants. Of the many beautiful varieties obtainable Countess, Elsingham White, Horace Martin, Carrie, Leslie, Polly, Blush Beauty, Improved Masse, Normandie, and Goacher's Crimson are a few of my favourites.

Early Peas.—The first sowing of Peas for planting on a warm border will be made at once in 3-inch pots. The compost will consist largely of loam with some old Mushroom-bed manure rubbed through a sieve and mixed in to enrich it. Five plump seeds will be enough for a 3-inch

netted at the same time the crop is practically ensured.

Onions.—If large bulbs are wished for, seed of the best kinds should now be sown in boxes and raised under glass. The most suitable structure is an early vinery or Peach-house which is being started. The boxes should be well drained and filled with a mixture of good loam, leaf-soil, and coarse sand. Use it in a moderately fine, dry condition, and make very firm. Sow the seeds thinly and evenly.

Leeks.—Where large specimens are required seed should be sown in the same manner as advised for Onions above.

French Beans.—To maintain a regular supply of Beans a small batch will now be

by experiment, the most probable reason being that the drain upon the growing plants reacts adversely upon the corms which they form. Hence it is that Gesneras are generally grown from seed, but I fancy that if healthy and robust leaves be taken and used as cuttings the result would be quite satisfactory.

Greenhouses.—Following upon the passing of the Chrysanthemums a good deal of re-arranging has been done during the week. Use has again been made of large Palms which, since October, have been left pretty much to themselves. There can be no two opinions as to the value of these plants and of Tree Ferns at this season of the year. Their green leaves are always attractive, and, after all, they are quite as ornamental as forced pieces of Staphyleas, Acers, and so forth, and, in addition, they are much more easily managed and much less liable to come to grief. I venture to prophesy that, as a result of existing conditions, more use will be made of these semi-hardy subjects. The Dicksonias, Alsophilas, and Lomarias among Ferns, and the Acacias, Hibbertias, and Oleanders among greenhouse plants of a former generation, may quite easily again come to their own. Some of us, at least, would be glad to welcome them back. We are now letting the various kinds of Primula bloom. These have been kept back for some time, with a view to utilising them when the Chrysanthemums were practically over. Seldom has *P. malacoides* promised better. The plants were grown on shelves near the light, and, as a result, the foliage is healthy and vigorous, and the flower-spikes exceptionally numerous. *P. sinensis* is, perhaps, scarcely so satisfactory. The plants never really recovered from errors in watering after they went into their flowering-pots, and it is difficult at this time to supervise everything. We are still delaying *P. obeonica*, which I find more useful in the spring. A spare batch of Begonia Gloire de Lorraine has been given greenhouse treatment. These are well in bloom and may be expected to last for some time. A good batch of *Schizanthus Wisetonensis* has been removed from shelves to a stage in a moderately warm house. These plants, at present in 5-inch pots, have been pinched, and in a short time will be repotted into 8-inch pots. Similar treatment has been given to a batch of *Alonsoa incisifolia*, but in their case no repotting will be done, the plants remaining in 5-inch pots. In the course of re-staging, apart from Chrysanthemums, a good many plants have been discarded. One is always sorry to throw out plants, but the near approach of the propagating season makes this work needful.

Forcing.—Further supplies of Asparagns, Seakale, and Rhubarb have been put into heat. At this time forcing is more easily carried out, and the produce is better than that which was excited into growth at an earlier date. Plenty of moisture is needed when forcing is done by means of hot-water pipes, but when the crowns are being forwarded on hotbeds, or in a Mushroom-house, less moisture will be required. In any case, while forcing is going on, too much water is no more dangerous than too little.

Outside work, meantime, remains at a standstill. Rose-planting, etc., has been delayed, and no attempt will be made to hasten the work till the soil conditions are more favourable. Rainstorms, snowstorms, frosts, severe though fleeting, and a steady volume of wind from the north-east will apparently finish the year.

W. McGUFFOC.

Balmac Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Agrostis pulchella (C.).—This very pretty Grass is an annual, and grows from 9 inches to 1 foot high. Sow each year at the end of May in small clumps on the herbaceous or flower border, and, covered slightly with fine soil, it will grow freely and be very acceptable for cutting at a time when the beauty of many things outside is failing. It requires no more care while growing than keeping free from weeds, and a few small stakes and some matting placed round the clumps to prevent the wind from blowing them to the ground.

Planting Liliums (A. E.).—If your bulbs have just been imported they should be carefully examined and all decaying matter removed. They then should be laid in Cocoa-nut fibre, moderately moist, until the bulbs recover their plumpness and roots are beginning to appear from the base. Then they should be planted out or potted as may be required. Before doing this, however, see that all decaying scales are removed, as a few of the outside ones are often bruised in transit, and after they have been in the soil for a little time decay sets in and contaminates the whole bulb.

Salvia patens (J. L.).—The plants should be lifted from the open ground, and, after the soil has been well shaken off the roots, be placed in fine, dry soil in a greenhouse or in a cold-frame, and be so far protected that frost shall not reach them. In this way the roots keep better than when dried and put away in sand or on a shelf. Plants in pots should have the stems cut down and be stood under a greenhouse stage till March. These, if brought into the light then, will start into growth, and young shoots thus produced make fine cuttings. The roots may be put into the open air in spring.

Growing Begonia Gloire de Lorraine (Salopian).—The culture of Begonia Gloire de Lorraine is not at all difficult, the principal thing being to obtain good cuttings in the spring, as the plant, being so free blooming, continues to bloom instead of growing, and it is useless to propagate from cuttings of the flowering shoots. After flowering, the old plants should be cut back, and young shoots will push from the base. These shoots, when from 1½ inches to 2 inches long, make the best of cuttings. Put them into well-drained pots filled with sandy soil, and stand in a close propagating case, where they will soon root and should be potted on as required.

The young plants do best in a gentle heat early in the year. Later on they may be grown in a greenhouse or frame, but in the autumn, heat is again necessary. A mixture of loam and leaf-mould, with a sprinkling of sand, will suit this Begonia, and when the pots are well filled with roots an occasional dose of liquid-manure is very beneficial. See also the "Week's Work." No leaves were enclosed with your letter. Kindly send some on, and we will do our best to help you.

SHORT REPLIES.

Mrs. Northey.—Clematis Nelly Moser belongs to the lanuginosa set, and must be pruned as recommended in the answer to "J. Arthur," in our issue of January 8th, page 26. We do not know the variety Gloire de Lorraine.—**Sunflower.**—It is impossible to advise you as to treatment unless you send us some flowers and leaves or tell us the name of the Begonia you refer to.—**A. B. G.**—See reply to "Mrs. Northey," above.

NAMES OF PLANTS AND FRUITS.

Names of fruits.—**L. W. G.**—Apple not recognised.—**Mrs. Newth.**—Apple is Graham.

CATALOGUES RECEIVED.

EDWARD WEBB AND SONS, LTD., Wordsley, Stourbridge.—Seed List for 1916.

ROBERT SYDENHAM, LTD., Tenby-street, Birmingham.—List of Vegetable and Flower Seeds, 1916.

J. STORMONTH AND SON, Kirkbride, Carlisle.—Selected Vegetable and Flower Seeds.

Book received.—"The Sweet Pea Annual, 1916," price 2s., from the Secretary, Henry D. Tigwell, Greenford, Middlesex.

OBITUARY.

MR. S. W. FITZHERBERT.

MANY garden lovers will hear with regret of the death of Mr. Wyndham Fitzherbert on December 20th, suddenly, while helping friends whose gardeners have gone to the front. He was a gentleman of high culture, and deeply interested in all rural things, and his notes on plants and gardens were most precious.

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GARDENING ILLUSTRATED.

No. 1924.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

JANUARY 22, 1916.

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NOTES OF THE WEEK.

Viola cornuta Papilio.—This is hardly ever out of flower. It is perhaps not very perennial, but it seeds itself so freely that once established it is not likely to be lost. It comes up in all sorts of odd corners but never seems to be in the way, as it rarely interferes with its neighbours, as so many of the free-seeders do. Here, within a few days of Christmas, there are several of its delicate blossoms to be seen scattered about in the rock garden, in spite of the frosty weather we had in November.—N. L.

The Shamrock Pea (*Parochetus communis*).—There are, unfortunately, few places in Scotland, except on the western seaboard, where this, referred to by E. Markham in his article on "Storm proof plants," can be accounted hardy. One can only hope that Mr. Markham's note may be the means of introducing it to the gardens of those in the milder parts of the United Kingdom. It is a delightful plant when trailing over rocks, and is very effective as a vase or tub plant.—S. ARNOTT.

Paliurus australis (Christ's Thorn).—I saw a small specimen of this interesting tree on September 27th of last year in Peckham Rye Park, when it was in bloom. The little flowers are greenish-yellow, but quite attractive, as they peep from among the Acacia-like leaves in great numbers. It is said to be hardy and has been cultivated in this country for many years, but one rarely comes across it nowadays. It is well worth a place in the garden, being of more than usual interest inasmuch as the Crown of thorns was supposed to have been made from its branches, which have sharp spines.—E. M.

Ozothamnus rosmarinifolius.—It is to be hoped that the illustration of *Ozothamnus rosmarinifolius*, on page 17, may enlist the consideration of gardeners in mild districts in the United Kingdom. It is a delightful shrub, especially against a wall, its only drawback being that it is not thoroughly hardy in the British Isles. Within the last ten years it suffered greatly on a south-west wall in my garden. A good plant was badly cut one year, and two winters later, when we had a specially severe time, immediately following a mild spell, this plant succumbed. In the Royal Botanic Gardens at Glasnevin it is magnificent.—S. ARNOTT, Maxwelltown, Dumfries.

"The Journal of Horticulture."—This respectable, and at one time very popular and useful, journal has now, after many years of good work, ceased publication from causes due to the war. At one time it had on it as writers some of the best gardeners of the day.

Morisia hypogæa.—A week before Christmas I was delighted to find three lovely blossoms and several more buds on a plant of this in the rock garden. I suppose the mild weather tempted it, as it did a plant of *Saxifraga sancta* near by, which was also showing a spike of untimely, though very welcome, bloom. Many people seem to find a difficulty in growing *Morisia hypogæa*, but in my garden in London it seems very easy. I grow it in a steep, sloping pocket, in soil which contains a large proportion of crushed brick and old mortar. I find a great many things appreciate crushed brick, as it keeps the soil open and also, it seems to me, is warm and dry even in wet weather.—N. L.

The autumnal Snowdrops.—Looking through the garden to-day (January 3rd) after a lull in the fierce storms we have had of late, one observed a considerable advance in the early bulbs. One outstanding fact has been the lateness of the "autumnal-flowering" Snowdrops. At present none of them have come into flower, and the furthest advanced is *Galanthus octobrensis*. As I have remarked on previous occasions, these autumnal Snowdrops have shown in most years a tendency to come into line with their sisters, the "Fair Maids of February," but I have not, I think, seen them so late before. To-day *Galanthus octobrensis* is above ground and showing a little white beneath the spathe. Probably the lateness is due to the long spell of cold and frosty weather experienced early in autumn.—S. ARNOTT.

Pyracantha angustifolia.—This evergreen shrub is now loaded with its orange-yellow fruits, which develop a deeper tint with age, and remain on the plant well into late spring; quite unlike those of the well-known *P. coccinea*, which are devoured by birds as soon as they are ripe. With me, *P. angustifolia*, which fruits annually, is growing out of a group of *Cotoneaster pannosa* in the open garden, and is quite 10 feet in height. It is sometimes known as *Cotoneaster angustifolia*, but its sharp thorns and general habit of growth are those of the *Pyracantha*; also the fruit is displayed in the same clustering manner. For cutting at this season

of the year this is most valuable, as sprays 18 inches to 2 feet long may be obtained. The shrub is also attractive when in bloom.—E. M.

Snowdrops.—Snowdrops appear to be late this season. As yet (January 6th) there are no signs of any flowers. Reference to the garden book gives the following dates for recent years: 1915, January 1st; 1914, December 27th; 1913, January 8th; 1912, January 5th; 1911, January 3rd; 1910, December 29th. The latest year of the past twenty was 1904, the date being January 16. These dates refer to the first fully expanded flowers, not to blooms picked as harbingers before being open.—W. McG., Balmac.

Accidental combinations.—A few of these having of late been referred to in GARDENING ILLUSTRATED is my reason for recording a note I made in early autumn of such result. It occurred in the rock garden. Some shoots of a strong-growing plant of *Verbena chamædrifolia* crept over the ground and found their way up between a small group of the Lavender Cotton (*Santolina*) that happened to be close by. Such a blending had never suggested itself before, and the effect was a really good one. I resolved to try, whenever opportunity offers, a bed of the ordinary scarlet bedding *Verbena* with a few plants of the above grey-leaved subject interspersed among the *Verbena*. *Santolina Chamæcyparissus* is, perhaps, the best-known variety, but *S. incana* would, I think, prove a better dot plant.—C. TURNER.

A note from Ashbourne.—The warm weather is producing great colour—the Dahurian *Rhododendrons* are covered with their light and dark-mauve flowers, and the Witch-hazel (*Ilex mammosa*) is one blaze of golden-yellow. The shrub, named by T. Smith *Cornus officinalis*, is just breaking out into blossom, citron-yellow, and the early Cherry (*Cerasus Miquelliana*) started to flower in December and will continue blooming until March. *Iris stylosa* is also sending up its flower-spikes, while the Heath is coming into bud, and even showing colour, though only planted in the late autumn. The *Hellebores* are also one mass of white flowers. I feel sure that they require deep, rich soil, and then must be left undisturbed in partial shade and in ground well drained. At first they gather strength, but in time they flower freely. We are so proud, as we have discovered thirty blooms on *Magnolia Campbellii*, for the first time,

but which indicates regular annual flowering hereafter. It is a glorious tree when the frosts respect it.—R. H. BEAMISH.

Gentiana acaulis in London.—I planted this in my London garden in 1914, but had little hope that it would do much good, and I am afraid I did not take much trouble over it. I put it into a low pocket of a bed of Heath, in soil composed of leaf-mould and grit, the surface dressed with a few stones. It was only a small plant, and I did not get any flowers in the spring of 1915, but in October it threw up a bud which I regarded at first with scepticism, but afterwards with much interest, as, to my great pleasure, it opened on a sunny day in the middle of November. It seems a very uncertain species as to flowering, and I do not suppose the atmospheric conditions of a London garden are much help to it, still, if it flowers once, it should flower again, and I shall take much more interest in it now. The friend who sent it to me told me that the secret of success was to see that it never got dry in summer, and no doubt a mulching of stone helps it greatly in this respect.—N. L.

FRUIT.

THE BAGGING OF PEARS.

I would refer F. L. Clark, Yorks., who writes *re* above in your issue of January 8th, to my note, p. 772, December 25th, 1915, of GARDENING ILLUSTRATED. Of course, muslin, or, better, tanned scrim, bags are best of all for fruit preservation. It is, as regards ripening, immaterial whether muslin or paper bags are used. Maturing of fruit on the trees is greatly influenced by inward warmth, not outward, I think. Paper bags preserve better the outward appearance of fruit; they are cheap, and being so are not worth preserving for another season, no little item among other details of the fruit garden. Your correspondent cannot do better than use either paper or muslin, as best suits his convenience, so long as he preserves his fruit from birds. Should only a hundred or so Pears require bagging, muslin would be best, but where thousands are in question paper bags, I think, will be found more economical and easier handled. Personally, I think paper bags, if such are strong, like used for tea, are even better protection from birds than muslin or scrim, for with network bags birds or wasps work through the net, whereas paper screens all from view, and unless fairly sodden by rains I have found a complete protection afforded by paper. As regards observing state of fruit that is not necessary, as anyone who knows will find when they are ready to pick by trying by hand.—W. C. F., Jersey.

—It will be well for Mr. Clark (page 15) to stick to his muslin bags, for of two necessary evils they are certainly preferable to paper. Something of the kind is probably required under certain conditions as a protection against birds and wasps, but it is very difficult to accept the statement made in a recent number that the flavour of the fruit is improved by enclosure in paper bags. On the contrary, all experience points to the desirability of a maximum of light and air to attain this. It may be desirable to bag the softer fruits that wasps and earwigs are able to tap unaided, like ripe Peaches, Plums, and especially Figs, but so far as wall and small bush and pyramid Pears and choice Apples were concerned I found $\frac{1}{2}$ -inch fish-netting answer the purpose admirably, this preventing the tapping by tits and the after attack of wasps. Certainly the flavour of a Doyenné du Comice or Beurré

Hardy Pear would not be improved by enclosing the fruit in a paper bag.—E. B. S., *Hardwick*.

—I tried paper bags this year with Pitmaston Duchess (the grease-proof bags made for cooking some years ago). I did not find that the Pears ripened in them, and where tied earwigs congregated; and again, the wet showers opened the lower edge of bags where joined. I shall in future try butter muslin, as suggested by F. L. Clark, as paper excludes all sun and prevents ripening.—T. K. S., *Norfolk*.

—In reply to F. L. Clark's, Yorks, inquiry in your issue of January 1st, the paper bags would last two or three times with care if made of good paper. The advantage of paper over muslin bags for Pears is they are much more easily and quickly put on. As regards the question of sunshine, I have not found the paper bags detrimental to the flavour of the Pears. Of course, any bag will interfere a bit with the colour. Paper bags will keep the Pears much cleaner than muslin, and if the mesh of the latter is too wide there is a risk from insects like saw-flies, etc. With regard to Apples, muslin or some similar material is better in practice, as it is difficult to put paper bags over them. There is one other point in favour of paper bags for Pears—viz., they keep the temperature more uniform and warmer at night. In conclusion, I consider paper bags best for Pears and muslin bags for Apples.—E. B., *Springfield, Northants*.

PEARS STANDARD AND CORDON.

The illustration of a standard Beurré Hardy Pear in a recent number, with notes on the same, shows a well-grown, shapely tree, and tells of what may be done in the way of growing high-class Pears in a form to which we are more accustomed in old sorts of less merit like Autumn Bergamot, Windsor, Swan's Egg, and the like, of which there are standards of large size in many English counties. I notice by the illustration that the tree was well cared for from the first, and not allowed to grow at will as in the case of the majority of the old sorts above noted. The majority of the best Pears of medium size in their respective seasons might doubtless be satisfactorily grown in this way if space permits, giving after a time a good return and occupying less space than straggling bushes or pyramids, but for small gardens, if a quick return in considerable variety is a consideration, I do not think one could do better than plant cordons. There are a few sorts not altogether satisfactory on the Quince, but I think it may be taken for granted that most of the best will do very well in this way, and come very quickly into bearing. A few that I have proved are Doyenné du Comice, Thompson's, Louise Bonne, Beurré d'Amanlis, B. Hardy, and B. Alexandre Lucas. How do the standard Pears fare with the spring frosts? I should think rather badly in many seasons, for the blossom is very sensitive and succumbs to the slightest frost if at all damp. It is here that the advantage is with the cordons, for whether on wall or rough, home-made fence they can be easily and cheaply protected, and with this, given careful cultivation in other matters, an annual crop is a practical certainty, and it must be remembered that this is a very quick business from the maiden tree stage.

I noted above that another point in favour of cordons was securing variety in a small compass, and this is indirectly emphasised by a communication from a correspondent on page 728, where we read of a quarter of a ton of Dr. Jules Guyot Pear from one tree. This is all very well from a market point of view, but prac-

tically useless for a private place, as nine-tenths of the crop, if not a larger percentage, would go to the manure heap if they were not tinned or bottled. It is probably the wastage that occurs with "too many of one season" Pears that leads to the conclusion that from a general utility standpoint the Plum is decidedly more serviceable than the Pear. One of the chief things to consider when planting cordons is to choose the best in their different seasons, starting with, say, Beurré d'Amanlis and ending with Josephine de Malines. E. B. S.

Hardwick.

Well-flavoured Apples.—I agree with everything Mr. Strugnell says about Apples, on page 16, until I come to the expression, "sweet-cooking" Apple. We do not want that at all. Such sweet Apples as one sometimes finds among cider Apples are not the best; we want a pleasantly acid Apple like the Newtown Pippin now on our markets, and also our own best Apples, such as the Ribston or Blenheim. I do not know any Apple I should call a first-class Apple that is remarkable for sweetness. The point is that such Apples as I have named are so fine in flavour that they do not want anything of added sugar. The French Crab is not a sweet Apple, but it is an excellent one for cooking or any other way of eating it. It is much neglected where it grows under various names in different parts of our country, but in the Antipodes they have taken to it, and some very fine samples come to Covent Garden. I think it is the old French Apple, *Pomme de Fer*, which in some way came into Kent and stayed there. Is Reinette du Canada enough thought of among our Apples for cooking, or any other way of eating it?—W.

GARDEN PESTS AND FRIENDS.

SILVER LEAF IN FRUIT-TREES.

(Concluded from page 35.)

ECONOMIC IMPORTANCE AND DISTRIBUTION.—The effect of this disease on the fruit-bearing capacity of a single tree is considerable, but of slow development. Young trees are seldom attacked, and, as a rule, few silvered Plum-trees of less than five years old are seen. The disease usually appears even in a badly-attacked orchard as the trees are coming into full bearing. As the fungus develops the yield of fruit gradually fails and finally ceases as the branches die. Death may not, however, occur for some time. The effect on an orchard taken as a whole is more noticeable but irregular. The trees immediately adjoining the tree attacked are by no means always the next to show disease, and the fact that disease does not spread directly to the adjacent trees shows that the fungus does not travel through the roots or the soil to the next tree. An orchard may therefore present a general appearance of being silvered before all the trees are attacked, owing to a number of affected trees being dotted about in an irregular manner, and it is only when a number of trees in a row are cut back for re-grafting or other purpose that the disease spreads in an epidemic manner. The Victoria and Czar varieties of Plum are, as a rule, most liable to attack, but an extensive enquiry conducted by the Board in the fruit-growing districts of England failed to discover any special susceptibility or immunity of any other variety. The distribution of this disease through England appears to be extensive, and many serious cases are reported from all the chief fruit-growing centres, especially those in which Plum-trees are com-

mon. No district appears to be entirely free from it, and as far as can be judged it is spreading rapidly. According to Pickering the disease first became a serious economic pest during the rainy seasons which were experienced about 1903.

METHODS OF CONTROL.—Many experiments have been conducted with the object of finding a remedy for Silver Leaf, but although occasionally local successes have been claimed, no really effective remedy has yet been found. The explanation of the apparent success may be due to the fact that *Stereum purpureum* was never really present in the affected tree and that the silvering was due to other causes. It has also been shown that some affected trees have recovered without any fungicidal treatment, and even without any treatment at all. Very little reliance can, therefore, be placed on reports of the successful treatment of single trees. Plugging affected trees with sulphate of

branches bearing silvered leaves unless the wound is promptly and effectively closed with a coating of tar. Dead branches should, however, be cut off at once and burned before the fungus has time to develop, and the wound should be closed with tar. (2) It must be remembered that the fungus is to be found considerably further down the branch than the level at which the silvered leaves appear. When therefore an affected branch is broken or is cut off for any reason the wood should always be cut back to a point where no brown stain can be found. (3) Dead wood should never be left lying about in an orchard or garden where Silver Leaf exists. All such wood should be burned on the spot or sawn up and used for firewood immediately. (4) Dead trees should be cut down to the ground, and if for any reason they cannot be grubbed up, the stump should be charred and well covered over with earth. (5)



Garden house with stone roof, Uckfield Park.

iron has been tried. A hole has been bored into the tree, crystals of sulphate of iron have been inserted and the hole closed hermetically. Indecisive results only have been achieved by these means and the process cannot be recommended. No really satisfactory treatment is at present known, that is to say, no treatment which is certain to bring good results without running serious risk of causing damage in other directions. The only useful advice that can be given at the present time is that precautions should be taken to prevent the spread of the disease. (1) It must be remembered that the fungus does not appear on the bark till the branch or tree attacked has been killed, and that so long as a diseased portion of the tree is capable of bearing leaves, even though they may be wholly silvered, it cannot spread the disease. As soon as the branch dies the fructifications of *Stereum purpureum* are liable to appear and under favourable conditions spread the spores of disease. It is therefore unwise to cut off

Suckers should never be taken from silvered trees for purposes of propagation. (6) The practice of cutting back silvered trees and re-grafting them is inadvisable, and may even be a means of spreading disease. (7) There is a persistent belief that disease is spread to healthy trees by pruning them with a knife that has been used for silvered trees. This belief is probably unfounded, but it is better to seal all such wounds with tar, as the bare surface affords an easy opening for infection. (8) The fungus flourishes in damp situations. Any improvement in the drainage of an affected orchard or garden will probably help to prevent the spread of the disease.—Leaflet No. 302, Board of Agriculture and Fisheries.

"The English Flower Garden and Home Grounds."—New Edition, 12th, revised, with descriptions of all the best plants, trees, and shrubs, their culture and arrangement, illustrated on wood. Cloth, medium 8vo, 15s.; post free, 15s. 6d. Of all Booksellers or from the office of GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

A GARDEN HOUSE.

This is one of the most artistic garden houses I have yet seen. It is on a little Ivy-clad elevation commanding a good view of the garden, and roofed with pretty old Horsham stone. W.

PLANTS AND FLOWERS.

ORCHIDS.

THE DENDROBIUM THYRSIFLORUM GROUP.

This group of Dendrobiums is a most desirable one for amateurs, the flowers being produced in large, drooping thyrses. They are all of easy culture.

D. THYRSIFLORUM blooms from May onwards and is undoubtedly one of the finest Dendrobies in cultivation. The sepals and petals are white flushed with pink, and the lip is golden-orange. In

D. DENSIFLORUM the flowers are produced in dense pendulous trusses, the sepals and petals orange-yellow, the lip downy and rich orange-yellow. It was introduced about the year 1828 and flowered for the first time in this country in 1830 at Messrs. Loddige's Hackney nursery. In

D. CURYSOTOXUM the flowers are of a rich golden-yellow with an orange-yellow disc on the lip. The variety *suavissimum*, sometimes accorded specific rank, has racemes of rich golden-yellow flowers and a deep blood-purple or maroon blotch on the lip.

D. FARMERI somewhat resembles *D. densiflorum*, the flowers being borne in a similar way, but less dense on the scape. The sepals and petals are pale straw-yellow tinted with rose, the lip deep tawny-yellow.

These Dendrobiums have a comparatively short growing season, and once they begin to grow every encouragement must be given them to make up strong, stout pseudo-bulbs. Soon after the scapes are removed new shoots will appear, and directly these begin to root any repotting must be done. Annual disturbance is by no means necessary or desirable, so when repotting becomes necessary a good lasting medium should be selected. Ordinary pots or teak-wood baskets may be used, and each should be filled to one-fourth of its depth with drainage. The soil should consist of *Osmunda* fibre used in a rather lumpy condition, and a little *Sphagnum* Moss can be incorporated with the last layer. During the growing period the plants should be placed in the warm-house, where the atmosphere is kept moist, and the plants well supplied with water. Shade will only be needed whenever the sun is very bright, and at this stage a light spray overhead will be beneficial. As the pseudo-bulbs reach maturity, which can be ascertained by the appearance of a terminal leaf, reasonable exposure to light and air should be the rule. This must be done gradually, and care must be taken that the plants do not suffer from dryness at the root. With such treatment the bulbs will swell up and become thoroughly ripened, an important factor in the cultivation of Dendrobiums. When this stage is reached the plants will be in a fit condition to undergo their long period of repose in cooler and drier surroundings. An average temperature of 50 degs. to 55 degs. F. will be sufficient, and only enough water need be given to maintain the pseudo-bulbs in a plump condition. This treatment should be continued throughout the winter and until the flower-scapes begin to swell, when a little more water and a few degrees extra warmth may be allowed.

SADOX.

CHRYSANTHEMUMS.

LATE CHRYSANTHEMUMS.

EITHER for using in the greenhouse or conservatory up to and after Christmas or for cutting, the late-flowering Chrysanthemums are of great value. The late kinds furnish us with a large quantity of flowers of medium size under ordinary cultivation. It is not a good plan to aim at obtaining the flowers of abnormal size, as if this is done the chances are that some will come deformed, besides which three or four smaller flowers are infinitely better than one of extra size so far as utility is concerned.

Late Chrysanthemums will do well if all work relative thereto is performed some few weeks later than in the case of the mid-season varieties. Starting, for instance, with the cuttings, these may, it is quite possible, be had nearly, or quite, as soon as those of the others. It is not, however, advisable to put in the cuttings so early; if they are inserted towards the end of January, or even in February, good plants can be had. At that season it will not be possible to strike them in a cold frame except in the mildest of winters. The better way is to put the cuttings under a hand-light in a cool-house, afterwards placing them in cold-frames as soon as struck. The after treatment need not differ (the plants simply being later) from that given to the main stock. I consider the bush form of plant better for late Chrysanthemums than the taller-grown plants. To obtain these, of course, a few stoppings will have to be resorted to. These tops will make useful material for the latest cuttings to supply a stock of dwarf plants in small pots. There is one point which I think is overlooked in the culture of late Chrysanthemums; it is that of commencing to feed them far too early in the autumn; a strong growth is thereby made, which will at times fail to set any buds at all; those buds also which may be thought safe will turn blind or fail to grow as they should do. But little loss will be sustained (if any) by deferring the application of manurial stimulants until the plants are housed. This work need not be done quite so soon as in the case of the main crop, there being no buds susceptible of injury by slight frosts. It is not well to risk the plants out too far into October. If not housed they should at least be so situated as to be within reach of temporary protection should a sharp frost ensue. The tendency before alluded to as regards growing too strongly should be further guarded against by keeping the plants in pots one size smaller than the rest. Full exposure to all the light and air, if needful with early and mid-season kinds, is even more essential for the late ones. When housed less warmth is required; by this I mean that the temperature maintained to keep down injury to the blooms by damping is not at first needed for these late sorts. If frost is just excluded they will be safe enough until commencing to show colour; then a little warmth and a more buoyant atmosphere will suit them better. To facilitate the culture of late Chrysanthemums it is far better to devote a house to them. The plants should not be in any way overcrowded; they should, in fact, have more room allowed them than is given up to earlier kinds, so that the foliage is kept in a healthy condition as long as possible. Disbudding can be done to suit each case, but I do not recommend it to be adopted in a severe fashion. Plants with from 12 to 18 flowers are better than those with three or four as far as utility is concerned, as well as for general effect. H. G.

NOTES AND REPLIES.

Show board for eighteen Japanese Chrysanthemum blooms.—I wish to make a show board to hold eighteen blooms Japanese Chrysanthemums. Would some exhibitor kindly furnish full particulars? In a book on Chrysanthemum culture it is said the holes should be 7 inches apart. Surely the National Chrysanthemum Society has altered this rule, as the majority of varieties sent out during recent years are far in excess of 7 inches diameter.—SOUTH AFRICA.

[The special regulations of the National Chrysanthemum Society provide that exhibitors must have their stands of the following dimensions:—For twelve Japanese blooms the boxes should be 28 inches wide from left to right, and 21 inches deep from back to front, the holes to be 7 inches apart from centre to centre. Stands for six Japanese blooms should be 14 inches wide from left to right, and 21 inches from back to front. A "twelve" board may be used together with a "six" board for exhibiting eighteen blooms. The stands have been increased in size two or three times until it has become a tax on exhibitors that they have not been disposed to acquiesce in. Each change in dimensions involves the purchase or the making of new stands and the boxes in which they are conveyed to the shows. In more recent years the National Chrysanthemum Society has encouraged the exhibition of these large blooms in vases, as in this way the true character and size of the flowers are so much better appreciated and displayed. We agree with you that the boards or stands at present in use are quite inadequate to display the large flowers satisfactorily.]

Chrysanthemum blooms—drooping varieties (Japanese) for exhibition.—Would some exhibitor of Chrysanthemums kindly state what is the rule laid down by the National Chrysanthemum Society regarding the judging of the drooping or reflexed varieties, such as Bob Pulling, Mrs. F. C. Stoop, Miss May Fox, etc.—SOUTH AFRICA.

[The National Chrysanthemum Society has no rules of judging. Judges whose qualifications are undoubted, and who should know the good or bad points of any or every variety they are asked to adjudicate upon, are always selected. Mere size does not count with a good judge, but if size is combined with beauty of colour, and with even and consistent form and freshness, little else need give exhibitors cause for anxiety. Colour, size, form, freshness, and quality generally are the factors that have to be considered in judging Chrysanthemums, and in close competition points are apportioned to each of these factors, and the exhibitor who gets the highest number of points is adjudged the winner.]

Border Chrysanthemums.—For both town and country gardens the border varieties of Chrysanthemums are very useful. During the past few years many new varieties have been raised. If due care be taken in making selections of varieties there need not be any lack of blossom in the borders from August to the end of October. Every year we pay close attention to the plants grown in pots, but I am afraid we do not give similar attention to the border varieties. The old roots are left in the ground too long, manured often enough, it is true, in many cases, but they deteriorate and are not so satisfactory as young plants raised from cuttings, or even from the best parts of divided roots that are lifted and replanted. Some border Chrysanthemums do not produce suckers at all freely, and they include many of the best varieties. Lifting and special treatment of the old stools are the best means of securing suckers suitable for cuttings. When the roots are lifted, carefully remove the old soil and then pack them fairly close together in boxes or on beds in a cold-

frame, surrounding them with rather finely-sifted compost of a light, sandy nature. If the old roots are kept fairly moist, and in a rather close atmosphere, suckers will soon grow; then more air may be admitted with advantage to strengthen the suckers from cuttings in due course.—BOURNE VALE.

Market Chrysanthemums.—I was interested in the note on these (page 742, December 11th). Those who grow flowers at home for decoration may learn a great deal from the grower for market. Undoubtedly the blooms grown are of high merit, because they are not too large, but big enough for filling nearly all kinds of vases, and the plants are so useful in the greenhouse, conservatory, and glass porch, as many of the best varieties are dwarf and of a nice bushy habit. For cutting, amateurs may grow a number of plants outside, lift when the buds have formed, and simply mould over the roots when the latter are placed on the bed of a vinery, Peach, or other suitable house. This plan would admit of more flower pots being used for growing specimens in for conservatory embellishment. For many years I have adopted the following plan with a good deal of success. Instead of putting out the plants in the usual way in borders, for lifting in due course, I put down a ridge of good lumpy compost on a bed of ashes. The ridges of soil were 3 feet apart, 15 inches wide, and about 9 inches deep, the plants being put into the centre of the ridge 18 inches asunder. During the summer, watering and feeding did not entail much labour. In the autumn the plants were lifted by simply placing a garden fork under each one and then transferring them to the glass structure. Very little soil dropped off, and not much was needed over the roots in the house. These plants never suffered through the removal, and flowers were gathered from them as late as the middle of January.—G. G. B.

Outdoor Chrysanthemums.—Will some reader kindly give me a list of about a dozen of the best showy, early, hardy Chrysanthemums for out of doors; not those which do not bloom till October or later, as rain always spoils them here? I want good, clear, decided colours—yellow (light and dark), red, pink, and white. Cranford Yellow was a success one year, and also a really beautiful variety called, I believe, Shower of Gold, but I seem now to have lost both. Hollicot White did well the same year. I also want the names of a few singles in the way of Mary Richardson, a splendid Indian red that is a mass of bloom each year, always reliable, and blooms nice and early. It is, however, too tall, and wants a lot of staking. Are there any in the way of Ladysmith in other colours? I once had a lovely white, Cannell's Paris Daisy, but could never get it again, and it was, though a perfect companion for Ladysmith, apparently much less hardy. Goacher's Crimson sometimes does well and sometimes dies. Is there another as good and less capricious? It appears invariably fatal to move them if they once do well, yet they make such great clumps. Disturbance cost me all those mentioned above as successful.—M. L. W.

Chrysanthemum Scur Melanie.—A good batch of this old variety is of some value in early December, alike for the conservatory and for cutting. It forms an attractive contrast to the somewhat gaudy *Salvia splendens*, at its best at the same time, and good bushy pieces full of bloom can be grown in 6-inch and 7-inch pots. A good quantity can be grown with a minimum expenditure of time and trouble from cuttings struck in February and March. These are planted out during May in a prepared bed in the open, stopped once or twice, and lifted and potted towards the end of September.

OUTDOOR PLANTS.

CLEMATIS DURANDI.

This excellent hybrid is free, bold, and good in colour. I have grown it for several years, and always with good results. It is happy on Oak trellises, and also over bushes. W.

— When the Jackman hybrids of Clematis came into existence popular favour was at once directed to them, with the result that the old species fell into neglect and could only be found in botanical collections. Among them was *C. integrifolia*, introduced in 1596 from Central and Southern Europe. The illus-

This short note describes well the spray of bloom figured to-day. It differs from *C. integrifolia* by its somewhat taller growth, broader and more massive leaves, and larger flowers. In *C. integrifolia* Durand we have a fine hardy plant which deserves more attention than it at present receives. Many other hybrids of *C. integrifolia* have been raised, but *C. i. Durandi* is, without a doubt, the finest of them all.

AMONG THE HARDY FLOWERS.

SEED-SOWING.—There is great gain in raising one's hardy flowers from seeds. This is specially desirable when novelties

there is a great danger that the young seedlings may become drawn and weakly from want of light and air and from too much heat. I am speaking from experience, and, besides these dangers, there is always the long period of care they require before the seedlings can be put out with safety. The end of February or the beginning of March is quite soon enough for sowing.

PRIMULA COCKBURNIANA.—It is strange to find such a difference of opinion about the biennial or perennial duration of *Primula Cockburniana*. Some of my friends assert that it is a true perennial, and others maintain that it is a biennial. With some it is a biennial only, but others



A flowering shoot of Clematis integrifolia Durandi.

tration we give to-day of one of its progeny is a revelation to those who are unaware of the existence of a non-climbing, herbaceous Clematis, with flowers nearly as large as those of many of the present-day hybrids, and in colour of the first water. The first record of the hybrid *C. i. Durandi* appears in the pages of *The Garden* of April 25, 1874. It is recorded that:—

MM. Thibaut and Keteleer announce under the name of *C. integrifolia de Durand* a new hybrid between *C. integrifolia* and *C. lanuginosa*. It grows 4½ feet high and bears dark, velvety flowers, each from 3 inches to 4 inches across, with yellow stamens. It blooms continuously from May till October.

are offered, as seeds are generally cheaper per packet than a single plant of the new flower. Then we often have these novelties in plants sent out of very small size, and calling for a considerable amount of coddling before one can consider them out of danger. For the price of one, or even for less, we may have a number of plants, and may make a nice clump or group if we so desire. It is true that we have sometimes to wait longer for results, but, on the whole, the balance of gain is largely on the side of raising the plant from seeds. Those who have greenhouses or other heated glass structures often think they will gain a great deal by sowing their seeds of hardy flowers as early as January. A little time may be gained, but

can keep it for several years. I think that thorough drainage is very helpful, and that removing the flowers so soon as they are over has also a good effect. Yet I do not venture to dogmatise, and am always willing to profit by others' experience.

PRIMULA SINO-LISTERI.—I should be glad to know if I might venture to leave this outside with impunity. It comes so near to *Primula obconica* that I am doubtful of the wisdom of doing so. If it is not hardy I shall keep it in a pot and plunge for a time in the open, or lift it and pot it in winter.

THE WOOLLY THYME.—Thymes are favourites of mine, and among the few that I grow I always appreciate *Thymus*

VEGETABLES.

WORN-OUT SOIL.

To renew a worn-out garden soil to a state of thorough fertility demands a deal of forethought and knowledge on the part of the individual in charge. Even in these days of high-class gardening it is no uncommon thing to meet with gardens the soil of which is completely exhausted through being long cropped with the same things and manured with the same material for years. The soil in such cases gets sour, and in time becomes a hotbed of weeds and vermin. Such cases more frequently occur on thin soils than on deep land of a clayey nature. Nothing is more productive of satisfaction to the good all-round gardener than a good kitchen garden, and if he has aspect and suitable shelter to husband the warmth of the sun's rays he has in a measure in his own possession the making of the soil.

To deal effectively with such cases as are indicated, no half-and-half way of doing the work need be thought of, and whatever is worth doing is worth doing well, however tedious and laborious the work may be before being accomplished. Now is the time to have all unoccupied ground turned up to get the winter's frost and air to sweeten and pulverise it. To improve a poor soil thoroughly something more than the ordinary orthodox system of trenching is necessary; every trench ought to be 2 feet wide, and turned clean over to the depth of 2 feet, if there be surface-soil to do that with, being careful to put the surface part with all its weeds and vermin into the bottom on the top of the subsoil, which should be broken up at least a foot deep. The more vegetable matter that can be turned into the bottom of the trenches the better, and the surface should have a good dressing of lime and soil, than which little better can be got to enrich poor ground. If such a course were year after year followed until the whole garden was gone over, a poor worn-out soil would soon be productive of good results, and in all likelihood it would take four or more years before the whole could be gone over, according to the size of the garden. One particular point in trenching should always be borne in mind—viz., the more vegetable refuse that can be put into the bottom of the trenches the better, as it acts beneficially in many ways, supplying food for the roots in a dry season, and also keeping them from going into the cold subsoil. It was my lot many years ago to enter upon a garden the deep cultivation of which had been so neglected that it would scarcely grow anything satisfactorily. It was impossible to expect much from the mode of cultivation that had been adopted—that of digging rank manure into the surface, that kept the free, light soil so open, that whenever the dry weather set in in June there was an end to the appearance of good crops. Deep cultivation was adopted in the manner stated, and the result was that vegetables were both abundant and wholesome. K. S.

Useful frame Carrots.—Those who value the small, sweet, tender Carrots which are such a feature in the Paris market will do well to make a sowing at once, on a mild hotbed, of the Inimitable Forcing Carrot, a globe-shaped variety with a clear skin, and one of the quickest to mature we have. The plants should be grown near the glass, and by using leaves in the making of the hotbed I have found one gets better roots, as the leaves remain in a moist, warm condition, which the roots like, while little watering is required; indeed, the less the better. If a larger root is liked there is no lack of good

varieties—such as Early Gem and Early Nantes—which require more time and make a good succession to the Inimitable Forcing. Given ordinary cold-frame culture, or sown on a warm border in February, and sheltered by mats or covers of some kind, such as spare lights, to protect from excessive rainfall, a much earlier crop, and at a season the roots are valuable, will be obtained.—F. K.

Potato Dover Castle.—Last season this proved an excellent introduction, and though the amateur is often at a loss when selecting a new variety or making a change of seed, I feel sure he will not regret trying this. Introduced in 1913, there has been sufficient time to test its merits. Though quality should be the first point, it is essential that the crop should be satisfactory also. In both respects Dover Castle will be found all one may desire. It is a late variety, and, grown in loamy soil, was the last to mature. Doubtless in lighter land and well drained it would be a little earlier. The tubers are kidney-shaped and handsome, with very shallow eyes, therefore there is no waste. There was no disease, and at this date (December) the quality is all one may wish. The plants make a close, compact growth, and the flowers are white. For many years Windsor Castle was a great favourite for its quality. Dover Castle may be classed as a later form of that well-known Potato.—W. F.

A useful winter salad.—With such variable weather as we have had this season the outdoor Lettuce crop has been destroyed in many gardens, and in others so much injured that the plants will take a long time to recover. The excessive rainfall has done more injury than frost. For many years, with a short Lettuce supply in mid-winter, I found it a good plan to get tender, delicate salad, to sow Lettuce seed rather thinly in boxes, much in the same way as Mustard and Cress, using a white Cos for preference. The seeds, if placed in a warm-house, and when germinated stood close to the glass, will give excellent cutting material for the salad bowl. If not given too much moisture the seedlings remain good a considerable time. It is advisable to thoroughly moisten the soil before sowing. Do not place much soil over the seed; indeed, I merely press in the seed with a flat board. Use good soil of a light nature. If sowings are made fortnightly there will be a supply of excellent salad material.—W. F.

Early Cauliflowers.—When nice, fresh Cauliflower-heads can be had about the first week in June they are most acceptable, and now that we possess so many early sorts that need not be difficult. The old plan of sowing in August or September, and keeping the plants under glass during winter, entail a great deal of labour, and therefore I have ceased to follow it, and now sow in spring. If seed of some of the earliest sorts is sown now in gentle heat the young plants will appear in a week, when they may be grown slowly on until the end of March, and then they should be planted out. If kept near the glass, and not allowed to become too crowded, they will be found to be much more healthy and robust than plants raised in autumn and wintered under glass.—N.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3s., post free 3s.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

lanuginosus. It does not flower so well as the others, but, on the other hand, it forms such a spreading cushion of a pleasing tone of grey that I admire it every time I see it. I have been told that plants with woolly leaves are liable to suffer greatly in wet winters, but I do not find that this is the case with *Thymus lanuginosus*. It never looks back with me, and yearly grows in size unless cut back lest it should encroach too much upon the domains of its neighbours. It is a delight when it is hanging over the stones of a rockery. A nurseryman told me the other day that some of his customers find it most difficult to establish, and buy plant after plant before they succeed. Some, indeed, give it as "too fastidious," which is rather a libel. It certainly likes a dry soil and stones about its roots. As a carpenter it is excellent, but should only be used for the more vigorous bulbs, such as Daffodils, and not for choice Crocus species.

SAXIFRAGA SIBTHORPI.—This bright, golden Rockfoil seems much the same as one I see grown as *Saxifraga Cymbalaria*. It is a nice little plant with shiny, light-green leaves, and begins to flower when the plant is only an inch or two high. It gradually extends its flower-stem and blooms for a long time, eventually becoming as much as 6 inches in height. I like it best when it comes first into bloom, as then the wee golden flowers seem as if set close on the small and pretty leaves. It flowers in spring and goes on for a long time. It is only a biennial or annual, but it seeds and sows itself in a most lavish way, so that we need never trouble to sow it unless we want it in any special place. It has a habit of growing well in one place for a few years and then taking a fancy to migrate gradually to "fresh fields." It evinces with me a preference for a shady and rather moist place, and it settles down there much better than in a sunny, dry position. It looks nice in the crevice of an old Moss-grown retaining wall in the shade, the leaves and flowers being charming for their setting of mossy green.

AN AMATEUR OF HARDY FLOWERS.

NOTES AND REPLIES.

The change of spirit in gardening.—No one can fail to have been struck with the change which has come over the planting out of borders. It will be within the recollection of a good many readers that once it was regarded as the correct thing to have borders filled with scarlet-flowering Pelargoniums, yellow *Calecolarias*, *Perilla nankinensis*, blue *Lobelia*, and yellow *Feverfew*. These were regarded in many quarters as ideal tenants, and if borders were so filled they were considered quite complete. The bulk of this style of gardening has gone. Few, I venture to say, would wish to go back to those days. Many who once looked upon hardy perennials with an amount of prejudice have come to regard them as indispensable in a garden. Why? Simply because an abundance of charming flowers may be had at many seasons, and they give little trouble once planting has been done; besides, once the initial expenses have been borne they can be propagated by root division quite easily. Some of the hardy biennials, which can be treated practically as annuals in regard to raising, are exceptionally beautiful, and great helps to those whose desire is to have the garden beautiful for the longest period. Amongst annuals, too, how delightful to have patches of Sweet Sultan, *Nigella*, Poppies, *Phlox Drummondii*, etc. Hardy plants provide us, too, with much autumnal splendour.—W. F. D.

TREES AND SHRUBS.

HYDRANGEA QUERCIFOLIA.

This plant comes from Florida, and is, therefore, only half-hardy, but will succeed in the open where the ordinary Hydrangeas grow. When in blossom it is covered with its bunches of white sterile flowers, which form a pleasing contrast to its green Oak-leaved foliage. It prefers warm, light, rich soil, with protection against winds and slight protection against the direct rays of the noonday sun. It is easily transplanted or divided.

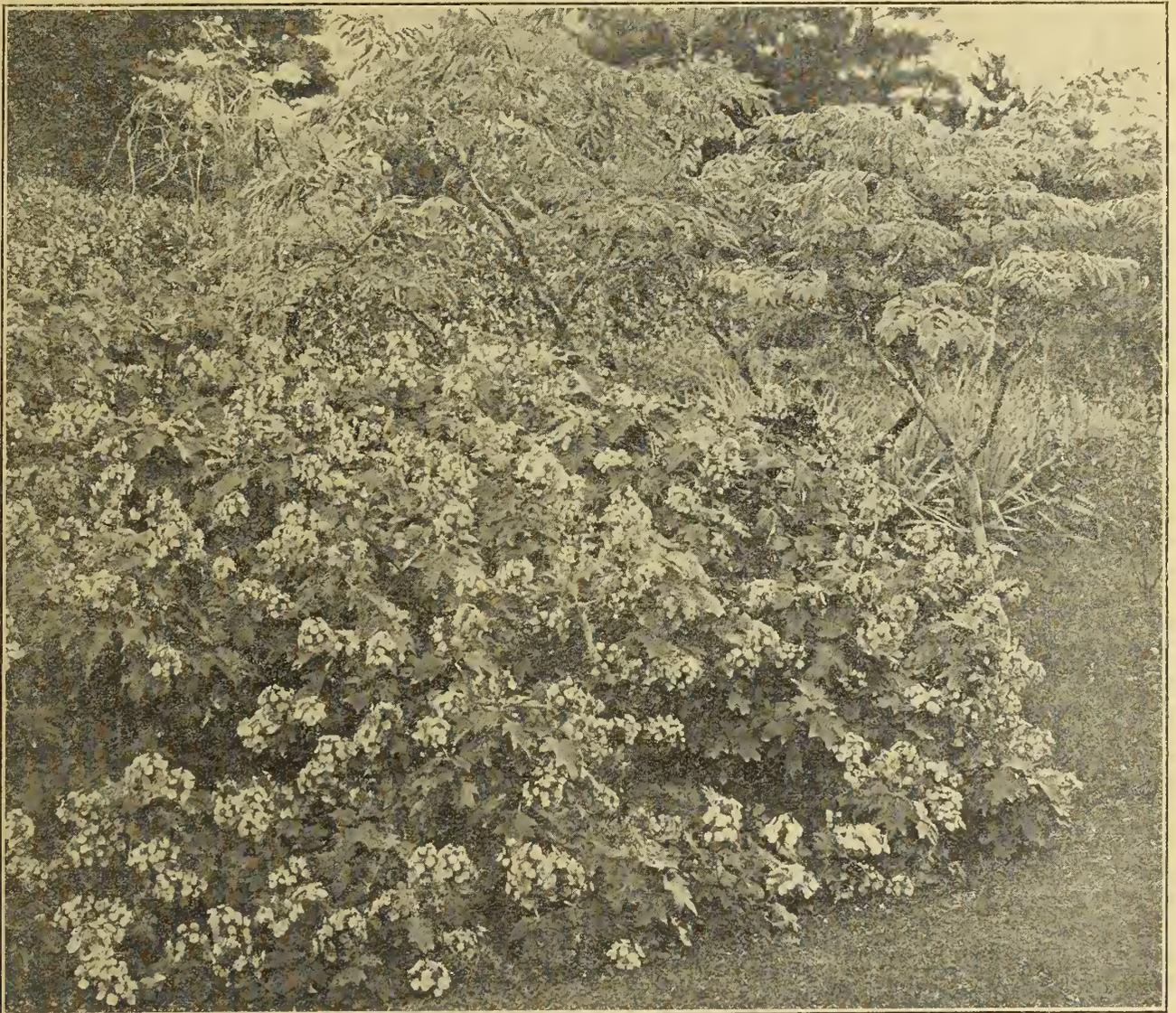
R. H. BEAMISH.

Ashbourne, Glounthaune, Co. Cork.

height being more suitable than larger specimens. It is also advisable to plant early, autumn or early winter being preferable to late spring except in districts where drought is not experienced in early summer, for those plants put in during autumn or winter have an opportunity of becoming well rooted before a dry time is likely to occur. During the first year or two after planting it will be necessary to check the growth of coarse weeds two or three times during summer, but afterwards the plants will look after themselves. As a rule it is advisable to dig or fork the ground over before planting, particularly when it is covered by coarse Grass, but when the ground is very

ing the tops off annually after flowering the plants can be kept quite dwarf if it is so desired. The variety sulphureus, or the Moonlight Broom as it is called, can be used for the same purpose. This should be grown from cuttings and planted out from pots. C. s. Andreanus can also be utilised, but for semi-wild or wild places the type is the best. Where a tall-growing shrub is desired *Colutea arborescens*, the Bladder Senna, can be used, as also can *Caragana arborescens*. Both are yellow-flowered shrubs and are best raised from seeds sown on the spot. They have been used effectively on old heaps near collieries. The

COMMON GORSE (*Ulex europæus*) is



Hydrangea quercifolia in Mr. Beamish's garden at Ashbourne, Glounthaune, Co. Cork.

SHRUBS FOR DRY BANKS.

It is sometimes difficult to deal successfully with dry, sandy, or gravelly banks so as to clothe them at small expense with vegetation of a permanent character, and that will grow with the minimum amount of attention. Beyond the limits of the garden, too, it is sometimes necessary to plant a hill-side, particularly when extensive bare areas are exposed to view from the windows of the house.

It is usually advisable to sow seeds and let the seedlings fend for themselves from the start, but it is possible to plant out seedlings or rooted cuttings from pots, or small plants from the nursery. In most cases, however, small plants are preferable to large ones, those below 9 inches in

steep, and likely to be washed by heavy storms, it is better to cultivate small patches, leaving grassy spaces in between; then, in a few years, after the plants have become established, dig up and plant the remaining areas. This will prevent the surface soil being washed away. The

COMMON BROOM (*Cytisus scoparius*) is one of the best plants for poor soil, and there are few places in the country where it cannot be established. Seedlings of a few inches high can be transplanted successfully, but larger plants may fail. If in February, however, seeds are sown thinly over loose ground and raked in, or two or three seeds are dibbled into the ground at distances of a foot apart, seedlings will appear in due course. By mow-

another excellent bush for poor soil; it should be sown direct on the site or planted from pots. An even better plant is the double-flowered variety, for it is more compact in habit, and after flowering has a tidier appearance by reason of the absence of seed-pods. This, however, can only be raised from cuttings, and must be kept in pots until planted permanently. Cuttings of half-ripe shoots, 3 inches to 4 inches long, inserted in a bed of sandy soil in a cold frame in July or August, usually root by the following April, when they may be taken up and potted singly. As a rule the poorer the soil the better the results. An autumn-flowering Gorse is obtainable in

ULEX GALLI, a low-growing bush often

of compact habit, and not more than a foot high. It blooms finely in September and is very effective when associated with common Heather (Erica cinerea) and Ling (Calluna vulgaris), both of which can be established on poor soil, although less rapidly than Gorse and Broom. It is usually advisable to take well-rooted plants from nursery beds and plant them 12 inches to 18 inches apart. In the event of dry weather being experienced during the first year or two it is a good plan to scatter decayed leaves between these Heaths in order to preserve moisture in the soil. The

COMMON JUNIPER (*Juniperus communis*) is another excellent evergreen for dry places, particularly in chalky districts, whilst the prostrate forms of *J. Sabina* can also be used. For the milder part of the country the various species of *Cistus* are excellent for sunny banks, and, as a rule, they give quite as good results in sandy soil as in soil of good quality, growth being less soft and consequently better ripened in the poorer soil. A few good ones are *C. laurifolius*, *C. populifolius*, *C. albidus*, *C. florentinus*, *C. monspeliensis*, *C. Loreti*, and *C. corbariensis*. The first-mentioned grows from 4 feet to 6 feet high, the others varying from 1½ feet to 4 feet in height. The *Helianthemums* may also be used, particularly the numerous forms of *H. vulgare*. Where a tall-growing plant is required,

SPARTIUM JUNCEUM, the Spanish Broom, can be used, whilst *Genista virgata*, a large bush, sometimes 12 feet high, is an excellent plant for an open position or for semi-shade. The various wild Roses can often be established in poor soil, particularly the Scotch Rose, *Rosa spinosissima*. This can even be used with effect on sand dunes near the sea, where, although it may be hut an inch or two above the sand, it blooms with the greatest freedom. The Blackthorn (*Prunus spinosa*) and Way-faring Tree (*Viburnum Lantana*) can be established on hill-sides where chalk is near the surface, as well as in other places, whilst the Double flowered Bramble (*Rubus ulmifolius flore pleno*) can be established if planted when small. Where a few inches of good soil are found in a garden, or where a little good soil can be provided, Lavender can be established, whilst *Berberis stenophylla* gives good results in places where a large, free-growing evergreen is desired. When neither of the plants mentioned can be obtained the Irish Ivy can be tried, whilst that good-natured evergreen, *Berberis Aquifolium*, can also be planted with good results.

Amongst trees, three of the best for poor soils are the Scots Pine, Common Birch, and Mountain Ash. D.

Newer Lilacs plant now.—Where there is plenty of the older Lilacs it is well to introduce a few of the newer varieties, for in size and colour of flowers they are improvements. Where flowers are wanted early, and there is warmth, it will pay to pot up any plants with good strong buds. They may be started in the Mushroom-house and afterwards moved to the light.—E. II.

***Distylium racemosum*.**—This, one of a number of curious shrubs belonging to the Hamamelis, is less beautiful than the various kinds of Hamamelis, but worth growing in the milder parts of the country in those gardens where interesting and out-of-the-way shrubs are encouraged. A native of Japan, it is in that country of tree-like proportions, but here it is no more than a shrub. Its evergreen leaves are Willow-shaped. The flowers, at their best in late spring, are chiefly remarkable by reason of their bright-red stamens. It requires light loamy soil to which a little peat or leaf-mould has been added, and should be given a position sheltered from cold winds.—D.

INDOOR PLANTS.

NOTES AND REPLIES.

Clematis indivisa failing.—The enclosed leaves are from a *Clematis indivisa* I have in my cool greenhouse. It is growing remarkably well, and new shoots appearing, but after a very short time the leaves turn like these. I have used sulphide of potassium, but it seems to have no effect. What would you recommend me to do?—CORNWALL.

[If the atmosphere of the structure in which *Clematis indivisa* is growing is at all close and moist the leaves are particularly liable to be attacked by mildew, as has happened in your case. We have found the best check to be dusting the foliage with sulphur, but by far the most important point is to see that there is a free circulation of air throughout the structure in which the plant is growing. During such a spell of damp weather as we have experienced of late mildew will, of course, be more troublesome than if the weather is dry.]

Erythrina Crista-galli.—This good old flowering plant has been shown in fine condition at some of the meetings of the Royal Horticultural Society during the present season. Some of the species are among the showiest of tropical trees, but, as a large structure is necessary for their development, they are very rarely seen. On the other hand, *E. Crista-galli* may be readily accommodated in a limited space, and during the summer it will grow and flower well out of doors. *E. Crista-galli* forms a thickened root-stock, whence annual shoots are produced. These, which reach a height of 4 feet to 6 feet or thereabouts, are furnished more or less with spines, and clothed with handsome foliage. The flowers, which are borne in large terminal racemes, are of a deep red colour, thick wax-like in texture, and of a singular shape. In a snug corner, such as in the angle of two glass structures, this *Erythrina* will pass the winter without injury, provided the root-stock is protected from frost. It is propagated from cuttings of the young shoots taken in the spring and placed in a close propagating-case.—W. T.

Hibbertia dentata.—This is one of the best of greenhouse climbers, flowering during the first three months of the year. It is of moderate growth, and mounts upwards by entwining its slender shoots around any support. The leaves are, when mature, of a deep olive-green, but in a young state they, as well as the growing shoots, are of a bright crimson tint. The flowers, which are each about 2 inches across, are bright yellow, and in general appearance very suggestive of those of a *Hypericum*. Being freely borne they are very effective when nestling among the deeply-tinted foliage. Throughout the summer, when growing freely, the foliage is particularly attractive. This *Hibbertia* will strike root readily from cuttings, while in a greenhouse I have had it seed freely. A singular feature was noted in connection with the seeds, for sown directly they were ripe some of them germinated at once, while the others lay in the ground for nearly a year and then grew.—K. R. W.

***Lilium Krætzeri*.**—There are many varieties of the popular *Lilium speciosum*, but it is safe to say that none of them is so handsome as the subject of this note. Many who grow *L. s. album* imagine that they have secured the best white, but they will find that this Lily is occasionally faintly tinged with pink, while the mid-ribs of the petals are of a decidedly pinkish shade. *L. Krætzeri* is free from this drawback, the large, handsome, and well-shaped blooms being absolutely white. In this case, the mid-ribs of the petals are of an attractive shade of green, which emphasises the whiteness of the bloom. For Christmas or at Easter, when white flowers are in request, nothing is more serviceable than *L. Krætzeri*.—KIRK.

ROYAL HORTICULTURAL SOCIETY.

JANUARY 11TH, 1916.

The first fortnightly meeting of the year was held on this date, and, whether regarded from the standpoint of quantity or quality or both combined, may safely be stated to be the finest January exhibition ever held in the hall. The bank of Orchids from Haywards Heath would have done credit to a big Chelsea meeting, while the Cyclamens from Reading were among the best ever presented at this season. In other directions, Carnations were particularly well shown, while the earliest alpiners were, perhaps, seen in larger numbers than is usual at this time.

HARDY PLANTS.

Quite a surprising lot of these was presented, and in unusually good form, the latter due unmistakably to their having been sheltered in cold-frames, which, while preserving the flowers, do not destroy their character. Of these, one of the most interesting was that staged by

Messrs. Barr and Sons, King-street, Covent Garden, W.C., in whose varied collection the most useful item was a goodly batch of *Iris unguicularis*, so long known as *I. stylosa*. Equal to the choicest Orchid in delicate beauty, it possesses the additional merit of hardiness, and may be enjoyed by all. Other items of interest were the winter-flowering Croci, of which *C. chrysanthus* and *C. Imperati* were noticeable. Coloured Primroses and Lenten Roses in variety were also included in the group.

Mr. Clarence Elliott, Six Hills Nurseries, Stevenage, brought a beautiful and well-flowered batch of the best of Burser's Saxifrage (*S. B. Gloria*), which, in the open without protection, was in full bud three weeks ago. The handsome white flowers on reddish stems, each 2 inches high, were very good. *S. Boydi alba* (of robust growth and free) and *S. Irvingi* (almost a pink-flowered *Burseriana* and a good addition) were remarked among others.

Messrs. Whitelegge and Page, Chislehurst, had a considerable showing of alpine plants in pots—largely Saxifrages. These included well-flowered batches of *S. apiculata*, *S. Boydi alba*, *S. Salomoni*, *S. Elizabethæ*, and a particularly good lot of *S. Burseriana*. The fine blue *Lithospermum rosmarinifolium* was welcome and good.

Mr. G. Reuthe, Keston, arranged a collection of alpiners and shrubs, the former, chiefly Saxifrages in flower, having been practically cleared by mice during a night at the station. Of such as *S. Boydi*, *S. Kestoni*, *S. Haagei*, and *S. Griesbachi* a few only remained in flower.

Mr. J. J. Kettle, Corfe Mullen, Dorset, put up a lovely lot of Violets, which he grows and shows so well.

Mr. Herbert Chapman, Rye, exhibited pots of his new hybrid Trumpet Daffodil *Reveille* (*pallidus præcox* x *princeps*), which had come into bloom thus early in a cold-frame. As shown, the new-comer is virtually a pale-coloured *princeps*, below the latter's average size. It is graceful and free, and is said to be a good garden variety. Pots of hybrid and other Snowdrops also came from the same source.

GREENHOUSE PLANTS.

Messrs. Sutton and Sons, Reading, contributed a full length table of Cyclamens, the pick of their famous strains of these indispensable winter flowers. Arranged in circular baskets, one colour in each, and brilliant or pure in colour, they constituted a considerable attraction, and were much admired. Particularly effective

tive was the Silver-leaved Salmon, a variety worth cultivating for foliage alone. Others of striking individuality were Salmon Scarlet, Giant White, Giant Crimson (the last two the largest-flowered of the race), Vulcan (intense crimson), and White Butterfly (one of the purest). Associated with fresh Ferns and backed by Palms, the group was most effective.

Messrs. H. B. May and Sons, Edmonton, also displayed an excellent lot of Cyclamens, arranging the plants in groups in red, white, salmon, pink, and other shades in a setting of greenhouse and hardy Ferns, the latter chiefly evergreen Scolopendriums, which alone are most welcome at this season. A good background was formed of Kentia Palms.

SHRUBS.

The most interesting item under this head was a fine cone-bearing branch of the South Californian *Abies bracteata*, sent by Lieut.-Col. Barclay, Bury Hill, Dorking (gardener, Mr. Grayswark), taken from a tree nearly 70 feet high, and having a spread of 36 feet. The branch shown was full of cones, each 3 inches to 4 inches long, and ornamental in the highest degree. Regarded generally as somewhat tender, it is suited to planting in favoured localities only.

Messrs. J. Cheal and Sons, Crawley, showed selected examples of white and red flowered *Mezereum*, the blooms much larger than usual. A spray of the Winter

doubt, it ranked among the finest ever staged at a January meeting. Space will not admit of our entering into details of the many choice kinds staged, and it must suffice to say that the group teemed with delightful forms of *Odontoglossums*, both white and blotched varieties, was rich in *Laelias*, *Laelio-Cattleyas*, *Odontiodas*, *Miltonias*, *Cymbidiums*, and *Calanthes*, while beautifully-coloured examples of *Sophranitis grandiflora* afforded a bit of brilliant colour possessed by no other Orchid at any season. Several dozen well-flowered examples of the chaste *Masdevallia tovarensis* also found place in the group, and rarely have better examples been seen. A gold medal was awarded this fine display. Several other small collections of Orchids were staged by leading growers.

A list of the certificated plants and medals awarded will appear in our next issue.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JANUARY 6TH.—*Winter Sweet* (*Chimonanthus fragrans*), *Berberis japonica*, *Garrya elliptica*, *Daphne Dauphini*, *Daphne Mezereum*, *Jasminum nudiflorum*, *Coronilla glauca*, *Andromeda floribunda*, *Hamamelis arborea*, *Laurustinus* (various), *Strawberry-tree*, *Parrotia persica*, *Erica herbaacea carnea* (in several varieties), *E. mediterranea glauca*, *E. m. hybrida*, *E. alpina*, *Tree Ivies*, *Genista hirsuta*, *Polygala Chamæburus purpurea*, *Prostrate Rosemary*, *Snowdrops* (in variety), *Violets* (in variety), *Crocus Imperati*, *Aubrietias*, *Tufted Pansies*, *Polyanthus* (in variety), *Christmas Roses*, the *Corsican Hellebore*, *Cyclamen Coum*, *Winter Heliotrope*, *Primroses*.

WORK OF THE WEEK.—The pruning of climbing plants has been continued, as this is possible so long as the weather is fine overhead. When planting is stopped owing to the sodden state of the ground, pruning can be pushed along. *Ceanothus* on walls are cut back to three eyes or four eyes, and old worn out wood removed. The *Winter Sweet* (*Chimonanthus fragrans*), being in bloom, is left alone for the present, but will be reduced somewhat after flowering. *Actinidia arguta*, usually makes a lot of strong training growths, and these, if not required for furnishing bare spaces, are cut back to six eyes. *Actinidia Kolomitka* requires very little attention, most of the wood made being short, stubby spurs, with an occasional trailing growth. This is a lovely climber for warm south walls, where it flowers annually. *A. chinensis* is a rapid climber, in its element when rambling through an old tree. *Clematis orientalis* is a very strong grower, and it is necessary to cut it back hard each year, also some of the old wood is removed. *Solanum crispum* (Glasnevin variety) is spurred back each year and a little of the old wood removed to allow the sun to play freely among the branches. Some old plants of *Rhododendron ponticum* have been grubbed up and the ground replanted with *Crataegus macrantha* and *Rhododendron Cunningham's White*. The clearing of leaves from the carriage-drive has occupied considerable time, but the material collected and the improved appearance will repay the time expended on such work. A border has been well prepared and planted with a large number of *Christmas Roses*. Hitherto these have been grown where they were shaded for the greater part of the day, but in that position they were not a success, being subject also to the drip from overhanging trees. Lime, sand, and a large amount of



Ferns and *Lilium auratum* in the greenhouse.

Messrs. Allwood Bros., Haywards Heath, showed winter-flowering Carnations very finely, the examples, whether for quality, fulness of bloom, or brilliant colouring, practically equal to those produced in late spring. We thought the vases of *Bedford Belle* (reddish-salmon) most effective. It is also fragrant. *Champion* (scarlet), *Wivelsfield White*, *Bishton Wonder*, *Fairmount*, and *Mikado* were good. There were also some good white and yellow ground fancies.

Messrs. Stuart Low and Co., Enfield, also had a capital group of these flowers, some of the best varieties being *Mrs. Mackay Edgar* (a fine salmon-pink), *Britannia Improved* (very rich scarlet and full flowers), *Baroness de Brien*, *Gorgeous*, *Pink Sensation*, and *White Wonder*.

Sweet (*Chimonanthus fragrans*) was among other fragrant subjects. *Garrya elliptica*, well-flowered examples of *Jasminum nudiflorum* (of richer colour than usual), with *Erica arborea alpina*, and *E. carnea* were noted among others.

Mr. L. R. Russell, Richmond, arranged a table of *Ivies*, *Aucubas*, and a variety of useful evergreens.

ORCHIDS.

The outstanding feature of the meeting was a magnificent bank of Orchids arranged by Messrs. Charlesworth and Co., Haywards Heath, the group extending from the entrance to the Orchid annexe. Rich in beauty and variety, the group also showed the wealth of the Orchid family at this season of the year, since, without

decayed leaves were well incorporated with the soil to keep it porous. A few others have been put out among summer-leaving Ferns. A group of *Skimmia japonica* has been planted to fill a corner previously occupied by Christmas Roses. Some good plants of *Rhododendron Thomsoni* having come to hand a place has been found for them where they will be protected from east winds and partly shaded by old Scotch Fir-trees. A small batch of *Azalea Kämpferi* has been added to the *Azalea* garden, near the edge of which have been planted a few roots of *Ranunculus amplexicaulis*. A large group of *Geranium ibericum* has been transferred from the garden to the waterside, where it is planted in the Grass.

Sussex.

E. M.

SOUTHERN COUNTIES.

Salvias.—These being now past their best will be thrown away with the exception of half-a-dozen plants of each variety—viz., *Fireball* and *S. splendens grandiflora*, which will be retained for stock and stood where the temperature does not fall below 50 degs. If placed in a cold house the plants invariably perish.

Cinerarias.—As *Chrysanthemums* are now practically over their places are being filled with the most forward of the *Cinerarias* of the *stellata* type, which will shortly make a fine display. Manure and soot-water are afforded them alternately. Later-flowering batches of plants are fumed occasionally to keep them free of aphid, while feeding at the roots, now that all are pot-bound, has daily attention—*i.e.*, when water is required.

Pelargoniums.—The earliest lot of plants to flower has been re-arranged and given more space, as they are now growing apace. They will be stopped again, after which they will be allowed to grow away and bloom. A batch of younger plants to flower later is making sturdy growth on a shelf close up to the roof glass. They are now in 4½-inch pots, but will shortly be shifted into others two sizes larger, in which they will be allowed to bloom. Frequent fumings are necessary to keep green-fly at bay. To avoid fuming the house simply for them alone the plants are removed for the night to another house, the occupants of which need a fuming, and taken back next morning.

Marguerites.—Plants of both the single and double varieties which were struck in autumn are now rooting freely in the pots to which they were transferred from the cutting pots a few weeks back. They will now be cut back to from three to four leaves from the base, with the object of forming dwarf, bushy plants. When they show signs of breaking they will be given a final shift into 6-inch pots.

Propagating.—Before the propagating-case is required for the rooting of soft-wooded bedding plants it will be utilised for striking a batch of Perpetual-flowering Carnations. Directly these are rooted the propagating of various stove plants will be proceeded with; also of subjects such as *Panicum variegatum*, etc., for draping the edges of stages. The Carnations will be inserted in pans filled with pure sand, but the cuttings of stove plants, such as *Crotons*, *Dracenas*—with the exception of *D. Sanderae*, of which four and five are dibbled into each pot—*Pandanus Veitchi*, and so forth, will be inserted singly in small pots filled with suitable compost, a pinch of sand being placed at the base of each to hasten the callusing and subsequent rooting. *Gardenias* and plants of a similar nature strike best when the cuttings are inserted round the edges of 7-inch pots. Before being used the case has to be thoroughly cleaned and made

insect-proof, otherwise crickets are apt to get inside and work mischief among the cuttings, particularly of Carnations, which they will eat off wholesale. Pit sand or fine ashes is the best material for placing in the case in which to plunge pots, etc.

Poinsettias.—As the bracts are now fading the plants will be removed to a house where a temperature of 50 degs. to 55 degs. is maintained. Here they will be placed under the stage to undergo the necessary season of rest.

Strawberries.—Weeds at one time in the autumn almost gained the upper hand, but by dint of perseverance in the way of hoeing and hand-weeding they were eventually got under to an extent that none but very small specimens were left. Thanks to the abundant rainfall and the mildness of the weather these have made much growth of late, and if not dealt with will soon prove a nuisance. Although not advocating the practice of digging between Strawberries, there is no alternative on the present occasion but to do so, and the weeds will therefore be pointed in together with the manrial mulch applied in September last. By doing this now it is hoped that the loss of roots which will follow will be amply compensated for by the pushing out later on of myriads of new roots into the buried manure. So far there has been but little loss of old foliage, but such as has succumbed will for the present be allowed to remain on the plants for the protection of the crowns, as a spell of very severe weather is yet possible. With regard to the young plants set out last August, an effort will be made to free the ground of weeds between the rows as soon as the soil can be had in good working order. Care will also be taken at the same time to see whether there has been any uplifting of the plants by frost, and to make firm again any found in this condition.

Melons.—With the advent of the New Year comes the time for the sowing of the first lot of seeds to furnish plants for supplying the earliest crop of Melons. After Apples are over and late Grapes are finished there remains but little in the way of fruit for dessert with the exception of forced Strawberries, and in some few cases Grapes from pot Vines. Early Melons are therefore always acceptable, and when well grown greatly appreciated, and an effort is usually put forth to produce them as early as circumstances permit. A well heated structure is very essential, as success very largely hinges on this; in fact, it is useless to attempt growing them without it. Although not required for the Melons just at present, as the raising and growing on of the plants up to a certain stage are done elsewhere, it is important that it be cleansed and got in readiness beforehand, paying particular attention to the lime-washing of all brick-work when insects and fungoid pests have in the past season been troublesome. As the earliest lot of plants succeeds better grown in large pots than on mounds of soil, these to the required number should be placed in position and then filled with suitable compost. The loam which forms the principal constituent should be sterilised in all cases where wireworm and eelworms are known from past experience to infest it, this being a sure way of eliminating these pests and averting disappointment. The only additions to the loam in our case, as the latter is of a heavy nature and full of fibre, are bone-meal and lime rubble, a 6-inch potful of the bone-meal and a 10-inch potful of the lime rubble to each barrow load sufficing. A good supply of drainage material in the bottom of the pots, 14 inches in diameter, is very necessary, the covering material

for which, to prevent finer particles from getting in and choking it, being flaky pieces of loam. Firm ramming is insisted on, the pots being filled to within an inch or so of the rims. If the bed in which the pots are stood, almost close together, has a chamber beneath containing hot-water pipes for supplying bottom-heat the grower has not then to rely on tree leaves for that purpose. All the same the bed, if filled with them, proves useful in a variety of ways up to the time that too much shade is cast by the growths on the trellis. If got in as soon as the pots are fixed in position they will have parted with sufficient of the heat engendered by them to prove harmless when planting time arrives. The seeds are best sown singly in small 60's filled with loam in a moist condition, which saves having to afford water before germination takes place. A propagating-case is the best place in which to raise the plants, and an improvised shelf over the hot-water pipes at the front of the house provides ideal quarters for them afterwards, or until the 6-inch pots into which they are shifted from the seed-pots when ready are fairly well filled with roots.

Early Tomatoes.—Seed of a suitable early variety will be sown at once to supply plants for fruiting in pots, and from which a crop will be taken as quickly as circumstances permit. Sowing will be done thinly in pans, and the resulting plants, when in the rough leaf, pricked off into 3-inch pots and stood on a shelf in the stove for a few days, or until they commence to root and recover, after which they will be accorded cooler quarters close up to the glass to ensure a dwarf habit of growth. When well rooted a shift into 6-inch pots will be given and the plants again returned to the shelf, from which, when the time arrives, they will be transferred to 10-inch pots in which they are to fruit. By the time they are ready for the final shift each plant is usually carrying one truss of fruit in the swelling-off stage.

A. W.

MIDLAND COUNTIES.

Bush fruits.—All bush fruits should now be pruned. Thin out old Gooseberries, spurring in the side shoots to two buds. Give the trees a dusting of lime and soot and repeat when necessary, as this helps to keep off the birds. Red and White Currants should have the side shoots spurred in to three buds and the leading shoots cut back to 6 inches. Black Currants only need some of the old wood removed, and if this was done soon after the fruit was cleared, as advised, they need very little, if any, further pruning. All the trees will be greatly benefited by a good dressing of rotten manure. Planting has been much delayed by the unusual rainfall, and it is necessary to push on with this work at every favourable opportunity. Newly-planted standard trees must be secured firmly to stakes to prevent damage from strong winds. The stakes should be fixed in position and well driven into the sub-soil before the trees are planted. If grafting is contemplated the scions should be collected and the stocks headed back before the sap commences to rise, allowing about 6 inches of the stem for a second cutting when grafting time arrives. Select scions of a medium size and heel them in in a shaded place until they are required.

Strawberries in pots.—When the earliest plants begin to throw up their flower-stems place them in the highest and most airy part of the house where they can have plenty of warm air; this will prevent the leaf-stalks becoming drawn and favour

the fertilisation of the flowers when they begin to open. At this season of the year Strawberry flowers need to be pollinated very carefully with a camel-hair brush. The plants are very susceptible to attacks of red-spider, and although they may have been thoroughly sprayed with an insecticide it will be necessary, after the flowers are set, to syringe the foliage twice daily with soft, tepid water, taking care to wet the under-sides of the leaves. Promote plenty of atmospheric moisture by damping the paths and bare spaces in the house frequently. As the pots are well filled with roots, applications of weak liquid manure alternated by some approved fertiliser, should be given two or three times each week. Plants for succession may be placed on a shelf near the roof glass in a Peach-house in which the trees have recently been started. Before bringing the plants under glass lay the pots on their sides, and syringe the foliage well with an insecticide. Remove a little of the surface soil from the pots and replace with fresh loam mixed with a suitable fertiliser. Late plants from which fruit is to be gathered in April and May must be fully exposed to the elements unless the weather is wet—when the lights can be tilted—or very severe, when a few Fern-fronds may be spread over the crowns in preference to covering the glass with mats.

Herbaceous borders.—Where not done during autumn, any rearranging required may now be carried out when the weather permits. If necessary dig or trench the borders, working in a quantity of leaf-soil, or plenty of good manure if the soil is impoverished, remembering that most herbaceous plants are gross feeders. When replanting, divide the old clumps, selecting the strong outside pieces for planting. Plant everything in good broad masses, with due regard to colour effect, leaving spaces between for hardy and half-hardy annuals. Allow some of the taller plants to come well forward and thus break the formal outline. On no account should planting be done in wet weather. When the replanting is finished all the plants should be accurately labelled, using labels that are likely to last in good condition for some time.

The tree Pæony (Pæony Moutan) needs the dead points of last year's shoots cut back to the first strong buds, which are now beginning to swell. The larger bushes will be examined and the weak shoots removed. If the tree Pæonies are grafted, suckers are liable to appear, and it is important to remove these directly they are observed. If herbaceous Pæonies were not mounded after the decay of their leafage last autumn this should be carried out without delay. The surface soil should be removed from about the roots and a thick dressing of decayed manure spread evenly all round them, returning the surface soil, which, if of a porous description, should be trodden firmly. This dressing will act not only as a stimulant but will enable the plants to pass through their blooming period without having to be watered. The present is not a suitable time to divide Pæonies. They should be left until after the flowering period, when they may safely be divided and replanted.

The rock garden needs much attention at this season. Many close-growing plants lose some of their shoots in the winter, and these must be removed to prevent the mischief spreading. Many plants, too, spread beyond their proper limits, and have to be entailed. In the case of dwarf-growing plants pieces may be pulled away, but with shrubby subjects the knife must be used, cutting away more of the under-lying than the over-lying shoots. It is possible to reduce the plants without making them

appear unsightly for weeks afterwards. Many plants also require a top-dressing of suitable soil.

Rhododendrons and Azaleas, owing to the natural soil in these gardens containing a quantity of lime, can only be grown in raised beds of prepared soil. Several groups are planted in this manner on the outskirts of the rock garden with good effect. These will now be given a good top-dressing of leaf-soil one part, decayed cow-manure one part, road sand one part, and good fibrous peat.

Rhubarb.—Batches of Rhubarb may be taken up at intervals and placed in gentle heat, but in addition some of the roots in the open ground should be forced in the position they now occupy, much in the same way as Seakale. This latter practice is preferable to lifting the crowns and forcing them indoors, unless crowns that have been specially grown for the purpose are obtainable. By the indoor forcing system the plants are so weakened that they need at least two years to regain their vigour. If the details of forcing in the open ground are carried out intelligently, the fermenting materials removed in good time after the forcing is over, the beds forked, and no more stalks pulled during the present season, the roots will be little the worse for slight forcing.

Parsley.—Should the stock be running short, plants may be lifted and put thickly into boxes, and if placed in heat will soon start into growth. Seeds should also be sown now and placed in a temperature of 60 degs. As soon as the plants are large enough to handle they may be pricked off into a warm pit. A supply from this sowing should also be available for planting out in April on a warm border.

F. W. GALLOP.

SCOTLAND.

Raspberry plantations.—In the course of the week some progress was made with the final training of Raspberry-canes. It is only about six years since these canes were planted. They have been well done, too, and the canes of the current year are numerous and well ripened. At the same time it is always of advantage to renew Raspberry plantations, for not only are crops heavier from fresh soil, but the individual fruits are much finer. For jam-making, medium-sized fruit is quite good, but for dessert or for bottling that of larger size is preferred in the kitchen or for still-room purposes. The canes in the break, referred to are of excellent quality and no misgivings are felt as to a plentiful supply of this always popular fruit in the course of the coming season. Unfortunately, training was put a stop to by heavy and incessant rainfalls, but, nevertheless, some progress was made. When the work is finished a light forking-up will be given and the entire quarter will be mulched with short and well-rotted manure, of which we have some quantity to spare for this purpose.

Seed lists begin to come to hand, and I think that we gardeners might do what we can to help the seedsmen at this time. They, like ourselves, are suffering from shortage of labour, and by forwarding our orders as soon as possible we will give them a better chance of coping with their spring work—always, as we know, a busy time with seedsmen, and one which will be especially so during the forthcoming spring. This is, perhaps, scarcely the place in which to refer to it, but I lately noticed that the Scottish seed trade had interviewed the Secretary of State in Edinburgh as to the "starring" of foremen in the various seed establishments. If these men are necessary, then, in an equal

degree, so are foremen gardeners; but I have not yet heard that they are asking for exemption. Skilled labour is necessary in all departments if work is to go on. Many head-gardeners are attested under the Earl of Derby's scheme, and it follows that if both these men and their foremen are called upon for service horticulture will suffer.

Novelties.—Judging by the lists to hand there is no lessening of the annual crop of novelties. It is always advisable to test a certain number of these annually, because now and then something really good is put on the market. At the same time it is a mistake to buy so-called novelties year by year to the exclusion of older varieties which have stood the test of time.

Strawberries.—Where early Strawberries are required a batch may now go into low pits nearly filled with leaves. In these the pots may be plunged—the foliage almost touching the glass—until the flower-spikes show. Then they may be removed to shelves in a warm house, pans of light, rich soil being placed beneath each pot, into which the roots will penetrate as progress is made.

The winter dressing of fruit trees has been greatly interfered with by the continual rains. Some Pear-trees which were attended to in the early part of the week will require to be again syringed, in order that things may be quite safe. The dressing is applied through a fine syringe, and care is taken that the bark close to the wall is attended to equally with that in the front of the trees.

Hydrangeas.—When these are wanted early in the year now is the time to introduce them into heat. Select those which have well-developed buds for the first batch, and let there be no scarcity of moisture during the forcing. Liquid manure is of much use to these rather gross-feeding plants, occasional doses of weak soot-water being as valuable as anything.

Plants in frames and pits were again thoroughly looked over during the week. At this time damp is the chief enemy; and, therefore, free ventilation is given on all suitable occasions. From time to time the temperature in such pits as are heated by hot-water pipes is run up rather briskly, the sashes being opened to the full extent of the tilts at the same time. This causes a brisk circulation of air, which is all to the advantage of the plants in the frames. Watering in the meantime is almost entirely dispensed with, except in the case of plants in pots which absolutely require moisture.

Firing.—At this period of the year, and with coal at its present prices, care is needful if fuel is to do its work economically. In a general way, much depends upon the fireman, some men being able to keep up the necessary heat with half the expenditure of material which another may require. Let flues and furnaces be cleaned out thoroughly at least once a week, and, as has been previously recommended, when time can be spared, give everything connected with the apparatus for heating a thorough overhaul. When fires are lighted and fairly under way the draught can be reduced. A good stoker can do much with the damper of a furnace, and it should never be out more than an inch or two when the fire is burning brightly. Bright fires are to be avoided in the early part of the day when the sun is apt to shine; but the pipes ought always to be nicely warm by 5 o'clock. Afterwards, a look round and a stir up at 8 p.m. will make things right for damping down round about 10 p.m.

Vegetable garden.—There has been little opportunity during the week to do any work upon the soil; indeed, the needful daily work of getting supplies of green vegetables has been most unpleasant, the sodden state of the soil and the dripping condition of the plants being most undesirable. At the same time supplies continue to be plentiful, and present appearances point to a prolonged season for green vegetables. Less trouble than usual is being experienced with wood-pigeons, and owing to the precaution taken in wiring in Sprouts, Savoys, and Curly Greens, pheasants are not noticeably destructive. These latter birds, it will be found, do not readily fly into an enclosed space, but they will soon find their way into unwired enclosures. Beet, Turnips, Potatoes, Salsafy, and root crops generally are regularly inspected from time to time.

Fruit-room.—Owing to the spell of inclement weather the fruit-room was thoroughly examined during the week. All spotted and doubtful fruits were removed. Mid-season Apples are not keeping well; but late varieties seem like giving a good account of themselves. These are hard, plump, and firm, and ought to prolong the season till well into the year. Excepting in very frosty weather, it is of advantage to admit plenty of air to the fruit-room.

W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Cobæa scandens (Mrs. Northey).—Your best plan would have been to leave your plants of *Cobæa scandens* alone until all danger of severe frost is past, and then cut them down to within 2 feet or 3 feet of the ground, when they should shoot out strongly. The only danger of cutting the plants down earlier is that if a severe frost comes after the fresh shoots have started these are killed, and the plants themselves often destroyed; whereas a frost which cuts the tops often leaves sufficient vitality in the lower part of the stems to make them break again.

A Mesembryanthemum (Bewilderd).—The specimen No. 2 is a *Mesembryanthemum*, but as there are over 300 species it is impossible in the absence of flowers to say anything further with regard to its name. *Mesembryanthemum* of this section can be readily increased from cuttings taken in the spring and inserted into well-drained pots of sandy soil and kept moderately watered, as from their succulent nature an excess of moisture would be injurious. The cuttings will not need to be put into a close propagating case, but simply stood in the closest part of the greenhouse and shaded from bright sunshine.

Asparagus plumosus from seed (C.).—Fresh seed of this will germinate freely in a good hot-bed in the spring. The best soil in which to sow it is sandy peat, which must be kept constantly but moderately moist. As soon as you can handle the seedlings, prick them out singly into small pots, using sandy peat and leaf-mould, returning them to a moderate hot-bed until they are well established and growing freely. This *Asparagus* does best in the warm, moist atmosphere of a cool stove or intermediate-house, lightly shading it from hot sun. If you have any old plants and wish to increase your stock, you can do so by division. A crown or two with a few roots attached will soon make a strong plant in a warm-house. It also does well in an unheated greenhouse during the summer.

The Belladonna Lily in pots (E. H. B.).—This may be grown in pots, but is far more satisfactory when planted out in a warm border, such as one in front of a hothouse and facing south. Under these conditions the flower-spikes, with their charming pink blooms, are pushed up, usually in September, before the leaves. After the blossoms fade the leaves are pushed up, and continue to grow during the winter. They turn yellow and die off late in the spring, the bulbs remaining quite dormant till the flower-spikes again appear. If grown in pots, the bulbs need a good loamy soil. After flowering, the plants must be kept in a frame to protect the leaves during the winter, then in spring, as the plants go to rest, they may be stood outdoors in a sunny spot, giving but little water till the flower-spikes appear. We do not reply to queries by post. See our rules to correspondents.

VEGETABLES.

Chicory (Yorkshire).—The forcing of the roots is an easy matter. When the leaves have decayed a number of roots should be taken up and laid in soil in some cold shed or other structure where they will not be frozen, and from this store they can be removed in batches for forcing as wanted. This is merely a precaution, be it understood, in case of severe frost or snow setting in and preventing them being lifted from the beds, where the main lot should be allowed to remain. The quantity of roots to be forced at a time will depend upon the demand for the salad. For a small family as many roots as can be put into a 12-inch pot will be sufficient at one time. Whether the roots are forced in a bed or in pots or boxes, they should be buried up to within an inch of their crowns in light soil of any kind, watered, and placed in a temperature of from 50 degs. to 60 degs., and be kept in the dark. If a dark shed or cellar be not available the crowns may be covered with an inverted flower-pot or box, which will do quite well. The leaves soon push out, and they should be cut when they are young and tender, and always just before they are required for salad. The roots will push out leaves a second, and even a third, time after being cut, but the growth gets weaker, and the best plan is to introduce a succession of fresh roots before the supply becomes exhausted.

MISCELLANEOUS.

The Lackey-moth (Rev. E. Hackett).—The eggs you send are those of the Lackey-moth. The best way is to look for the bracelets of eggs that surround the shoots. The way in which the eggs are laid is very peculiar, they being deposited in spiral lines round the shoot in many cases as many as twenty rows being found. When the eggs are removed they should be at once crushed, so as to make sure they are not hatched. The caterpillars appear in April and May.

A weedy lawn (S. Lamb).—The weed you send specimens of is the Bugle (*Ajuga reptans*). You cannot use a weed-killer, and lawn sand would be of no use. The best thing you can do is to dig out the weed during the winter, and in the spring to put on to the bare places some good loamy soil, sowing down in the coming April with good Grass seed. You can, if you care to, apply a top-dressing directly you have cleared out the weed, letting it remain all the winter so that the frost may break it down. Then having worked the top-dressing well into the soil you may sow the Grass seed as advised above.

Decaying leaves (M. F. Innes).—To accelerate the rotting of tree leaves it is best to put them into a heap and let them become thoroughly moist, then frequently turn them. But if needed only for ordinary manure, then it is better still to mix with them all sorts of garden refuse, having the whole turned two or three times, some soot being strewn over the heap when the turning is proceeding, to kill slugs and worms. We have seen such a heap in capital condition for use in about four months from the collecting of the leaves. When decayed leaves are needed to make leaf-mould for potting, then they should be kept alone, and need, with an occasional turning, fully a year to enable the material to be thoroughly decayed.

SHORT REPLIES.

R. N. Ferroll.—1, The best tree for your purpose would be the Japanese Arbor-Vitæ (*Thuja japonica*). The odour of the crushed shoots resembles that of Eucalyptus. 2, Holly would make the best screen. Procure strong, two-year-old seedlings, and prepare the ground

well before planting.—*Skisdon.*—The seeds of the Laburnum act so violently as an emetic that they are justly deemed poisonous, and we would advise you not to run the risk. 2, You should procure a copy of the "Vegetable Garden," in which descriptions of the various herbs are given, also their mode of culture.

NAMES OF PLANTS AND FRUITS.

Names of fruits.—K. W.—Apple: Sturmer Pippin. Pear: Glou Moreau.—R. E. B.—Apples: 1, Dutch Mignonne; 2, London or Five Crowned Pippin; 3, French Crab.—A.—Pears: 1, Judging by flavour more than from outward appearance—skin having turned a blackish brown—is, we think, Beurré Duhaume; 2, Appears to be, as far as flavour and shape are concerned, Susette de Bay.—F. G. M.—Pear Winter Nelis.

CATALOGUES RECEIVED.

R. H. BATH, LTD., Wisbech.—List of Select Garden Seeds.

JAMES CARTER AND Co., Raynes Park, London.—Garden and Lawn, 1916.

WM. SAMSON AND Co., Kilmarnock.—Spring Catalogue of Choice Seeds and Plants.

HARRISON AND SONS, Leicester.—List of Garden Seeds and Sundries.

W. ATLEE BURPEE AND Co., Philadelphia.—Annual for 1916.

Peat ashes.—Can anyone tell me if the above may be used with advantage to plants, etc., just as wood ashes are?—R. B.

The Gardeners' Royal Benevolent Institution (founded 1838).—The seventy-sixth annual general meeting of the members and subscribers of this institution will be held at "Simpsons," 101, Strand, London, on Thursday, January 20th, 1916, at 2.45 p.m., for the purpose of receiving the report of the committee and the accounts of the institution (as audited) for the year 1915; electing officers for the year 1916; and for the election of eighteen annuitants on the funds. The chair will be taken by Sir Harry J. Veitch, F.L.S., V.M.H., Treasurer and Chairman of Committee, at two forty-five o'clock. The voting papers have been issued with the following appeal:—

The committee, in sending the accompanying voting paper, tender their grateful thanks to those who have so kindly enabled them uninterruptedly for so many years to administer the funds of the institution with so much benefit. Owing to the terrible stress and anxiety at this time, the committee find their annual income much diminished—largely in consequence of the inability to hold the usual festival dinner which has always been so helpful in adding to the funds of the institution—whilst the appeals for assistance have become more numerous than ever. In these circumstances the committee are compelled to elect eighteen candidates only from an approved list of sixty-one applicants. Even in coming to this decision they sincerely rely on a continuance of that liberal and generous support hitherto given to them in maintaining the work, and for which they now most earnestly appeal. Any gift you may feel disposed to send will, I can assure you, be greatly appreciated.—HARRY J. VEITCH, Treasurer and Chairman of Committee.

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GARDENING ILLUSTRATED.

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THE WRONG ROUTE.

THERE never was a time when there were so many ways of teaching art through academies, schools, in every parish almost, and professors and books no end, and there never was so much bad art. This is the common opinion of good judges in Paris and London. In Lord Redesdale's book there is a passage which has a bearing on this:—

"I remember how once, when a lady consulted Lord Leighton about her boy, who showed a great talent for painting, his answer was: 'Let him have the education of a gentleman in the first place; then, if he should still have an inclination for art, let him specialise.'"

There is evidence to show that the way advised by Lord Leighton is not the right way. Excellence in art is not to be had without early devotion to the work, and the education in colleges until a man is well over twenty precludes any full early training in art.

If we look at the history of our own great landscape painters we find that excellence in the result was not through any college education, but by early devotion to work, often under the poorest conditions. David Cox was the son of a blacksmith, and he was an artist with a true eye for the beautiful in nature. Constable was a miller's son, and began his studies with a painter and glazier friend in the fields—a much better place to study art than any academy. Turner was not quite so happy in his father, being the son of a barber, but even in Maiden-lane a genius may arise. Old Crome began life as a doctor's errand boy. These were among our very best painters, leaving out those who died young, like William Müller. Carolus Duran, whose portrait of Pasteur—a masterpiece—was seen in London some years ago, told me he was at work in the Academy at Lille at eight years of age.

By far the best landscape art in England arose from conditions different from those laid down by Lord Leighton, whose own work does not justify his teaching. A picture by one of the old Dutch painters who, as boys, were apprenticed to their craft, was worth all he ever did. Watts and Constable among English artists are examples of the right way of arriving at art excellence through work. Though healthy birth in country air is an advantage, it in no way frees a youth from the need of early apprenticeship.

This may seem all away from garden design and planting, but it really is not so, because the problems that confront the landscape planter are the same as those which the landscape painter has to deal with—viz., beauty, repose, breadth, and air. The man who uses trees instead of pigments has the nobler task. He has advantages, too, in that he has ready to hand the atmosphere of Corot and the sky of Diaz. The painter has much to learn in landscape, the artist planter more of the trees of the world, both in a wild state and in cultivation. Without that knowledge there can be no good design in park, field, or garden. W. R.

NOTES OF THE WEEK.

Apricot-trees.—In reply to "G. P. K.," in GARDENING ILLUSTRATED, January 8th, I have very good crops of Apricots every year by keeping the roots high up and supplied liberally with chalk, which ensures the roots not getting too dry when the fruit is setting.—C. PHELIPS, *Shillingstone, Dorset.*

Erica carnea gracilis.—This has been one of the earliest to flower this year. It has, I think, surpassed itself in beauty, the drooping habit showing well the pretty flowers. The flowers are what are called "Italian pink," a good shade, a little lighter towards the base. The tips of the flowers are dark brown. It appears to me from my experience of three years now to be slightly less hardy than some of the others. It is well in bloom now (January 14th).—S. ARNOTT.

Christmas Roses at Kirkcudbright.—Hellebores of the Christmas and Lenten Rose classes always do well in Mr. Horne's garden at Kirkcudbright, but the blooming of the large-flowered Christmas Rose, *Helleborus altifolius*, deserves special mention this year. The clumps are not protected in any way. The chief points, however, were the number and size of the flowers. At Broughton House the plants receive full attention in the shape of manure, but it is evident that the deep, black, somewhat alluvial soil suits the Christmas Rose.—S. ARNOTT.

Hamamelis arborea.—This Witch Hazel is now bedecked with its twisted yellow flowers, which are rendered all the more conspicuous by the prominent claret-coloured calyx. It is quite the best of the group, being also one of the first to bloom.

I have it among tall-growing Heaths, the dark-green foliage of which shows up the flowers of the Hamamelis. In the company of other shrubs, such as Laurustinus, Garrya, Forsythia, flowering at the same season, it is most effective. For cutting and using indoors with the Alexandrian Laurel (*Ruscus racemosus*) these branching sprays are excellent and last a long time.—E. M.

The Prostrate Rosemary.—A more charming little plant for the rock garden at this season of the year than the above could scarcely be desired. Rarely more than a few inches high, the pale lilac flowers, now opening, are succeeded by myriads of buds, the whole possessing the fragrance of the taller species. With me it has covered the ledge and fallen to the ground level of a 3 feet retaining wall, clinging to the wall as it grew. It is sometimes touched with frost, but never killed. Few plants are more easily increased, as cuttings inserted in sandy soil during late summer and autumn invariably strike. These soon make nice stuff to put out the following spring.—E. M.

Dimorphotheca aurantiaca.—I was very much struck with this last year, and pen a few lines for the benefit of readers who have not grown it. Though the plant only reaches 15 inches in height, it is covered throughout the summer with dainty blooms, which are chiefly of a brilliant orange colour. I have grown it in several ways, but the best method in my garden, exposed to all the cold winds that blow, is to sow it in pots in March in gentle heat, pricking off in late March and planting out at the end of April. Dead flowers must be removed frequently, and the plants set 9 inches to 12 inches apart each way, when they form fine little bushes.—E. T. ELLIS, *Sheffield.*

The Winter Aconite in the South-west of Scotland.—The proximity of the Solway Firth and the influence of the Gulf Stream are responsible for the early-flowering of plants in the Kirkcudbright district. After a rather uncongenial time it was an unexpected pleasure to observe a good display of the Winter Aconite in the garden at Broughton House, Kirkcudbright, on January 10th. The flowers were not isolated ones, but were in great numbers, and brightened up the garden. In my own garden, further east, and some ten miles as the crow flies from the Solway, there is not yet a single bloom of the Winter Aconite to-day (January 14th). Although a December flower in some

places, it is but seldom that it can be recorded in that month in Scotland.—S. ARNOTT, *Maxwelltown, Kirkcudbrightshire.*

Iris histrioides.—This very beautiful winter-flowering Iris does not seem to be well enough known. It is at least as easy of cultivation as its later relative, *I. reticulata*. I have grown it now for several years, and find that each bulb produces a second one regularly, and no frost seems to hurt it. I have a batch now (January 16th) in my rock garden just expanding its large pale-blue flowers.—P. WILLIAMS, *Newbury.*

Storing Apples.—I agree with "T. P.," page 27, that late Apples are all too often spoiled by trying to preserve them on lattice stages in fruit-rooms where the air is much too dry and warm. If a cool, slightly damp cellar with a brick floor is available, nothing is better than an ordinary bushel basket to store clean, firm fruit in, placing them carefully in the baskets to avoid bruising, and, of course, making sure there are no decaying portions in the skin. Occasionally examine the fruit to make sure all are keeping soundly, removing any suspicious fruits. Stored in this way, last year I kept fruit of Cox's Orange Pippin until the middle of April in good condition.—S. P.

A note from Glasnevin.—We have continual rain; nevertheless, on Saturday (January 8th) I gathered *Chimonanthus fragrans* (the Winter Sweet), *Saxifraga Burseriana major* (forty-three blooms on the cushion), *Iris Vartani*, *Iris stylosa alba*, *I. s. Elizabethæ*, *Iris histrioides*, blue Primroses, Jack-in-the-Green, Red Polyanthus, Snowdrops, Crocuses, Christmas Roses, *Coriaria nepalensis*, California Alder, *Garrya elliptica* (well out), Lenten Roses, *Jasminum nudiflorum grandiflorum*, *Lonicera Standishi*, Aconite, Pyrus, Wallflower, *Lithospermum prostratum* Heavenly Blue, Pansies, *Aubrietia* Dr. Mules, Bachelor's Buttons, *Tussilago fragrans*, and *Daphne Blagayana*, which, arranged in a Nankin China bowl well stuffed with lovely soft Co. Wicklow wall Moss, make a picture of spring that is in keeping with the song of the thrushes and the soft little trill of the robins outside.—W. P. M.

Carrya elliptica.—This is now at its best. The pendent and delicate grey-green catkins, nearly a foot in length, are abundantly produced from the leaf-axils, giving the whole shrub a most picturesque and striking appearance. For cutting, too, it is lovely, and if gathered when the catkins are half-developed these will open to their full extent in a warm room, sometimes becoming longer than those left on the plant. I have seen it growing on walls in the north, but it is when seen as a large, spreading bush that its true value is seen. The plants referred to are growing in the open, where I have known them get touched by frost during hard spells, therefore it is advisable to select a sheltered position, protected from north and east. Being rather impatient of moving after occupying one position for a few years, it should be planted where it is likely to remain. I saw a good specimen a few years ago in a garden in Hertfordshire, fully exposed, and annually draped with flowers. This to my knowledge was never injured by frost. The finest catkins are seen on plants growing in good ground, but bushes established in poor soil appear to winter best, due possibly to the wood being better ripened.—E. M.

Two winter-flowering Honeysuckles.—Among the earliest-flowering shrubs are two bush Honeysuckles, *Lonicera fragrantissima* and *L. Standishi*, which in mild

winters are usually at their best during the latter half of January. *L. fragrantissima* is in many gardens a sub-evergreen, while in other places it may be quite evergreen or deciduous. It is a native of China, and was introduced in 1845, although it is not very common. Mature bushes may be upwards of 6 feet high and as much across, the branches being long and slender. The white flowers are deliciously scented, and produced in pairs from the wood matured the previous year. The other species, *L. Standishi*, is also of Chinese origin, and was introduced with the last-named. It is, however, a common shrub, and, of the two, the hardier. By its more erect growth, stouter and shorter branchlets, longer oblong leaves, and creamy-white flowers, it is easily distinguished from the other plant. In most gardens it blossoms very freely, and its presence can be detected at a distance of several yards by the fragrance of the flowers. When growing in the open, fruits are not often matured, but when planted against a wall quantities of bright red, fleshy fruits are ripened during May or June. An occasional thinning of the older branches and a surface-dressing of manure now and then may be given with advantage. Cuttings of half-ripe shoots root readily if inserted in sandy soil in a close frame in summer.—D.

FRUIT.

ESPALIER FRUIT-TREES.

GENERALLY speaking, only Apple and Pear trees are trained in the form of espaliers. Both Plums and Cherries can also be grown as such, but they are less suited for the purpose, consequently, it is not possible to obtain such well-trained examples in their case as with Apples and Pears. The value of espaliers is well known, as not only do they occupy less space than pyramids or bushes, but the trees cast but little shade on whatever may be grown in their vicinity. They are also very productive, and, as to the quality of the produce, this is equal in every respect to that found in fruit yielded by the previously-named forms of tree. If planted so that the trees are distant some 3 feet to 4 feet from the edge of the walks in the kitchen garden, narrow borders which can be turned to account for a variety of purposes are then obtained.

PRUNING.—The pruning of espaliers differs but little from that accorded wall-trained Apple and Pear trees. When established, the various tiers of branches of which each tree consists are clothed from end to end with fruiting-spurs. The young wood produced in the latter is, and always should be, stopped twice during the growing season, *i.e.*, early in July and again the latter end of August. The result of this treatment is that all that requires to be done now is to shorten all these stopped growths back to four buds. With some varieties a thinning out of the fruit-buds in the spurs becomes an absolute necessity when the trees attain age, otherwise they become so congested that the fruit produced is small and of second-rate quality. Other varieties, again, are prone to set a great number of fruit-buds, and make little or no new growth, a case in point being *Emile d'Heyst* Pear. To counteract this tendency the spurs must not only be kept well thinned, but so regulated that they stand a good distance apart on the branches. By curbing their fertility in this way a greater quantity of young growth results.

SPUR-PRUNING may also be applied to old yet healthy trees with beneficial re-

sults. Every other branch may be denuded of spurs in one season, and the remainder similarly treated not in the next, but the year after. The branches in the course of a few seasons will then become by this process entirely reclothed with a new set of spurs, as new growths will result at intervals throughout their entire length. Another method is to dispense with every other spur on each branch now, and the remainder in two years' time. If the bases of the old spurs are left about an inch in length several young growths will be emitted by the latter the following season. These, when stopped, form the bases of new or future fruiting spurs. All this can be carried out at the present time. To prevent the spores of "canker" or other fungoid diseases entering the wounds smear the latter over with knotting.

G. P. K.

NOTES AND REPLIES.

Apricots.—Your note about Apricots is excellent. I fancy that the old trees are dying off because they are old, and that the nurserymen now bud or graft upon a wrong stock. You could have added at the end of your note a word to the effect that what the Royal Horticultural Society is attempting to do at Wisley is already being admirably done at several establishments in different parts of the country—Rothamsted, etc. I was always under the impression that when Sir Thomas Hanbury offered Wisley to the Royal Horticultural Society he made the condition that he should be allowed to appoint three trustees in order to safeguard the garden against its being put to uses other than those he intended. He spoke about it amongst his friends and gave his reasons for not giving it unconditionally to the Society. There are many who think that the trustees have lamentably failed in their duty, but I do not go so far, for there may be many considerations of which outsiders know nothing. What they do know is that the garden was given for horticulture and all questions appertaining thereto, and of interest to the general public; the Apricot question for instance. They have spoiled the garden with their buildings, ruined its charm, and the horticulture is indifferent. Enormous sums are being spent in equipping the laboratories and diverting the purpose of the garden from horticulture to second-rate science.—F. L.

Fruit-trees under glass, now in position, have been sponged over. There is never much danger at this time of insect pests, but prevention is better than cure, and a strong soapy wash keeps things right. Top-dressing has been attended to; in the case of stone fruit some lime was added. For some time care in watering will be needed. Fruit-trees in pots are apt to be deceiving, and any shortage of moisture may quite easily result in bud-dropping. Figs in pots call for special attention. If these are not to be hurried on any dampness in the atmosphere may tend to the rotting of the terminal buds—a state of matters which is fatal to success. Free ventilation on all suitable occasions is recommended.—W. McG.

Extending fruit trees.—When a Peach, Apricot, or Plum on a good aspect on a wall or building has filled its allotted space, and appears capable of doing more and better work by extension, it will pay to give it more room if possible. Take the Grape Vine. If we plant a dozen or more Vines in a house a certain number will take the lead in a general way, and if those were allowed to extend they would bear finer bunches and berries. Instances could be given where this has been done with good results. I have seen the same

thing happen with Figs and other fruit trees on walls, and also in orchards, where the trees have been allowed more room. The same thing happens in the case of vegetables and flowers, Sweet Peas for instance. Now that cultivators give more room to their Sweet Peas longer spikes and finer blooms are obtained. To carry this extension out to the best advantage we must begin right with the base, and the foundation of all cultural improvement lies in the deepening and improving of the soil, and if we want all-round improvement we must fit the soil to the crop.—E. H.

Dessert Plums under glass.—Most of the Gages may be grown for dessert under glass quietly forced merely by keeping out frost after the buds start into growth. The following I have had good both in pots and also planted out and trained near the glass thinly,

TREES AND SHRUBS.

VITIS HENRYI.

This is one of the recently-introduced plants from China. When properly planted it grows rapidly and then forms an interesting covering to a high wall. In the south of Ireland it is found to dislike the sun, preferring a shady position facing north, and a good, light, somewhat damp soil. Its leaves are dark green bordered with silver, and on the reverse side of a deep red-purple, which is chiefly noticeable when the foliage is caught by the rays of the evening sun.

R. H. B.

The Heavenly Bamboo (*Nandina domestica*).—Although introduced to this country

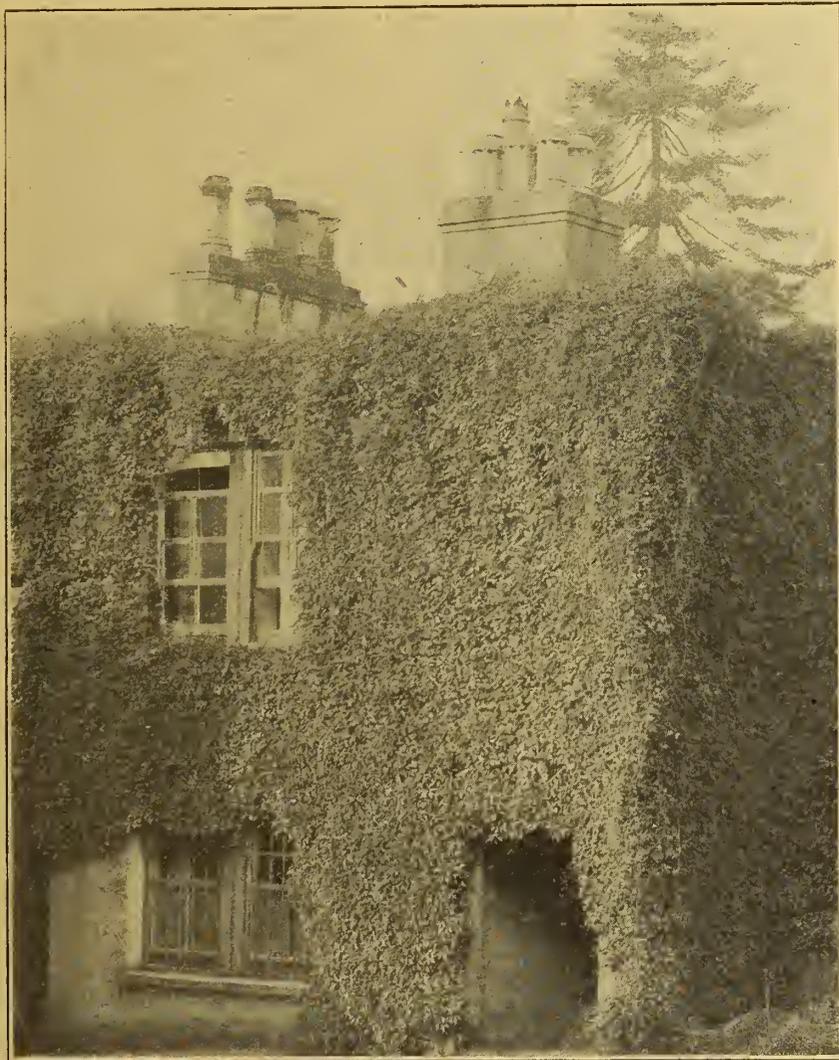
every garden however small. In that country it bears sprays of red fruits, but with me it carries annually stiff, erect, white panicles of bloom, but never fruits, the flowers apparently coming too late in the season. It fruits freely in France. I have grown it on hot, sunny walls in Surrey, but in this way it was not seen at its best and never produced fruit. The most effective way of growing it is to plant a small group, when its elegant Bamboo-like appearance is easily recognised. The leading growth, on becoming bare of leaves at the base, is furnished with young growths which break out around it, the whole having a pleasing effect and reaching eventually several feet in height. Half-developed leaves are very pretty when cut, their shining surface and charming tints showing to great advantage under artificial light.—E. M.

The Willow-leaved Magnolia (*Magnolia salicifolia*).—Although introduced as recently as 1906, this species has already blossomed well in the British Isles, and has proved worthy of inclusion amongst the most attractive kinds in the family. It is a summer-leaving species, and in its native country, Japan, grows 20 feet to 30 feet high. From its behaviour here it will doubtless attain similar dimensions. The rather slender branches are clothed with narrow, Willow-like leaves, the larger ones each about 4 inches long and nearly 1½ inches wide. Towards the end of April glistening white flowers are borne in advance of the young leaves, the individual blossoms being 3 inches to 4 inches across with long, narrow petals. Planted in a position sheltered from cold east and north winds, it grows rapidly, adding to its height by 12 inches or more each year. When plants can be secured on their own roots it is always advisable to select them in preference to those that have been grafted. As yet, however, it is a rare plant and does not appear to be obtainable in quantity.—D.

The Chinese Arbor-vitæ (*Thuja orientalis*).—When planted under favourable conditions this forms a handsome specimen. Although in the British Isles it assumes the proportions of a large bush, it attains the dimensions of a tree up to 34 feet high in China. Introduced over 150 years ago, it has long been popular for gardens, either under the name that heads this note or the synonym of *Biota orientalis*. It is easily distinguished from other *Thujas* by the branchlets standing out at right angles to the main branches, and by the woody scales of the cones. A great deal of difference is noticeable in the behaviour of individual plants, for whereas some may be free growing and of rather open habit, others are of dense habit, very wide in proportion to their height, and increase slowly in height, never becoming very tall. It is a mistake to plant this species in gardens in towns where smoke or chemical fumes are prevalent, whilst it should also be left out of tiny gardens, such as are often attached to small villa residences, for it is only when allowed plenty of space that it is seen to advantage.—D.

Chinese Chestnut (*Xanthoceras sorbifolia*).—The note by "E. M." (page 16) is interesting to those of us who have tried it without any real success. My little experience of it and the information I have received concerning it corroborate the statement in "The English Flower Garden" to the effect that it requires a warmer climate than that of Great Britain.—S. ARNOTT.

The Fastigate Tulip-tree.—The erect-branched Tulip-tree (*Liriodendron tulipiferum fastigiatum*) is especially useful for small gardens, where the ordinary Tulip-tree would take up too much room. It is quite erect in growth, and the branches assume an almost vertical position, so that a fair-sized tree in point of height takes up very little space.—S. A.



Vitis Henryi at Ashbourne, Glounthaune, Co. Cork.

after the manner of Peaches, the pruning to be a mixture of spurs and young wood, leaving a healthy young shoot where there is space. Of course, the crop must be thinned if too heavy. Early Transparent Gage, Oullin's Golden Gage, Purple Gage, and Belgian Purple bear freely; Coe's Golden Drop is indispensable, and Coe's Emperor is also good. Plums bear freely when grown in pots. When forming a collection, it is best to select the trees and pot them in the autumn. We need not wait for every leaf to fall, but after potting firmly let the trees stand outside on a foundation of ashes till the new year, sheltering the pots and roots with litter if frost comes whilst outside. As soon as taken inside dress with a suitable insecticide, so that they may start clean.—E. H.

"The English Flower Garden and Home Grounds."—New Edition, 12th, revised, with descriptions of all the best plants, trees, and shrubs, their culture and arrangement, illustrated on wood. Cloth, medium 8vo, 15s.; post free, 15s. 6d. Of all Booksellers or from the office of GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

as far back as 1804, it is only of late years that it has been planted to any extent in the open air, this being partly due to doubts as to its hardiness. It has passed unharmed through 20 degs. of frost both in its native land (China) and in this country, and therefore is far from being tender. It belongs to the Barberry family and should be given similar treatment, except that a little shelter from strong winds is also an advantage. It is evergreen, its leaves, each 18 inches long, being finely cut, almost like those of the delicate *Aralias*. When young, the leaves are coppery red, the leaf-axils and midrib especially so, becoming deep green at maturity. In Japan, whence it was first introduced, it appears to be held in high esteem, and is to be found in almost

PLANTS AND FLOWERS.

INDOOR PLANTS.

BEGONIA FUCHSIOIDES.

W. McGuffog praises *Begonia fuchsioides* so highly that I can hardly believe it to be the plant described under that name in "Nicholson's Dictionary of Gardening." The species is usually ungainly in a small state, the plant only becoming symmetrical as it attains age and has formed a number of tall suckers. Under good cultivation these may be about 5 feet in length, and when well developed bear a fair quantity of branched panicles of brilliant scarlet flowers. I have never seen it succeed better than when planted out and trained to a pillar in an intermediate-house. There is, however, what appears to be a pink variety sold under the same name, and this deserves all that was written on page 15. It soon forms dainty little plants of good habit, every small branchlet bearing a panicle of delicate pink flowers, borne over a long season. It makes a pleasing contrast when associated with *Eranthemum pulchellum*, a charming blue-flowered plant which is easily grown under the same conditions. Both can be propagated from cuttings in early summer. A temperature of 55 degs. Fahr. is sufficient during winter. Unfortunately, the *Begonia* soon drops its flowers when used in rooms. J. COMBER.

[The *Begonia* referred to by J. Comber as being somewhat ungainly in a small state, and thriving better planted out than when confined to pots, is undoubtedly the true *Begonia fuchsioides*. At the *Begonia* conference held at Chiswick in 1893 Mr. Watson, of Kew, read a paper on the best fifty species of *Begonia*. He thus alludes to *Begonia fuchsioides*:—

"Introduced from New Granada to Kew in 1847 by the collector Purdie, who found it on the Ocana Mountains. It has a woody root-stock, succulent, tall stems a yard or more high, clothed with numerous ovate green leaves, each 1½ inches long, tinged with red when young. The flowers are borne on drooping, branched panicles; colour of the whole inflorescence a rich scarlet. This is a first-rate greenhouse plant. It should be planted out and its stems trained up a pillar or tall stake."

Concerning the pink-flowered form Mr. Watson says: "A variety called *miniata* differs only in having flesh-coloured flowers." In the "Dictionary of Gardening" a different plant is evidently referred to, as the variety *miniata* is described as having smaller leaves than in the type, and with cinnabar-red flowers. Owing to Mr. Watson's experience and the fact that his paper was written some years after the publication of the "Dictionary of Gardening," we must assume that the name of *miniata* as applied to the pink form is correct.

There are some garden hybrids claiming parentage from *B. fuchsioides*. The most generally grown is *Corbeille de Feu*, the result of a cross between this just named species and the persistent-flowering *B. semperflorens*. *Corbeille de Feu* blooms throughout the greater part of the year and is extremely useful for greenhouse decoration, while it is also largely used in the flower garden during the summer.]

Early Primulas.—*Primulas* bloom in a far more satisfactory manner when a house is devoted to them than when placed amongst a miscellaneous lot of plants in a

show-house or conservatory, as the temperature usually maintained in such structures is a little too cool for their requirements. The objection to having a house filled entirely with *Primulas* can be met with the plea that there is such a great diversity of colours among the flowers when the trusses are fully expanded that they produce quite a show in themselves, especially if the *stellata* types are judiciously made use of, both to lend variety and prevent monotony in the general effect. Air is, whenever possible, admitted at the apex, and by the ground ventilators also, to avert the possibility of the atmosphere becoming over-charged with moisture, while a little artificial heat maintains the temperature at the necessary degree. Rain-water alone is used for watering, a little of Clay's fertiliser being dissolved in it to supply the required amount of plant food.—G. P. K.

Forcing White Lilac.—Aalsmeer is a small town in North Holland, about half-an-hour by rail from Amsterdam. It is a quaint little town, of the kind that the old Dutch artists loved to depict. Its roads and streets are paved with cobblestones, and bordered with trees. Canals traverse the town, and barges laden with flowers for the market pass sedately and silently along the canals. It is quite a restful picture that meets the eye in Aalsmeer. One is reminded of Dutch William and the formal gardens which became fashionable in England through his influence. Facing the station you can see a whole garden full of the artificially-trained Box and Yew trees which in England we associate especially with the Dutch tradition in horticulture. There are peacocks, and dogs and birds on pedestals—even a Teddy bear and a baby in a bath. There are about 400 nurserymen and florists in Aalsmeer, most of them engaged in the trade in cut flowers. When you come to the Uiterweg, as one of the canals of the town is called, you are told that nurserymen's houses line the banks on either side, and that you can walk for half-an-hour without coming to the end of them. Behind are the hot-houses in which they force their market produce. The plants are not placed in earth or in pots, but stand in rows with the earth they need for nourishment in a solid clod around their roots. This earth is the secret of the success of the growers of Aalsmeer. It is a black friable mould, which I was assured needs no artificial reinforcement. In October the houses are heated to 110 degs. Fahr.; but in the present month the temperature is about 65 degs. to 70 degs. Fahr., and this will be maintained until May, when the forcing comes to an end. When the blooms have reached perfection they are sorted for market according to quality.—*The Times*.

Jacobinia chrysocephala.—This forms an upright sparsely-branching plant, the orange-yellow flowers being borne in erect terminal heads. The individual blooms are of a curved, tubular shape, and disposed in a regular crown-like manner. This *Jacobinia*, during the growing season, needs a temperature above that of an ordinary greenhouse—indeed, an intermediate house is more to its liking. Towards the end of summer it may, however, be transferred to the greenhouse, and exposed to the sun and air. In this way the production of blossoms is ensured. Cuttings root readily in the spring, and these young plants may be allowed to carry two or three shoots, as if they are stopped in order to produce more it will be at the expense of blossoms. Good flowering plants may be grown in pots 5 inches to 6 inches in diameter.—K. R. W.

The Maiden's Wreath (*Francoa ramosa*).—I frequently come across plants of the Maiden's Wreath in cottage windows along with Scarborough Lilies, scented-leaved Pelargoniums, and other subjects beloved of country folk. During the last summer I saw a somewhat novel combination in a private garden made up of the scarlet Gem Mrs. Bradshaw, *Heliotropes*, the centre of the bed planted with *Francoas*, the long, flowering shoots wreathed in blossoms.—W. F. D.

FERNS.

HARDY FERNERIES.

While flowers are indispensable for the ornamentation of a villa residence, a collection of hardy Ferns forms an equally important addition, and when properly and tastefully arranged they may be made to assume as natural an appearance as they do in a wild state; the rustic appearance, too, of a hardy fernery forms an agreeable contrast to the more dressy portions of the grounds.

It is difficult to lay down definite rules for the construction of a fernery, so much depending upon the position which it is to occupy and the space at command. In fixing on the site, the first thing to be aimed at should be a shady, secluded nook—not one that can be seen from the windows of the mansion or cottage, nor yet from the flower garden, but a part that is unexpectedly come upon when walking through the grounds. The situation should also be one that is sheltered from winds. Moisture, too, is essential to the well-being of hardy Ferns, but this cannot always be given in sufficient quantity to carry them safely through hot summers. In forming a fernery, anything like straight lines must be avoided. If the space to be occupied be long rather than broad, it should be broken up here and there so as to form miniature dells, recesses, and projections; but all should have as natural an appearance as possible. The plants in all cases should be allowed sufficient space in which to develop. Where outdoor Ferns have failed to do well, the ferneries have generally been cramped for room. What is wanted is breadth and length. If the fernery be so arranged that it could be traversed by a narrow path from which the plants could be examined, all the better. The stones employed should be placed in as natural a manner as possible, and yet they should possess a certain amount of artistic arrangement.

Soil.—Anyone who has searched for Ferns in their native haunts cannot have failed to observe that they luxuriate in a light, sandy soil, and this must form, if possible, the main bulk of the fernery. I have, however, frequently used Cocoanut-fibre mixed with turfy loam, and it has always appeared to answer admirably. For very delicate sorts a compost may be formed of peat, leaf-mould, and loam, with a sprinkling of sand to keep all open and porous, but the stronger sorts will succeed best in loam without the addition of peat. When I use Cocoanut-fibre I find that it retains a considerable amount of moisture without becoming sodden. Fern roots, being generally of a wiry nature, will grow in almost any soil that is of ordinary texture, but it ought not to be too heavy. Ferns dislike manure, both in solid and liquid form. In arranging the plants I would not separate the evergreen from the deciduous kinds, but so dispose of them that when the foliage of the latter dies down in the beginning of winter, there would still remain plants enough to interest the cultivator. I would, therefore, plant plenty of sorts that would retain their verdure throughout the winter, such as the *Blechnums*, *Scolopendriums*, *Polystichums*, and *Polypodiums*. In planting, an error of too common occurrence must be avoided—viz., that of planting too deeply. Generally speaking, the crowns must be kept well above the soil, but the plants should be made firm, and the stronger-growing sorts should be planted first. Dwarf-growing varieties with fine fronds should have the most sheltered nooks assigned to them. If water exist in the fernery, a place must be found for the Royal Fern. A. G.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

A BOG GARDEN.

THE illustration depicts a corner of a bog garden, which, four years ago, was a stagnant swamp overgrown with rushes, and shows what can be done in converting such situations into beauty spots, where many plants thrive with such luxuriance that in a few months the whole aspect is changed, often at quite a modest outlay. In this particular instance the bog was caused by a stream becoming silted up, until it was lost in a swamp. In the first place an irregular channel was formed to confine the passage of the water, and to drain the surrounding ground, which was afterwards dug over and cleared of rushes and other weeds. Irregular groups of Japanese Irises, which have been a great success,

tions last season, one leaf measuring 8 feet 6 inches in diameter, and several others more than 7 feet. Details which have done much to assist this fine specimen are the heavy annual mulching of rotten cow-manure and precautions taken in the spring to prevent the young leaves being injured by late frosts.

The boulders of rock were introduced two years ago. One forms a bridge over the stream. Just beyond the left-hand end of this is a group of *Petasites japonica*. In selecting a site for this plant, one has to take into consideration its habit, as, although its large leaves are very attractive, as are also its peculiar flowers which come so early in the year—before any signs of foliage are present—it is a veritable weed, spreading with remarkable rapidity. It is useful for obscuring an unsightly spot, and will thrive almost anywhere.

T. B. FIELD.

Wych Cross Place, Forest Row, Sussex.

and the plant continues sending up new buds at intervals all through the winter, from October till March and April, except in hard frost. *Cyclamen Atkinsi*, *C. Coum*, and *C. ibericum* were all in bud, giving promise of their fascinating little flowers in red or white before long. These are lovely even when not in flower; indeed, one great charm of a rock garden is that so many of its tenants are almost as beautiful in their winter garb as when covered with blossom. A patch of *Eriogonum umbellatum*, with its neat, reddish-bronzy foliage, was very pretty, and so was a large tuft of *Sedum glaucum* showing up quite blue in a retaining wall. The silver *Saxifragas* were beautiful, some of the larger species—*Hostii*, *Cotyledon pyramidalis*, and *longifolia hybrida*—having the tips of their leaves flushed with red, giving a very pleasing effect.

The mossy Rockfoils, too, are always beautiful, *S. Wallacei* being, in my opinion, the prettiest in the colour and general effect of its foliage. Unfortunately the sparrows raid the clumps occasionally and make sad havoc, whether in a hunt for slugs or in mere wantonness I do not know. Anyhow, one becomes in time resigned to these things. There is, however, one thing I cannot bear with equanimity, and that is when a worm makes his hole in the middle of a clump of *Dianthus neglectus*, and half covers it with "casts." You cannot dig it up, but you can visit the place some mild damp night, when it lies out, and with a gentle but steady pull draw him from his hole and fling him far afield.

There is much good work to be done in winter at night with the aid of a lantern, for not only are worms about, but a good bag may be made of slugs of all kinds. There are also many hibernating caterpillars which are only too ready to wake out of their winter's sleep on any mild night and come forth to devour any young shoots they can find. Nothing seems to come amiss to them. They will eat out the centre of the silver *Saxifragas*, which are immune from slugs, or even gnaw away their roots so that they wilt and die.

I was surprised to see how early some of the wild plants which I have in my rock garden show above ground. *Orchis mascula* was throwing up its pretty spotted leaves quite vigorously, while *Orchis Morio* has been above ground for some weeks. I also have *Orchis maculata*, but that does not seem to start quite so early. *Allium triquetrum* has been up for a long time, and so has the pretty little Meadow Saxifrage (*S. granulata*), brought with the various *Orchids* from damp meadows in Suffolk, where all were growing in great profusion.

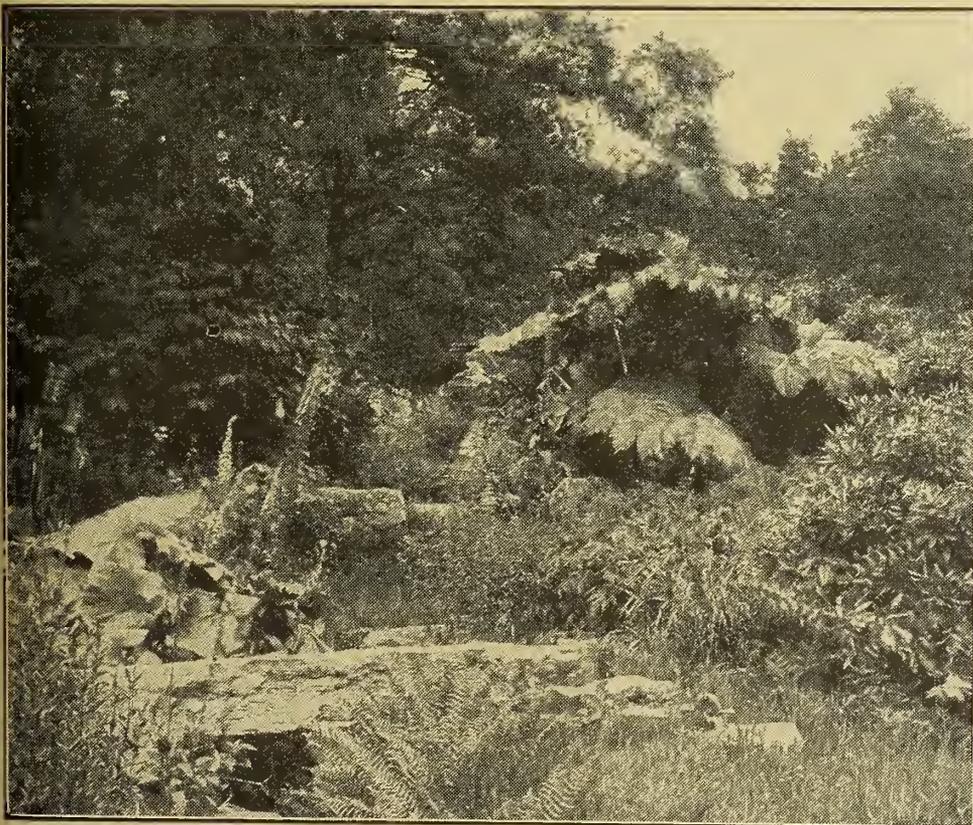
The heavy rains of December have been bad for some things. *Onosma tauricum* in particular was looking very miserable, though planted in an almost perpendicular wall. However, almost all of them came through all right last winter, which was as wet, or wetter, than this, so I hope they will survive this one. It always seems to me wonderful that plants which are used to a pure air, clear skies, and cold, dry winter should do so well in our climate, more especially when the vagaries of the climate are supplemented by the smoke and the fog which they get in a London garden. N. L.

Alyssum alpestre.—This is a dainty little species, which, with its tiny, silvery leaves, forms a close cushion of foliage, which looks neat and pretty at all times of the year. It seems quite as easy to grow as its coarser relatives *A. argenteum* and *A. saxatile*, appreciating a dry, sunny position in light soil. When in blossom the tiny, pale-yellow flowers cover the plant. It is easily increased by division.—N. L.

MID-WINTER IN THE ROCK GARDEN.

A STROLL round my London rock garden on New Year's Day was full of interest, although there was little to be seen in the way of blossom. The spell of mild weather in December, however, had brought on some of the early-flowering things, some of them being so forward that the inevitable frosts and cold winds of January are sure to spoil some of the more precocious flower-spikes. *Saxifraga apiculata* was crowded with buds, some of them almost ready to open (one odd spike did flower in November), and *Saxifraga L. G. Godseff* was equally full, but fortunately not so advanced. *Anemone blanda* and *A. apennina* were unfolding their early leaves, and so was *A. sylvestris*. *A. Pulsatilla* still seemed to be keeping dormant. *Iris stylosa* was blooming freely. There is a charm about this beautiful species of which one never tires,

were then planted, *Spiræas* in variety, notably *palmata rosea*, *Lysimachia punctata*, *Lythrum Salicaria*, *Saxifraga petata*, *Primula japonica*, *P. sikkimensis*, *Polygonatum multiflorum*, Foxgloves, *Senecios* in variety, and *Petasites japonica gigantea* were then planted. Some of these may be seen in the illustration. The intervening ground was sown with Grass seed, which is mown at intervals, and makes access easy to all parts. By adding pebbles to the channel and forming shallow pools with fair-sized stones jutting out irregularly from the sides, it now resembles a natural stream, with Ferns, *Myosotis palustris*, and *Mimulus luteus* growing along the sides of it, the two latter forming a pleasing combination. On the bank in the background of the illustration is a fine specimen of *Gunnera manicata*, and in the left-hand corner a group of *Polygonum sachalinense*, both of which were planted four years ago. The *Gunnera* assumed gigantic propor-



Lower part of bog garden, Wych Cross Place, Forest Row, Sussex.

ROSES.

BUDDING A WEeping DOROTHY PERKINS ROSE.

I HAVE in my garden a very strong-growing standard (weeping) of Dorothy Perkins Rose, on Brier stem, 3 feet high. During last season it threw up through the bush a growth from the Brier (starting about a foot from the ground) about 8 feet long, and I am writing to ask if Dorothy Perkins can be successfully grafted on to this new growth, and how and when it should be done? If so, I can see a chance of this tree being made an exceedingly beautiful one. Thanking you in anticipation of the information through the columns of your most excellent paper and for the help I get from it.—HORACE THOMAS.

[As it is not possible to graft roses out-of-doors it would be best for you to bud the growth in question, and this work is best done about the end of June or early July. The shoot being quite young it would, no doubt, be possible to insert three or four buds into the sides of the shoot itself; or the shoot may be cut down to a desirable height now, which will cause it to throw out lateral growths at the top, in three or four of the strongest of which buds may be inserted. The buds, or eyes, are obtained from any young shoots of the present season's growth that are sufficiently ripened. As a general rule a shoot may be considered in a fit state, either for giving buds or for budding upon, when the spines spring off on being slightly pushed. The shoots from which the buds are to be obtained are cut and the foliage removed, leaving about $\frac{1}{4}$ inch of the leaf-stalk to facilitate the handling of the bud. The only tool necessary is a very keen-edged knife. In cutting out the eye hold the stick of buds in the left hand, with the leaf-stalks pointing upwards. Commence the cut about 1 inch above the eye, finishing about $\frac{1}{2}$ inch below, and as thin as possible. The thin portion of the hard wood of the shoot is then removed and the eye is ready for insertion. Next make a T-cut in the shoot to be budded, being careful to cut the bark only, without running the knife into the solid wood. The bark is then forced open with the end of the budding-knife or with a sharp piece of bone or wood, and the bud is inserted, cutting off any portion of the bark that may protrude beyond the cross cut. Now bind the bud in with raffia or wool, leaving the little eye itself uncovered. The tying material is removed about six weeks later and the bud exposed to the weather. In the following February the shoot, or shoots, budded are cut back to within a few inches of the bud, which is thus forced into growth and quickly develops. You might obtain a very lovely and unusual specimen by inserting buds of three or more varieties of Ramblers, choosing related varieties, so that they would blossom simultaneously. A pretty combination of colour would be obtained by using buds of, say, Lady Gay or Dorothy Perkins (pink), Mrs. L. Dewhurst or White Dorothy (white), Lady Godiva (delicate salmon-blush), and Excelsa or Troubadour (crimson).]

Roses Frau Karl Druschki and Juliet for a hedge.—Are Frau Karl Druschki and Juliet suitable for combining and making into a Rose hedge?—D. N. P.

[The two varieties would be very suitable for hedges. Both Juliet and Frau Karl Druschki have a semi-climbing habit, and would soon grow into a nice hedge, for both varieties are of bushy growth. Give them a good start by trenching the site, and provide a store of nourishment for the future by incorporating plenty of old manure in the lower spit. After planting the hedge we would advise you to cut the plants down to within 6 inches of the

ground level in March. By doing this you will obtain a good foundation of fresh young growths, and by the end of the year the hedge will be quite as high as if you left the shoots full length.]

GARDEN FOOD.

WINTER SALAD.

WHEN the good Lettuces of several kinds disappear from the home garden some people give up salads altogether. They need not do so. In the French market gardens the growth of salads is continuous, and no doubt it might be so here, but we have to deal with things as they are. In gardens some of the things are generally very good; well-grown, which is an aid in all ways, cooked or uncooked, such as Celery. For salad it is best to use the crisp kinds, with a view more to flavour and texture than size. Apart from its uses as a salad it is very good as a cooked salad with other materials, such as Rice and Beetroot.

Corn salad is much more used in France than with us, and it deserves to be more commonly grown. With shreds of Celery it makes a welcome salad, with a little oil and squeeze of Lemon if anyone desires acid, but no vinegar. Corn Salad should be more freely grown and in a more cleanly way than it is, that is to say, in little raised borders, where it will not get too much splashed with soil. Good Cabbage cut into hair-like slices, as in America, is a help to salad-making, and it is one of the ways in which the Red Cabbage might be used.

The most common winter salad in English gardens is Endive and the forms of it, but, as usually served, it is very tough and indigestible. The French make a better use of them.

In writing about salads it is usual to enumerate a lot of varied plants, some wild and some garden, all mixed together. It may be done, but it is the wrong way, and any good French cook will say that a salad is best made of one or two things at most. Mustard and Cress are generally best left for those who like them, and also Radishes, which, however well grown, are apt to give stomach-ache. Potato salads, so much favoured by some Continental peoples, are better avoided, as one gets so much of the Potato in other ways; moreover, we doubt if the Potato contains the salts of potash that the fresh green salads do. Watercress should not be neglected. I grow a large form from seed, and it is very good. The French way of serving a garnishing of Watercress with bits of broiled meat is a tasty way of using Cress.

The hardy and useful Cress might be used also with Beetroot and Celery. It is better worth growing than Mustard and Cress, and my streamlets where it grows being now in flood, I hope for winter supply to grow it in moist beds. Apples of the pleasant acid kind are very good additions to some salads and aid the flavour—the main thing in a salad. In the country garden we have the gain of Cress away from any source of pollution. It should never touch manure. W.

NOTES AND REPLIES.

Pear Duc de Nemour.—I am interested in the note by "E. B. S., Hardwick" re Pears. I think I have a Duc de Nemour Pear-tree in front of my house in a dry situation in light soil. The tree is about sixty years old, standard, 40 feet or more high on free stock, single-grafted, roots under turf, and very little added food available. It is a great cropper, and in favourable seasons fair in size and good in quality, but, owing to age and situa-

tion, liable to spot and decay in unfavourable (dry) weather. I sent grafts to Messrs. Pearson and Sons, Chilwell, three years ago, and put my old favourite on a west wall and in bush form both on dwarfing stock to try what Duc de Nemour would do. Results are very good. I have just finished eating two Pears probably about 10 oz. each, quite perfect in form and flavour. Duc de Nemour is a grand variety under the close pruning system, and the way it will develop the twig carrying fruit is a guarantee in itself of quality in the Pears when ready. This Pear is in season a long time, often from mid-November to Christmas.—R. SUTTON, Kirk Lane.

Lamb's Lettuce.—In the issue of January 1st (p. 6) "W." notes the value of Lamb's Lettuce as a winter salad, and having grown it for many years I quite agree with what he says. It is a great favourite on the Continent, where there are some excellent varieties. In this country only one or two sorts are catalogued, mostly the Italian, but the Messrs. Vilmorin, Paris, have some superior stocks, a very fine one being the dark-green Louviers. This has a large leaf of a shining dark-green colour, and the plants form a good bunch of close-leaved, or what may be termed rosette heads. This, sown in the autumn, gives a most useful supply. Grosse graine is also a splendid salad plant, having a strong growth and large leaves. Both the above are much superior to the Italian, of which there are two forms, one much better than the other. I have, to get a full winter and early spring supply of this salad, sown in a cold frame, and got a full crop for a considerable time. Grown thus in a severe winter the Corn Salad is most useful. It is quite hardy, but well repays a little protection in severe weather.—W. F.

Pecans from America.—Thanks to the kind aid of Mr. Elliott, of the Pittsburg Nursery, my beloved Pecans have come from Mississippi, where they do so well. I was disappointed earlier in the autumn with some old Nuts that were sold in London as genuine Pecans. The Pecan is the best Nut I know, the only other Nut that comes near it being the Sapucaia, which is not always at its best when sold, probably due to having been gathered at any time by the natives.—W.

The Pear-shaped Girasole (Jerusalem Artichoke).—Of late years I have grown the large white Girasole, but should be glad if you will let me try the Pear-shaped. Girasole is a good name, but, however good a name, one never knows how it can be made to "take." Language seems to grow by ways of its own—apparently quite arbitrary and illogical. It "won't be druv," as our old people say.—G.

Keeping Apples.—I have been experimenting for the last fourteen years as to the best method of storing Apples, and find the following the most satisfactory.—I store them in a brick cold-frame, using only carefully-handled fruit, piling the different varieties in heaps, and letting them have plenty of ventilation, excepting in frosty weather. They keep sound and plump as long as the different varieties are expected to keep. I finished Lord Suffield about the middle of November, and they were then as sound and plump as when taken from the tree. I am now using Pott's Seedling, Bramley's Seedling, and Scotch Bridget. I can keep the fruit in this way well on into the next year.—H. S.

A white alpine Strawberry.—There is a delightful little white alpine Strawberry which loves a sheltered nook in the rock garden. Its flowers and fruit are somewhat larger than those of the English wild Strawberry. It is dainty in appearance, and the flavour is excellent. Given a sunny spot, well sheltered from the north and east, it will continue fruiting until late autumn. Owing to their colour, the berries are not touched by birds, even when the neighbouring red ones are stripped half ripe. It was introduced into my garden by a French friend, and it has proved a charming acquisition.—A. B. B., Ventnor, Isle of Wight.

OUTDOOR PLANTS.

SHEFFIELD PARK.

To me the advantages of our country in ornamental water are very great, and the adornment of those waters is of first importance. Other countries are not all blessed with the like noble estuaries, numerous rivers, and picturesque lakes, many of them still without much tree beauty, as in the west of Ireland. The best place I have ever seen, so far as regards making artistic use of water, is Sheffield Park. Not only is the tree-beauty very great, but there are many shrubs of interest there, the ground plants and Heaths of our

put on $\frac{1}{2}$ -inch in thickness. Apply to a good seedhouse, stating the size of the lawn, nature of soil, position, etc. On receipt of order a renovation seed mixture will be sent, arranged in suitable quantities of Grasses and Clovers, which, if sown thickly, will soon make a good lawn.

HARDY FLOWER NOTES.

ASPHODELS.—The yellow Asphodel, *A. luteus*, cannot be classed with the choicer and more showy garden plants, but it blooms early, is cheerful looking, and has great powers of endurance. Long periods of dry weather do not destroy it. The foliage may die off and the crowns may have a lifeless appearance, but rains revive it, and young, fresh green leaves appear again. No plant could be growing under

land or for placing among low-growing shrubs.

CAMASSIA.—Here we have a family of hardy plants which may be used in the same way as the preceding. Once fairly established they are a joy for years; in fact, the longer they remain undisturbed the better they are, although, of course, no plant is endowed with indefinite life. *C. esculenta* has long been an inhabitant of English gardens, and was once more in favour than at the present time. Individually it is not impressive. Like many bulbous-rooted plants, it must be planted in colonies to be effective. This species should do in Grass where it does not grow over-rank. The finest member



The lower lake at Sheffield Park, Sussex. From a photograph by G. A. Champion.

country all tending to make the scene as charming as man's planting and Nature's gifts can make it.

It is not so much the fine collection of things I want to speak of as the landscape beauty. The gardening fraternity are apt to over-plant and to think very little of breadth, grouping, or repose. Therefore, broad sheets of water, such as are here, are a great aid in giving light, air, and space. Hence the reason for making the most of them. The improvements effected by Mr. Soames are very striking in every way and all parts.

W.

Improving lawn (A. L.).—Have all the weeds and Daisies removed from the lawn in March, then top-dress with a rich, light soil

worse conditions than this Asphodel does with me. It is close to a Douglas Fir, the roots of which fill the soil for several square yards, and is therefore extremely poor and dust-dry at times in the summer. In spite of these adverse conditions a plant has lived and bloomed for some years and has ever increased. *Asphodelus ramosus* is quite a different plant, and possesses a certain amount of effective beauty which is best displayed in association with other things. It is a good plant for the mixed border. This is supposed to be the oft-quoted Asphodel of Shakespeare. Very indifferent as to the character of the soil, and able to take care of themselves when in intimate association with other things, these Asphodels are suitable for the wood-

of the family is *C. Cusicki*, a very distinct plant with a certain nobility of growth. It is worthy of a good place in any garden where hardy flowers get good treatment.

CHELONE BARBATA is first cousin to the Pentstemons, and, like them, in the majority of soils is best treated as a biennial. It exhibits the same fine decorative qualities, and the same constitutional defects, as those much-prized ornaments of the outdoor garden. It is a curious fact that some hardy plants which cannot endure without loss of vitality the heavy rainfall which frequently characterises the English winters, are equally adversely affected by very dry periods. Frequent renewal is the only thing to do in such cases. In its nature *Chelone barbata*

bears such a close resemblance to the Pentstemons that the only safe way is to sow annually, thereby being always in command of plants which, by reason of youthful vigour, not lowered by a season of flower production under trying weather conditions, will take the place of those which have their vitality sapped by prolonged periods of heat and drought. Seeds sown early in the year will make strong-blooming plants for the following season if well cultivated. If sown, as I have often done, some time during the summer, they can remain in the seed-pans until the following spring. Wintered in a cool-house or frame they will be very hard, and can be put out in March or early in April, which will give them a long season of growth, and they will make fine specimens which, in the heyday of their youthful vigour and luxuriance, will yield a rich reward in floral beauty for all pains taken.

ERIGERON AURANTIACUS is in many soils disappointing in the same way as the preceding, a season of good flower production being followed by a collapse. I have an idea that this Erigeron grows naturally among herbage in the same way as *Gentiana verna* and some other native plants of very dwarf stature, their welfare to a large extent depending on the protection to the roots and crowns thus afforded. There are many alpine plants that could be induced to thrive permanently with us in this way if we could command the right kind of herbage, but as a rule this grows too rank. The kind that covers our Surrey commons, where the soil is very light and poor, would be ideal for naturalising such things. For the generality of gardens frequent seed sowing must be practised. In low-lying localities this Erigeron must be grown in the rock garden. J. CORNHILL.

LILIUM BROWNI AND NEARLY-ALLIED KINDS.

WHAT is *Lilium Brownii*, and whence does it come? Like the Nankeen Lily (*Lilium testaceum*), its history seems to be obscure. All that is known is that it was distributed by a nurseryman named Brown, of Slough, somewhere about 1830. It would probably soon have died out in this country, but it was taken in hand by the Dutch growers, who found the conditions prevailing in their country suit this Lily. At all events, considerable numbers of it are sent here every year from Holland in the shape of large, firm bulbs that can be depended upon to flower well the first season after planting.

The "Kew Hand-list" gives the native country of *Lilium Brownii* as China and Japan. This may be, yet out of the vast importations from China which we have received within the last dozen years or more I have not seen a Lily that would be confounded with the Dutch-grown species, which I have known for nearly half a century, long before the Chinese forms made their appearance in this country. The "Kew Hand-list" gives two varieties of *Lilium Brownii*—namely, *Chloraster* and *platyphyllum*. Neither of these is, however, in general cultivation, while *Lilium Brownii leucanthum*, which first flowered at Kew in 1894, and formed the subject of a coloured plate in *The Garden*, Vol. 47, is not included. At the time of its flowering it was described as having a particularly good constitution, but something would appear to have happened since then. In the bulbils from the axils of the leaves, and its general appearance, this form seems to have a considerable affinity with the Burmese *Lilium sulphureum*, but it is considerably less in stature. This

brings me to one of the newest and best of the Brownii group, namely,

LILIUM REGALE, a very free-flowering species. In this the centre of the flower is flushed with yellow, shading to white at the edges, while externally it is marked with brown towards the base, changing to rose at the tips. The anthers are yellowish. This Lily was first distributed as *Lilium myriophyllum*, and as such was given an award of merit. Last year, at Holland Park, it received a first-class certificate. Apart from its beauty, the robust constitution of *Lilium regale* is also a most valuable asset.

LILIUM SARGENTÆ is later in flowering and of taller growth than *L. regale*, with which, however, it has many features in common. Both prefer a good loamy soil for their successful culture. One other member of the Brownii group must be mentioned. This is the Lily which, in the "Kew Hand-list" is referred to as

LILIUM JAPONICUM COLCHESTERI, the name of odorum being given as a synonym. This Lily is certainly widely removed from *L. japonicum* (*L. Kramerii* of gardens), and it undoubtedly belongs to the Brownii class. A few years ago a bed of *Colchesteri* at Kew was labelled Brownii during the whole of its flowering period. Beside this the bulbs sent here from Japan under the name of Brownii are usually those of *Colchesteri*. This last differs from the Dutch Brownii in the foliage being broader and of a much thinner texture, while the flowers are shorter, less stained with chocolate on the exterior, and yellowish within, instead of the ivory-white of *L. Brownii* itself. As *Colchesteri* is so dissimilar from *L. Kramerii* the older name of odorum would appear to be the correct one. K. R. W.

FLOWERING PLANTS UNDER PERGOLA.

IN my garden I have a pergola sloping down the terraced hillside. From the early summer until the late autumn the top of the pergola is covered with the canes and foliage of *Wichurajana* Roses, which bloom freely, and at such a time there is considerable shade beneath the pergola. On either side of the walk down the pergola there is provision for growing flowers, but the loss of light after midsummer is so great that few flowering perennials, or even annuals, do well. I should be much obliged for any suggestions as to how best to treat the beds beneath the pergola, so as to make them gay and attractive, if not throughout the year, at least during as many months as possible. Would you kindly tell me what flowering plants do well in partial shade? What I could plant so as to obtain flowers in the early spring before the Roses are in full leaf? Would *Irises* grow well in such circumstances? *Daffodils*, presumably, could be planted, also *Polyanthuses* and *Anemones*.—DEVONIAN.

[Provided the soil was suitably prepared for their reception, there are many plants which would grow quite well beneath the shade. We take it the side light is available, which would be helpful in its way. You give us no idea of the size of the pergola—its length or width—so that we can only reply in general terms. In any case you might freely indulge in such things as *Snowdrops*, *Chionodoxas*, *Anemone blanda*, **Adonis amurensis*, **Lenten Roses*, **Hepaticas*, *Narcissus Queen of Spain*, *N. pallidus præcox*, and other *Daffodils*; also *Muscari conicum*, which would provide pretty colour patches from February onwards to May, and before the Roses make much headway. After that time such **Liliums* as *candidum*, *eroceum*, *umbellatum* in variety, *Hansonii*, *testaceum*, *chalcidonicum*, *pomponium*, *pyrenaicum*, *odorum*, and others arranged in groups at intervals would carry on the display, assisted by Spanish and English *Irises* in variety. The taller, bearded, or **Flag*

Irises we would only introduce if ample room existed, and in such case they would be most effective. **Montbretias* in moderation might also be good. The general run of hardy perennial border plants should not find a place, though a set of the more distinct **Heucheras* might be added with advantage, or the brilliant **Transvaal Daisy* (*Gerbera Jamesoni*), which should be hardy with you in the open. These, with *Colchicums*, such as *Crocuses* as *speciosus*, *zonatus*, and others, and the red and white *Cyclamen neapolitanum*, which is valuable also for its foliage for months on end, would provide not only variety and beauty but a fairly long season of flowering to boot. Those marked by an asterisk could be planted now, the remainder could be dealt with in autumn.]

NOTES AND REPLIES.

CROCUS BORYI, var. *marathonisius*.—In his "Monograph of the Genus *Crocus*," Mr. George Maw figures flowers of *Crocus Boryi* in bloom in November. He suggests that from the lateness of its flowering this lovely *Crocus* "is best grown to advantage under the protection of a cold frame." It stands winter weather wonderfully well without any protection, but, undoubtedly, the shelter of the frame will induce it to bloom earlier, and to last longer, than in the open. The early frosts retarded *C. Boryi* and its variety *marathonisius*, and the latter could only be said to come properly into flower as late as January 9. It differs but little from the typical *C. Boryi*, which has white flowers with a patch of yellow at the throat and the base of the exterior, though an occasional variety has the outer segments delicately lined with lilac. Some authorities have given *C. marathonisius* specific rank under that name, but Maw informs us that the only difference he can observe between it and the typical *Boryi* is that the stigmata are less branching and only reach to the level of the summit of the anthers. This distinction is borne out by a study of the plants as grown here. One can, therefore, hardly quarrel with Maw's classing it with *C. Boryi* as only a variety. I may say that my plants are in the open without protection, and in a fairly sheltered position are standing well.—S. ARNOTT.

SWEET PEAS.—A sowing of Sweet Peas will be made at once in 3-inch pots, sowing two seeds in each, placing the pots in a moderately warm pit, and covering with boards to protect the seeds from mice till the seedlings are through the soil. The seedlings must be grown in very cool conditions from the first, admitting plenty of fresh air whenever the weather permits, and keeping them near to the roof-glass. Support the shoots with small twigs, which should be placed in position when the plants are very young. The seedlings will eventually be hardened off and placed in a cold frame till planting-time arrives. The ground must be prepared as soon as possible, both for the early and later batches. Deep cultivation and plenty of well-decomposed cow-manure are necessary to obtain the best results. At the final preparation of the ground a liberal quantity of soot and wood-ashes will be scattered over the surface.—F. W. GALLOP.

NEW INDEX AND BINDING CASES FOR COMPLETED VOLUME.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3½d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

GARDEN PESTS AND FRIENDS.

DISEASES OF PEAS.

POWDERY MILDEW.

(ERYSIPIHE POLYGONI, D.C.)

DURING a comparatively dry, bright season the leaves of Peas often show sickly, yellowish-green blotches, which gradually increase in size until the whole of the foliage changes to a yellow colour and soon wilts and dries, though the leaflets, as a rule, do not fall. If the under-surface of a leaf, just beginning to show yellow patches, is carefully examined, the discoloured patches will be seen to be covered with a delicate whitish mildew, which gradually spreads over the entire surface, or even over the upper surface as well. When badly attacked, a row of Peas presents the appearance of having been whitewashed — leaves, stems, and pods being equally covered with the mildew. In such cases the plants soon die outright,

These spherical winter-fruits enclose spores or reproductive bodies. They remain unchanged until the following spring, when they decay and the spores are liberated. These spores infect young Pea plants and give origin to the vegetative stage of the fungus (mycelium), which first produces the crop of summer spores. Powdery mildew also attacks various kinds of Vetches, both cultivated and wild, and several of our commonest weeds belonging to widely-separated families of plants.

METHODS OF CONTROL.—Spraying is practically ineffective unless begun sufficiently early. It should be begun before the disease appears in June or July, especially if the weather is dry and hot.

Liver of sulphur, used at a strength of 1 oz. in 4 gallons of water, is preferable to Bordeaux mixture for this disease. As the disease is not apparently carried in the seed, the infection must be derived from some outside source, such as from diseased

son. The winter-spores are produced on the vegetative form of the fungus (mycelium) which is present in the tissues of the dead leaves, and cannot be seen from the surface. These winter-spores, as usual, remain in a resting or unchanged condition until the following spring, when they germinate and infect Peas and allied plants.

Pea mildew also attacks both wild and cultivated Vetches, and many wild plants belonging to the Pea family.

METHODS OF CONTROL.—The first infection in spring can only be due to winter-spores, and hence the necessity for destroying all diseased material. Burning is the only certain method of accomplishing this object, as the winter-spores pass through the intestinal canal of an animal without injury. Spring infection is often due to fragments of diseased leaves falling to the ground, where they decay and liberate the winter-spores, which remain on the ground until the following spring.



The upper lake, Sheffield Park. (See page 57.)

and in every instance the injury caused to the foliage affects the crop, the injury being in proportion to the amount of mildew present.

When examined under a microscope the mildew is seen to consist of myriads of reproductive bodies (conidia), which are produced in chains, but soon become free from each other and form a dense white mass on the surface of the leaf, suggesting the idea that it had been sprinkled with flour. These conidia are summer-spores, which are capable of germination at the moment of maturity; they are scattered by wind, rain, insects, etc., and in this way spread the disease. Later in the season, when the infected plants are dying, a second form of fruit, known as winter-fruit, is produced from the same vegetative portion of the fungus (mycelium) which had previously given origin to the summer-fruit. The winter-fruit first appears in the form of minute yellow balls which eventually become dark brown or blackish, and are often present in myriads on the dead leaves.

Pea-straw, or weeds capable of harbouring the parasite. The straw should, therefore, be burnt and weeds kept down.

PEA MILDEW.

(PERONOSPORA VICIÆ, De Bary.)

This mildew is liable to be confounded, by the casual observer, with the powdery mildew described above, but belongs to a totally different group of fungi, and requires different treatment. The leaves first become covered with a delicate white mould, which soon changes to a pale pinkish-grey colour, and may pass unnoticed until its presence is indicated by the wilting and yellowing of the leaves. The powdery appearance of the mould, so characteristic of powdery mildew, is entirely absent, and, inspected with a good pocket-lens, the mildew is seen to consist of myriads of upright stems, which bear numerous branches at the tip, the tip of each branchlet bearing a single summer-spore (conidium). It is these summer-spores, dispersed by various agents, that spread the disease during the growing sea-

Rotation of crops would in this instance be desirable.

When the disease is present spraying with half-strength Bordeaux mixture* should be resorted to. Liver of sulphur is much less satisfactory in its action on the mildews proper.—*Leaflet No. 287, Board of Agriculture and Fisheries.*

(To be continued.)

Looking through the seed lists.—In the past I think we have been too much under the influence of Germany in the matter of garden seeds. Our own people are now finding out that they can do without the Germans, as, aided by our colonies, we can produce as good, if not better, seeds than the Germans. Some of our lists of various things are getting too long—longer than is necessary or desirable. The lists of names of Sweet Peas on offer are, I think, absurd, as they make the work of selection very difficult. The same difficulty occurs in many other things; Peas, for instance, and Tomatoes. Of the latter there are more than sixty names in a list before me. It is confusing, and really not necessary, as the best might easily be included in a list of a dozen names or so.—E. H.

* 6 lb. copper sulphate or bluestone (98 per cent. pure) and 3 lb. quicklime to 100 gallons of water.

VEGETABLES.

CHICORY AS A WINTER SALAD.

WHEN Lettuces and other things are scarce there is never any difficulty in having plenty of Chicory, and it is to a large extent a substitute for both Lettuce and Endive. The Chicory is a hardy plant, and if sown in time the roots will be strong, and, like Seakale, may be taken up and forced when wanted. When grown for blanching common Chicory is usually sown during May and June. If sown sooner it goes to seed. The object of the cultivator should be to get good strong roots capable of producing a large number of leaves when they come to be forced. The plant is not particular as to situation, but it should have a rather light and moderately rich and deep soil. Being a tap-rooter, like the Carrot, it sends its Carrot-shaped roots straight down, and when it can do so freely the plants are always much stronger. The ground should be deeply dug with a spade or fork or trenched (if it has not been done in the winter-time), and the seed should be sown at the same time in drills not less than 15 inches apart; and when they can be well handled the seedlings should be thinned out to 1 foot apart in the rows. After this the only attention they require will be hoeing between the rows and watering in dry weather till November or December, when the plants will have shed their leaves and be ready to take up for forcing. The

FORCING OF THE ROOTS is an easy matter. When the leaves have decayed a number of roots should be taken up and laid in soil in some cold shed or other structure where they will not be frozen, and from this store they can be removed in batches for forcing as wanted. This is merely a precaution in case of severe frost or snow setting in and preventing them being lifted from the beds, where the main lot should be allowed to remain. The quantity of roots to be forced at a time will depend upon the demand for the salad. For a small family as many roots as can be put into a 12-inch pot will be sufficient at one time. Whether the roots are forced in a bed, or in pots or boxes, they should be buried up to within an inch of their crowns in light soil of any kind, watered, and placed in a temperature of from 50 degs. to 60 degs., and be kept in the dark. If a dark shed or cellar be not available, the crowns may be covered with an inverted flower-pot or box, which will do quite as well. In this way Chicory is sometimes forced in a kitchen. The leaves soon push out, and they should be cut when they are young and tender, and always just before they are required for salad, for which purpose they are prepared like Lettuce or Endive. The roots will push out leaves a second and even a third time after being cut, but the growth is weaker every time, and the better plan will be to introduce a succession of fresh roots before the supply becomes exhausted.

NOTES AND REPLIES.

Two early dwarf Peas.—The dwarf Peas of recent introduction are now little inferior to the taller growers. This is a great gain, as they are a vast improvement on the old small, white, round-seeded Peas. I have found it advantageous to sow these dwarf varieties quite close. Eighteen inches or 2 feet between the rows will suffice if such a kind as King of the Dwarfs, an excellent variety only 12 inches to 15 inches in height, is used. Considering its height it bears a really good pod, and is remark-

ably early. Reading Wonder, the other variety, is probably less known, though equally valuable, and like it as regards quality. This is an ideal variety for a small or narrow border, being of compact growth and producing good pods, mostly in pairs, with eight to nine Peas in a pod, and remarkably early. Last season I saw this in cold frames, and grown thus it gave excellent results. Sown in January there were excellent dishes in a little over three months from date of sowing.—W. F.

Early Broad Beans.—Of late years some valuable additions have been made to the early Longpod Beans, and one or two to the later Windsor section. After repeated trials I have found as regards earliness, and, of course, hardness also, no variety superior to the old Mazagan, or the later but useful Dwarf Cluster. I prefer the Mazagan, but both are equally good for sowing this month (January), should the weather be suitable, or as early in February as the soil is in a workable condition. For many years I sowed the Mazagan in November, and with a mild winter there is a gain. It well repays those who want Broad Beans as early as possible to sow in frames or in boxes under glass. It is surprising how quickly the above variety blossoms even when the plant is quite dwarf. The Mazagan is harder than the larger green Longpod. If possible, give a warm, sloping border. These early varieties may be planted closer than the larger and later varieties. The reason I have included the Dwarf Cluster is on account of its dwarfness. When sown somewhat close the plants protect each other. Where the soil is at all heavy I have found it a good plan to make it more suitable by a liberal addition of burnt garden refuse or wood ashes. The Beans of the above varieties, though small, are of excellent quality.—F. K.

Early Peas.—As the soil is too wet and cold for Peas to be sown outdoors at present—and will be until the month of February is well advanced—a sowing of a first early variety will be made and raised under glass as soon as the seeds come to hand. As pots will be the more expeditious way of raising the plants pots 5 inches in diameter will be used for the purpose. One crock in each with a few flaky pieces of loam on top will suffice for drainage. When the time arrives for planting to be done root-disturbance is then reduced to a minimum. The compost will consist mainly of good, sound loam with a small quantity of leaf-mould and spent Mushroom manure mixed with it. The pots will be placed in a cold pit and no artificial warmth used to hasten either germination of the seeds or to forward growth afterwards. Even then the plants will be quite forward enough by the time planting can be done. Other methods of raising early Peas are to sow either in boxes or on turves, which, when labour admits of their being cut and prepared, are, perhaps, all things considered, the better means to employ, as not only do the roots thoroughly permeate the turf, which is of the greatest assistance in sustaining the plants until the roots get a grip of the soil when first planted, but the turf itself assists in improving the condition of the staple.—G. P. K.

Good forcing Lettuce.—Those who value tender salad in the early spring will find it a good plan to sow a box of seed in January. I have found such varieties as Commodore Nutt and Tom Thumb the best for the earliest spring supplies, though where there is no lack of room such kinds as Golden Ball and Golden Queen are excellent, but a little longer in hearting than the first named. Seed sown

on rich, light soil, and placed in a warm frame, soon germinates, and from this period the plants should be grown near the glass. I have often sown a little seed in a frame made up with leaves and warm litter some time in advance of sowing, and thus one gets strong plants. The seedlings may be planted out or grown in boxes for the first supply. If planted out in frames a little bottom heat at the start is of much benefit, and good material of the small early Cabbage forms noted above may be had by Easter. Much depends upon the treatment of the seedlings in their early stages of growth. In all cases avoid excess of moisture, as this causes damping. With a deficiency of frames or heating material I have found box culture very serviceable, as the boxes can be moved from house to house.—W. F.

Early Peas and Beans.—Every large seed firm has its own selected varieties of Peas, etc., and one cannot go far wrong in planting those they recommend. Among Peas, we may include, if we want dwarfness, The Sherwood, Ideal, Early Bird, and Gradus, and as soon as the weather is suitable make a sowing at the foot of a south wall as well as in pots to come on in a cool-house to be ready to go out in treuches in March when the weather is settled. Protect for a time with evergreen branches thrust into the ground beside the plants. A sowing of second early Peas may be made shortly, and may include such kinds as Daisy, Senator, and Telephone, sowing thinly. I draw 6-inch drills, and drop the seed about 2 inches apart in sowing the early kinds, and give more room as the season advances. Early Beans should include Beck's Dwarf Green Gem; and as Beans always transplant well, plant the first lot in boxes under glass, harden off, and plant out in March.—E. H.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JANUARY 14TH.—*Winter Sweet* (*Chimonanthus fragrans*), *Garrya elliptica*, *Hamamelis arborca*, *Genista hirsuta*, *Jasminum nudiflorum*, *Coronilla glauca*, *Forsythia spectabilis*, *Edgeworthia chrysantha*, *Daphne Dauphini*, *D. Laureola*, *D. Mezereum*, *Periwinkles*, *Berberis japonica*, *Andromeda floribunda*, *Polygala Chamabuxus purpurea*, *Prostrate Rosemary*, *Parrotia persica*, *Laurustinus* (various), *Strawberry-tree*, *Erica herbacea carnea* (in several varieties), *E. alpina*, *E. mediterranea hybrida*, *E. m. glauca*, *Crocus Imperati*, *Aconites*, *Carpathian Snowflake*, *Winter Heliotrope*, *Christmas and Lenten Roses* (in variety), *Snowdrops* (in variety), *Aubrietias*, *Polyanthus* (various), *Cyclamen Coum*, *Violets*, *Tufted Pansies*, *Triteleia uniflora*, *Anemone coronaria*, *Great Pilewort* (*Ficaria grandiflora*), *Megasca*, *Primroses*, *Algerian Iris* (*I. unguicularis*).

WORK OF THE WEEK.—Lapagerias promise to be quite a success out-of-doors, especially on north and east walls. Having a favourable position clear, some of the rosy form have been planted out, plenty of leaf-soil and sand being worked into the soil. *Rhododendron Nobleanum* and *R. ciliatum* are two very early-flowering kinds. As their blossoms are liable to be damaged a very sheltered position has been found for them out of the reach of cutting winds. The soil is of a sandy nature and slopes to the south-east. A good-sized group of each kind has been put out. *Escallonia montevidensis* has been planted at the foot of a wooden fence. More Michaelmas Daisies have been transferred to the waterside to make room for some groups of *Eulalia japonica viridis*, *E. japonica gracillima*, and *Gynerium argenteum Bertini*. These are contiguous to a large existing group of Pampas Grasses and other Reeds, so that the whole plantation may be seen from various directions. *Exochorda Giraladiana*, *Syringa Sweginzowi*, and *Polygonum*

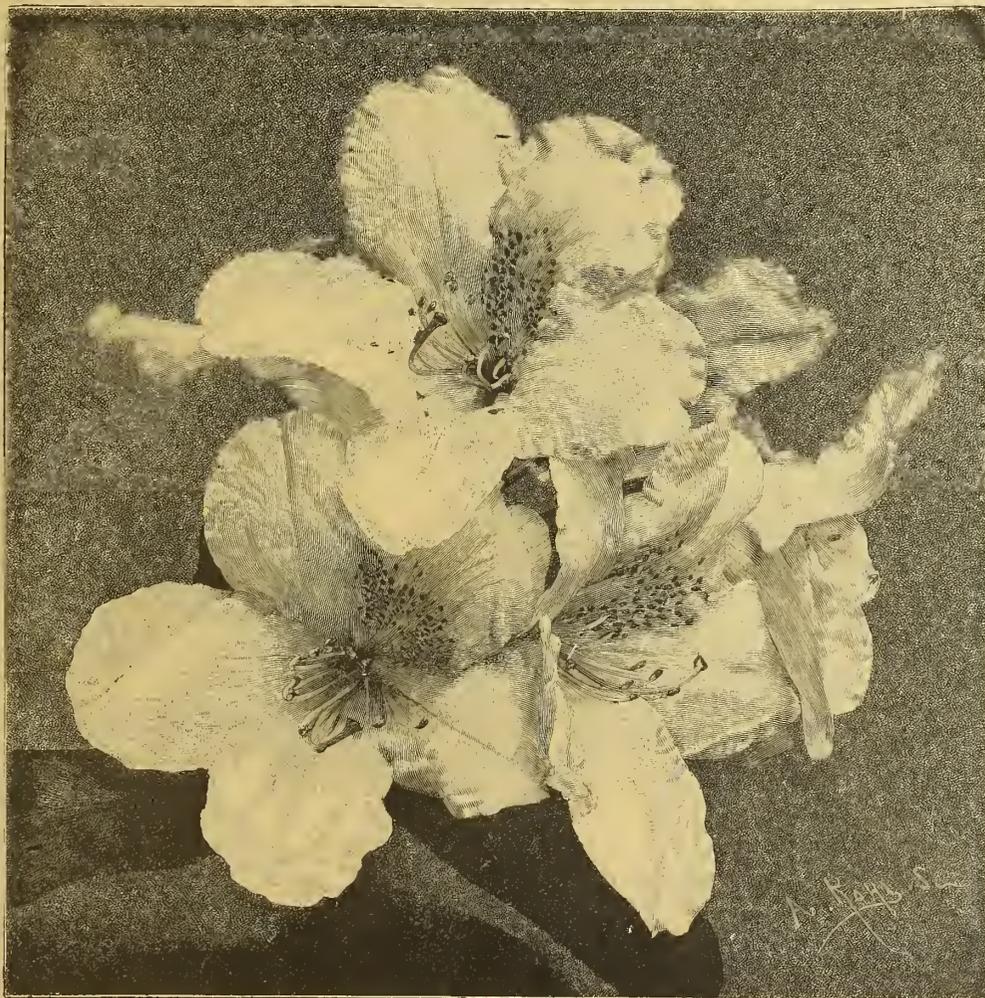
Auberti have been planted out, the last on Holly-trees and fences. Rose Hiawatha has been treated likewise. Hepatica triloba, H. triloba rosea, H. angulosa major, and its rosy-pink variety, have been added to a previously-made plantation of these early-spring flowers. A group of Davidia involucreta has been growing in a rather shaded position, and it was decided to move a few of the plants to another part of the garden where they will be fully exposed to the sun for most of the day. A dense mass of roots had been formed during the little time they have been planted here. A group of Larkspurs, chiefly seedlings, has been planted near a newly-made entrance. Oenothera speciosa grandiflora, Inula glandulosa, some new varieties of Day Lilies, and a White Flax have been added

SOUTHERN COUNTIES.

Late Grapes.—As the vinery is now needed for storing various kinds of plants for a time, and as the Grapes will now keep better off the Vines, the remainder of the crop will be cut and bottled. To do this, not only is fine weather a necessity, but three pairs of hands are required, one to cut the bunches and examine them thoroughly, so that they may be free from decaying berries, another to carry them carefully to the Grape-room, or whatever place is for the time to be used as such, and the third to insert the ends of the laterals into the bottles. The bottles must be so arranged that the bunches hang clear of each other, and so secured that they cannot move out of position. Darkness and

usual cleansing, both of Vines and structure, can then be undertaken at any convenient moment. That the Vines may get as thorough a rest as under the circumstances is possible, the ventilators will be opened to their widest extent whenever the weather is favourable.

Early Peach-house.—Climatic conditions in the south have been such that little or no fire-heat has been required to forward the trees to the stage when the buds swell apace and begin to show the colour of the petals, which means that the temperature must now be advanced another 5 degs. at night and from 5 degs. to 10 degs. by day. If necessary the border should be again watered before the blooms begin to unfold, and the house fumed whether aphid is present or not. Neglect of both the last-



Rhododendron Manglesi.

to the mixed border, while two varieties of the Maiden Pink have found a place on a raised border well exposed to the sun. A group of Aucubas has been lifted and transferred to the boundary of the Heath garden, where they are intended to block out some unsightly out-buildings, at the same time forming a groundwork to over-hanging Pine-trees. A few hybrid Clematises have been planted to ramble among Holly bushes. Pruning is being pushed on, the weather being very mild. Vines, Passion Flowers, and Solanum jasminoides have been dealt with, removing, in the case of the two latter, all thin, unripened wood, and training out that required for furnishing bare spaces. The forking over of shrubberies is being pushed along at every favourable opportunity.

E. M.

Sussex.

dry air being essential for the keeping of the Grapes, light must be excluded and any damp caused by the spilling of water while bottling was going on dispelled by the use of a little artificial heat. After this a steady temperature of 50 degs. suffices, and the admission of air regulated according to outside weather conditions, closing the ventilators or windows when frost, rain, or fog prevails, and opening them to a less or greater extent as may be necessary when it is fine and dry.

Pruning will be done directly the Grapes have been bottled. The wood has ripened splendidly, but as so much fire-heat has been used during the winter the wounds will, as is customary, be dressed with "knotting," which will, at any rate, prevent bleeding either now or when the Vines come to be started later on. The

named details oftentimes means an indifferent set and an attack of fly before the trees can, owing to their still being in bloom, be safely fumed. Up to the time of the expanding of the blossoms damping down and syringing are continued as before, it being more freely indulged in when the morning is bright and the temperature, with the aid of sun-heat, standing at 70 degs. to 75 degs. at closing time. When the flowers begin to expand, generally drier conditions are, for the time being, maintained, but a dry, parched atmosphere is never allowed, as the floors are damped down when air is admitted on fine mornings, and again when closing for the day. As a free circulation of air is necessary for the ripening and dispersion of pollen the maximum amount of ventilation permissible is afforded by the time that it is requisite to carry out the fertilisation of

the flowers, or about mid-day. Bees perform their due share of this process if they can gain ingress to the house, but to make doubly sure of a good set the flowers are lightly touched with a rabbit's tail tied to a stick. The trees are also given a gentle shake each day on the completion of pollination. Care is also taken not to extend the fertilisation beyond the period when individual flowers give signs, by the fading and dropping of the petals, that the process is complete, as doing so is apt to damage the stigmas.

Pot Strawberries.—A shelf in the early Peach-house furnishes an excellent position on which to place pot Strawberries just coming into flower, as the conditions are suited to both until the fruits of the latter are set and swelling off, when they need a warmer temperature in which to develop size and mature. Hand setting of the blossoms being a necessity, this is best performed at the time the Peaches are receiving attention with the same kind of, but separate, implement. Keeping the soil slightly on the dry side tends to promote speedy and perfect setting, but care has to be taken to see this is not carried to excess, otherwise the balls contract and leave the sides of the pots, which no after attention will remedy, to say nothing of the labour that will be consumed in watering afterwards as a result. The taking in of the first batch of plants as indicated allows of another relay being brought in from their winter quarters to be started after undergoing a course of preparation in the way of picking off dead leaves, examining the drainage, scrubbing the pots, removing a little of the surface soil, and making good with a top-dressing containing a stimulant. Clay's Fertiliser was used for this purpose last season with such excellent results that it will again be employed. Extra vigour of the flower-spikes follows the use of this stimulant.

Spring Cabbages.—Harbinger has made such progress that, unless severe weather should intervene, heads for cutting will be available by the middle of—if not earlier—next month. Other varieties, such as *Ellam*, *Matchless*, *Flower of Spring*, and *Ellam's* are, if not so advanced, in an equally satisfactory condition, and the hoe will be run through them and a little soil drawn up to the plants on either side to steady and protect them. A little later sulphate of ammonia will be strewed between the rows at the rate of 1 oz. per square yard, and lightly hoed in. A large and later breadth planted to form a succession to the foregoing will now have the soil stirred between them, as the surface in this case has become beaten down by the recent heavy rains. Young plants raised last September and intended for getting out next month to supply a still further succession have wintered well, and have just been hoed through and relieved of weeds.

Border Chrysanthemums.—Owing to shortage of skilled labour the old stools have been lifted and pulled to pieces in lieu of propagating from cuttings, as has usually been done. The best portions of each stool have been potted and placed indoors to give them a start. As soon as they commence making new roots and pushing up growth all will be moved to a cold pit. It is hoped that the plants will be ready for planting out early in March and so save further labour in watering, etc.

Chrysanthemums for pots.—The propagation of Japanese and single varieties for pots will now be commenced. An improvised case is fitted up for this purpose on the front stage of a vinery. This consists of 9-inch boards, 1 inch thick, placed

on edge to form the back and front, the ends being of boards of the same dimensions. The width of the case is 2 feet, and large sheets of glass, which reach from one side to the other, render it sufficiently air-tight. The stage being covered with ashes a cool and moist base is thus provided on which to stand the cutting pots, 3½-inches in diameter. The glass is removed each morning and wiped dry with a cloth. A. W.

MIDLAND COUNTIES.

Vineries.—The pruning of all Vines should now be completed. Thoroughly cleanse the rods with a mild insecticide, such as Gishurst compound. I do not advise the scraping of the rods. The loose bark may be carefully removed with the hand, and the insecticide worked well into the crevices of the bark by means of a soft scrubbing brush. If the Vines have been badly attacked by mildew or red-spider close the ventilators and vaporise two or three times with a nicotine and sulphur compound. Having cleansed the Vines and the house, give the walls a coating of lime-wash, remove any loose or exhausted soil from the surface of the borders, and apply a good top-dressing of rich loam mixed with some fertiliser and a little lime-rubble. Tread the new soil firmly and cover it with a mulch of manure from a spent Mushroom-bed.

Hardy fruit.—Owing to the mild weather the buds on many fruit-trees are becoming very prominent. Pruning and training having been completed (with the exception of Peach-trees) spraying must be seen to. Carefully rake up all prunings, remove the surface soil from badly-affected trees, and convey them to the fire-heap. American blight—the worst pest that attacks Apple-trees—is one of the most difficult to eradicate. Badly-attacked trees should have the infested parts carefully dressed with undiluted paraffin, very carefully working it in with a small painter's brush. This requires great care and must be done whilst the trees are quite dormant. The stems and main branches should be thoroughly scrubbed with a strong solution of Gishurst compound. After this is done all trees should be thoroughly sprayed with caustic soda-wash, or one of the effective proprietary washes that can be bought ready mixed. I have found V. 1 Fluid for winter spraying, and V. 2 Fluid for summer spraying, safe and effectual against all pests. The best way of applying these and other sprays is by means of a knapsack sprayer, but where only a small number of trees has to be sprayed an ordinary syringe, with a spraying-nozzle attached, will answer.

Heliotropes as standards.—Plants of Heliotrope intended for training as standards may be raised from cuttings inserted singly in thumb pots and rooted in a frame in the propagating-house. The frame should be opened slightly to admit air, otherwise the cuttings are liable to damp off as they are susceptible to injury from excessive atmospheric moisture. After the cuttings are rooted they should be taken out of the frame, but may still be stood in the propagating-house. When they have filled the small pots with roots they should be potted into 4½-inch pots, using a compost of good loam and leaf-mould with a little sand. Allow the main stems to develop until they have reached a suitable height. Repot into 7-inch pots as soon as ready, and transfer to a house having an intermediate temperature. Pinch out any flowers that develop to throw the energies of the plant into making growth. The compost for the final potting should consist of loam, leaf-

mould, and well-decayed cow-manure, adding a little sharp sand and bone-meal. An important point in the cultivation of Heliotropes in winter is to prevent the plants receiving a chill.

Christmas Rose (*Helleborus niger*).—A batch of Christmas Roses that are in an unsatisfactory condition will now be divided and transplanted. A rich bed, about 2 feet 6 inches deep, has been prepared for the plants. With the lower foot of soil a heavy dressing of cow-manure was incorporated, as the Hellebores are partial to a cool and sustaining sub-soil. Some well-rotted manure is also added to the upper stratum. Large clumps should never be transplanted in their entirety, as such a course often results in the death of the plants, however carefully the removal is effected. When the clump is lifted it should be placed in tepid water, and when the soil around the root is well moistened this may be washed off with a single-jet syringe. When the roots are entirely free from soil the clump may be divided, separating the roots by hand and cutting the crowns apart with a sharp knife. A portion with three crowns is quite large enough for a single plant. These divisions should then be planted 18 inches apart, using around the plants a few handfuls of fibrous loam and leaf-mould, no manure being allowed to come into direct contact with the roots. A sheltered position is best adapted for this plant, one partially shaded by trees at some little distance being admirably suited to its requirements. A mulch of well-decayed manure and leaf-mould in early spring, and plentiful supplies of water during hot weather, will promote the vigour of the plants.

Perennial Lobelias.—The stock plants which have been wintered in frames are now making growth, and if any increase is required the young growths may be taken with a few roots and potted into 5-inch pots. If placed in a temperature of 55 degs. they will soon become established, and may then be removed to a cold frame, the protection of a mat being sufficient to keep out frost. Watering must be carefully done and ventilation given freely in fine weather. This is all the attention they will require previous to planting them out.

Cabbage.—The autumn plantations are looking remarkably well, but having grown so freely in consequence of the mild weather they would suffer severely in case of sharp frost. A dressing of soot has just been applied and the ground stirred between the rows with a digging fork to the depth of 3 inches. Where there appears a likelihood of there being a scarcity of spring Cabbage a small quantity of seed of an early-maturing variety had better be sown now, raising them in gentle heat. Such plants may be expected to produce heads fit for use early in the spring.

Spinach sown last autumn has done well here this season, and there is little likelihood of a scarcity before the spring or February-sown crops are available. The first opportunity will be taken to sow a few rows on a warm border.

Onions raised from seed sown in boxes at the beginning of the year are making good progress, and will shortly need pricking out into boxes filled with three parts fibrous loam, one part leaf-soil, and one part spent Mushroom manure, adding a dusting of bone-meal, soot, and sufficient sand to keep the soil porous. The soil should be in a moderately dry condition, and be made firm in the boxes. Prick out the plants at a distance of 3 inches apart. Stand the boxes in a light position in an atmospheric temperature of from 50 degs. to 55 degs. If not

already done, the land should now be prepared for planting the seedlings. Select an open situation and ground that has been deeply cultivated and in a good condition generally. Trench the land as soon as possible and allow it to remain in a rough condition until March, when a good dressing of soot should be forked into it. About the middle of April, or later if the weather is unfavourable, the plants may be put out.

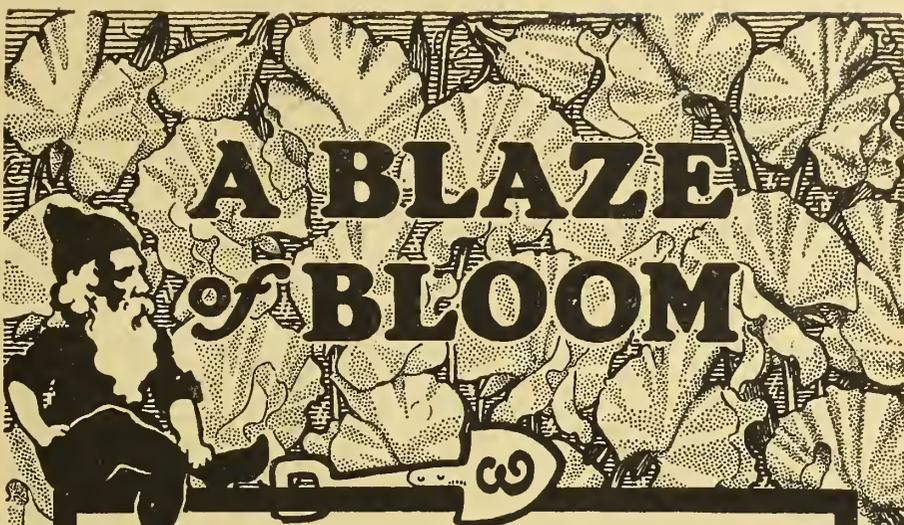
F. W. GALLOP.

SCOTLAND.

Hardy flower borders.—In the course of the week some progress was made with the annual turning up of the hardy plant borders. Bulbs are visible now, so that the work can be undertaken without injuring these. As the work goes on any lifting and replanting which have hitherto been delayed are being attended to. Plants which become too obtrusive are reduced or forked out as the case may warrant. Such subjects as the Achillea family are reduced by forking out all superfluous roots, these running almost as freely as Bishopweed. The useful *A. ptarmica* fl. pl. (The Pearl) is a confirmed offender in this respect, for not only does it find its way through and among Box edgings, but it invades the stools of other plants as well. *A. serrata* and *A. millefolia rosea* need similar attention, but they do not encroach at such a rate as the other variety mentioned. The usual plague of seedling Asters is being dealt with. Year by year large quantities of these appear, and as in almost every case they are poor they are destroyed. Mont-bretias, too, are being lifted and replanted thinly. In the front portion of the borders, where there are many of the smaller and better herbaceous plants, the fork is used; but among the most robust and taller sorts in the back rows the spade is employed. Phloxes can be divided at this time, and for these plants—as well as for strong growers generally—a good allowance of well-decayed manure must be provided. Such things as the Gypsophilas, after forking over is completed, will be covered with mounds of ashes, for slugs are very fond of the tender young shoots and soon work considerable havoc if they are not kept in check. As the work goes on care is taken that the labels are not displaced.

Late Cinerarias.—The late batch of these—all of the stellata type—is yet being kept quite cool. This batch was pricked out from the seed-pans into 8-inch pots. These were then plunged to the rims in cold frames and treated exactly as if they were planted out. The success of the experiment is undeniable, as the plants are healthy and well furnished, and will give a good account of themselves. Naturally, much care was needed in watering in their early stages, but much time was saved in potting and repotting. When the pots were lifted and cleaned it might have been anticipated that a little flagging would take place, but such was not the case.

Stove.—Throughout the present winter the display in the stove has been well maintained. Flowering plants continue to be remarkably free. Of these, the more popular include Begonia fuchsioides and B. Gloire de Lorraine and its varieties. Of the latter a considerable number of strong leaves has been put in, these leaf-cuttings rooting in a satisfactory way. Pentas carnea has been outstanding on account not only of the duration of its Bouvardia-like blooms, but for the long period over which they have been produced. Bryophyllums have given great satisfaction, B. calycinum yet being in good form. These plants incline to be of



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spindly habit, and frequent pinching is necessary in the younger stages in order to induce symmetrical plants. The flowers of Bryophyllums are of no use for cutting. Bougainvillea Sanderiana is again blooming freely. Orchids, chiefly Cypripediums of good sorts, are very few, and the blooms last well. Stray pieces of Pancratiums from time to time throw up a spike, and Coleus thyrsoides lends variety in point of colour. Thunbergias and the usual run of brightly-coloured, fine-foliaged plants aid in making an attractive display. Syringing has not yet been recommenced, the necessary moisture in the atmosphere being supplied by occasional damping along the pathways. No striving after a regular and fixed heat is attempted. The conditions of the thermometer out-of-doors regulate the heat of the stove—65 degs. at night in mild weather, correspondingly less when the nights are frosty.

Greenhouses.—Plant-houses are more popular during the winter months than is the case at other times. Chrysanthemums have had a prolonged season, and there are still a few plants of the latest varieties—single and double—available. Late Chrysanthemums are invaluable in January, but they are at times capricious, and if the weather is abnormally damp they sometimes fail to expand satisfactorily. Still, they are worthy of inclusion from year to year. Salvias continue to be bright. *S. splendens*, *S. s. grandiflora*, *S. rutilans*, and *S. lactiflora* have been, as usual, a "stand-by," but *S. Bethelli*, owing to its disappointing habit of refusing to develop its flowers, will be discarded. The less regret is felt on this account, as the variety is of a stiff and ungainly habit, although, of course, none of the Salvias is exactly graceful, excepting, perhaps, *S. rutilans*. Bulbs are useful alike for cutting and for decoration, and a fresh batch of the usual subjects was introduced in the course of the week. Smaller stuff includes Cinerarias of sorts, the various Primulas, some Lorraine Begonias, Coleus thyrsoides, Heliotrope, and Zonal Pelargoniums. Year by year I am confirmed in my belief that to see Primula malacoides at its best it ought to be grown in 10-inch pans, five plants to the pan. Handsome as this variety is in 4-inch and 5-inch pots, it is much more imposing and showy when grown in pans. Arum Lilies will shortly be useful, and a roof plant of Acacia dealbata will presently be handy for cutting from. Watering must not be excessive, avoid damp by free ventilation, and keep down fire-heat as much as possible during mild weather.

Plants for spring flowering under glass.

—Those who may, under present circumstances, be keeping houses quite cool will find several of the border plants useful for indoor cultivation. *Hoteia japonica*, *Dielytra spectabilis*, and Solomon's Seal make fine pot plants. So, too, do Montbretias, and, of course, the early-flowering Gladioli—The Bride, Ackermannii, etc. The Montbretias must not be unduly hurried, succeeding better, it will be found, when given quite cool treatment. The Plantain Lilies—Funkias—are also very useful for this purpose. These, however, do not object to a considerable degree of heat. In all these cases copious supplies of moisture are necessary during the period of growth.

Orchard-house.—If any work yet remains in the way of training Peaches which are planted out, there ought not to be much further delay, for buds are visibly plumping now, and are easily rubbed off. Trees in pots must be looked over at

regular intervals in order that the needful amount of water may be given. Meantime, to keep the buds back, let there be free ventilation, except when the weather is exceptionally frosty.

Wall fruit.—A beginning was made during the week with the tying and training of Peaches and Nectarines out-of-doors. These are untied or un-nailed each season, the trees cleaned, and the wall washed with hot lime. Thin training is done, superfluous shoots being cut cleanly out. Part of the wall is wired, and on other parts nailing to the wall is resorted to. Opinions differ as to the relative value of the two methods; but, for my part, I prefer the older fashion of nailing. It seems to me that the closer the shoots are trained to the wall the cosier they are, and there is an absence of the draught which is present when the branches are trained to wires 4 inches or 6 inches away from the wall.

Vegetable garden.—Owing to the sodden state of the soil it continues to be impossible to push on the work. During the week preparations were made for the sowing of early vegetable seeds under glass, by sifting soil, leaf-mould, etc., and getting them under cover in order that they may dry a little. Sowing will claim attention early in the coming week.

W. MCGUFFOG.

Balmie Gardens, Kirkcudbright.

OBITUARY.

M. VIVIAND MOREL.

In a letter, Miss Willmott says:—"I am sorry to tell you that our dear friend Vivian Morel is dead. I have not seen him since the war broke out, but until then I never missed an opportunity of meeting him, and many were the botanical expeditions we took together. I had a great regard and appreciation for him. I always considered him one of the most original and remarkable men I ever knew. His knowledge, memory, and accuracy were of a high order. He was the best practical gardener, the best field botanist, and one of the kindest and most amiable of men. Had the wheel of fortune taken him out of his groove at Lyons his ability and literary gifts would have made him known and justly appreciated throughout the world. We were firm friends for many years, and I learned from him what has been of the greatest use to me. He was held in high esteem amongst his colleagues and greatly beloved in Lyons."

Trials at Wisley.—The director begs to call attention to the following trials to be held at Wisley in 1916:—Delphiniums (perennial): Three plants of each variety, to be sent by February 29; entry forms may be obtained on application. Mossy Saxifrages: Considerable confusion exists with regard to the naming of the Mossy Saxifrages in gardens. A collection of all the forms in cultivation is being got together to grow on in order to compare them and straighten out the nomenclature, and the director will be grateful if all who grow them will send him two plants of each variety for this purpose. They should reach Wisley by February 29; entry forms are not necessary. Sedums: The director would also be glad to receive Sedums to add to the Wisley collection for the same purpose; no entry forms are required, but plants should be sent by the end of February. Letters should be addressed to The Director, R.H.S. Gardens, Wisley, Ripley, Surrey; and goods sent via Horsley Station, L. and S. W. Railway.

CORRESPONDENCE.

Questions.—Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.

Naming plants.—All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.

Naming fruit.—Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.

PLANTS AND FLOWERS.

Growing Ten-week Stocks (C. R.).—Ten-week Stocks sometimes go off with a disease known locally as blackleg, which is chiefly caused by sowing early in heat, and permitting the plants to remain too long in the seed-pans. With more rational treatment, not so much forcing, sowing thinly, and pricking off as soon as they can be handled, and hardened in cold frames, there will not be much risk of failure.

Oleander with dirty leaves (F. F.).—The blackness on the Oleander leaves is caused by brown-scale. The leaves and the stem of the plant should be well and frequently sponged with soapy water to which a little Tobaccoliquor has been added. As the scale adheres closely, it may be loosened with a pointed stick. Syringe with clean soft water after sponging. If this treatment is followed up the plant should soon be clean. See that it does not get over-dry at the roots.

Cinerarias in bad condition (Anxious).—The behaviour of your Cinerarias would suggest that they have been kept too warm and close, for, though excessive stimulants act in the same way, a dose of weak manure-water once a week should not hurt them. A good light position in the greenhouse, a free circulation of air, and a maximum temperature of 55 degs. or thereabouts are very suitable to Cinerarias. We presume your plants are free of aphides or green-fly, as these pests often attack the flower stems and weaken them. The XL All Vaporiser will keep these in check.

Pelargoniums diseased (Bewildered).—The cause of your Pelargoniums being diseased as in the tiny specimen sent is undoubtedly their being kept far too warm and with an insufficient circulation of air. You say that the structure in which they are growing is kept at from 50 degs. to 60 degs. during the night, which with a corresponding rise during the day is warm enough for many stove plants. A temperature of 45 degs. by night is quite sufficient for Pelargoniums, and they should be given plenty of air whenever possible. Meanwhile, the plants may be sprayed with a rose-pink coloured solution of permanganate of potash to check the fungus which is present on the leaves.

Raising Seedlings (Anon.).—You do not state what plants the seedlings referred to consisted of, the kind of soil employed, or the temperature. It is full early yet to begin raising seedlings of many things. Zinnias, for instance, are certain to fail if started too soon. The chief points to be observed at this early season are extra free drainage and a small depth of soil only, this being of a light and thoroughly sweet and porous nature; to keep the seedlings well up near the glass after germination takes place, and to water only as required, taking care that the bottom does not get dry while the surface is moist. Perhaps there is too much steam in the frame. Do not let the temperature exceed 50 degs. to 70 degs., and prick off the seedlings as soon as possible.

Clivia miniata (J. Lowc.).—This showy plant flowers naturally in the summer, earlier or later according to the temperature and treatment afforded, or it may be forced into bloom in the spring, by placing the plants in a brisk

heat early in the year. It is a strong-rooting subject, requiring plenty of root room, and if at all pot-bound shifting into a larger pot in the spring, just as the new growth is commencing. Large old plants may be divided in the spring, but when this is done they frequently do not bloom till the following season. Liquid-manure may be given with benefit to well-rooted plants as soon as growth commences. It may be safely wintered in a cool greenhouse if kept moderately dry.

Treatment of Caladiums (C.).—It is desirable to start these at two different times, by which means a portion may be had in the autumn, with handsome foliage, at the time when the earliest started plants have lost their colour. In potting it is well to consider whether large or small examples will be the more useful, for in no case is it advisable to over-crowd the pots, as, where this occurs, the leaves will not acquire their wanted size. They will succeed in a staple of either loam or peat, but the foliage possesses more substance when grown in loam than in peat.

Treatment of Ardisias (F.).—These are most useful when comparatively small and furnished with leaves to the base. Any that are getting too large, and that have lost their lower foliage, should now soon be headed down and put into a brisk heat, where they will at once make several shoots. When these have attained a few inches in length, all but one can be taken off with a heel and struck. They will make good small plants much quicker than seedlings. The stools may then be partially shaken out, repotted, and grown on with a single stem, a way in which they look much best.

Grevillea robusta losing its leaves (M. B.).—The plant of which you send leaves is not a Fern, but the above. In some districts it is called a Fern owing to the resemblance of its leaves to Fern fronds. It is not at all unusual for the leaves of this plant to fall off, as yours have done, more especially when the plant is getting old. It requires ordinary greenhouse treatment, and in winter the temperature should never fall below 45 degs. Thorough drainage and careful watering are very important, more especially in the younger stages. In the London parks it is used as a dot plant with such plants as Tufted Pansies for a groundwork.

Rock gardening (Alpine).—We very much fear from your description that it would be well nigh impossible to advise you as to what is best to do without seeing the place. The illustration which appeared in our columns nearly four years ago, and to which you refer, is but a fragment of a very large whole with

rock associations on all sides, entirely distinct from those you describe, and with rocks often enough of several tons each, hence we feel that the two could not be compared. With the rocks in position and having particulars of the stone employed, aspect, and other essentials, a selection of plants might easily be given. It is another matter altogether to advise what to plant on non-existing rockwork. We are pleased to know you have achieved so much success from following our advice as to the dry wall.

Oleanders (O.).—To induce these plants to flower freely they should be encouraged to make a vigorous growth during the spring and early summer, by giving them one or two liberal shifts, using rich, loamy soil, and when well rooted giving plenty of water and weak liquid-manure. At the same time they should have a light position, with little or no shade, and free ventilation. Towards the autumn ripen the growth by full exposure to sun and air. During the winter keep cool and airy, and moderately but not too dry, as the foliage is evergreen.

Flowers at Christmas in the greenhouse (Enthusiast).—In a well managed greenhouse there ought to be in bloom at Christmas Chinese Primroses, single and double flowered, also Primula obconica, Persian Cyclamens, Cinerarias, Zonal Pelargoniums, Heaths (Erica) of several kinds, Epacris, Bouvardias, Abutilons, Heliotrope, late Chrysanthemums, and Salvias; also Roman and Italian Hyacinths, early Narcissi (Paper-white, N. Stella, etc.), and perhaps some pots or pans of Scillas, Snowdrops, Crocus, etc.; also Violets, Christmas Roses, Camellias, Correas, and perhaps a few Tea Roses, Cytisus, and others. With the aid of a stove or forcing-house there ought also to be Hyacinths in plenty, with Tulips, Narcissi, Azaleas, forced shrubs, Roses, Lily of the Valley, Epiphyllums, Linum (Reinwardtia) trigynum, Plumbago rosea, Arum Lilies, Poinsettias, Eucharis, Carnations, etc.

MISCELLANEOUS.

A poor lawn (Edwin Campbell).—No; the only way is to see to it that the soil is deeply dug and well manured before laying the turf or sowing the Grass seed. In dry weather the lawn must be frequently well soaked with water. Evidently your lawn is in poor condition, this accounting for the poor sward of Grass that prevails. Giving the roots good, deep soil is far more likely to keep the ground in the condition in which you want it than watering. No practicable watering will make up for a deficiency in this respect.

SHORT REPLIES.

Brentwood.—1, If the cuttings are strong and healthy you may use these with every hope of success. 2, Yes, you can prune the Roses as we advised. 3, Cut the Pelargoniums down, and dress the shoots with Gishurst Compound. 4, Clear away the soil till you find the roots of the Vines and add fresh loam with an addition of some bone-meal. You should procure a copy of "Vines and Vine Culture," which can be had from Mrs. Barron, 13, Sutton Court-road, Chiswick, London, W.; price 5s. 6d. post free.—**Constant Reader.**—The only thing you can do is to purchase retarded crowns from those who specialise in this work, and who have gone to heavy expense to do so.—**South Stafford.**—The best plant for such a position would be the Aucuba. Get the male and female forms, and then if all goes well you will have the added beauty of the fruit.—**W. H. G.**—There is no need to grow the Laburnum on the wall. If you can do so, we should remove it and plant it in the open.—**South Stafford.**—Your best plan will be to at once consult a hot-water engineer.—**Skisdon.**—In addition to the answer given you in our issue of the 25th, page 50, you should write to Miss M. Hope, the Secretary of the Woman's Herb-growing Association, 46, Queen Anne's Chambers, Westminster, London, S.W.—**Amateur.**—Seeing that you are manuring the ground, vegetables of all kinds should do well in such a soil. In the case of Peas, Runner Beans, etc., it would be necessary to mulch them well and water freely should the season be dry. All root crops, as Potatoes, Carrots, Turnips, Beet, and such like, should succeed. The great thing is to keep the hoe going in the summer, this, besides keeping down weeds, also aerating the soil, which, being loose, acts as a mulch.—**M. B.**—The only thing you can do is to cover the tree with fish-netting, which is very easily done.

NAMES OF PLANTS AND FRUITS.

Name of fruit.—**Chas. Louch.**—Beauty of Hants.

CATALOGUES RECEIVED.

LITTLE AND BALLANTYNE, Carlisle.—*List of Garden Seeds, etc., 1916.*
 JOHN K. KING AND SONS, Coggeshall, Essex.—*Manual of Gardening, 1916.*
 DANIELS BROS., LTD., Norwich.—*Illustrated Guide for Amateur Gardeners.*
 W. DRUMMOND AND SONS, LTD., 57 and 58, Dawson-street, Dublin.—*List of Garden Seeds.*

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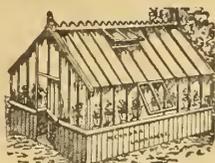
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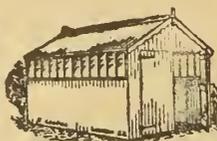
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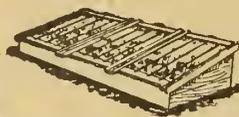
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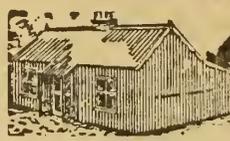
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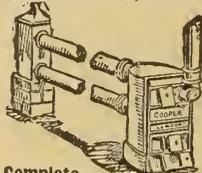
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No. 1926.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

FEBRUARY 5, 1916.

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NOTES OF THE WEEK.

Snowdrops in Lancashire.—Readers may be interested to know that I have had Snowdrops in flower about a fortnight.—M. CLARKE, *Grange-over-Sands*.

Early growth.—An extraordinary instance of early growth this season is *Andromeda japonica*. Many of the red flower-trusses have turned white, and a few flowers were open yesterday (January 18th). This is quite three weeks earlier than usual. Still more extraordinary are a few flowers on the Connemara Heath, both pink and white.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

Berberis fascicularis.—Far the best flowering shrubs here now are the hedges of *Berberis fascicularis* put in four or five years ago to screen some nurseries in the woods. I suppose one gets over-stiff in one's opinions, but no *Berberis* will do for us here what this plant does, and yet you very rarely see it. I got my *B. fascicularis* from Fisher, Son, and Sibray, Sheffield, who are nearly alone in having a stock of it.—J. C. WILLIAMS, *Caerhays, Cornwall*.

A note from Bettws-y-Coed.—There were severe frosts here during November for a fortnight, the ice on ponds being at least 3 inches thick. I am, therefore, surprised to see that *Parochetus* planted at the edge of a pond and trailing into the water is uninjured. It is now covered with fresh foliage. Several goldfish which have been in this pond for a good many years were killed by the ice. There is fresh foliage on *Berberis Thunbergi* and on *Tropæolum speciosum*.—E. CHARLES BUXTON.

The white-flowered Mezereon.—This has been in flower here from about January 4th. This is early for it here, but it always blooms considerably in advance of the purple or crimson varieties. When it comes early, as this year, it is liable to have all the opened flowers destroyed by frost. Fortunately, a later display generally follows. This white variety produces wax-like, yellowish berries, from which seedlings can be easily raised if sown in the open or in pots.—S. ARNOTT, *Dumfries*.

Erica carnea præcox rubra.—One of the earliest of the new varieties of *Erica carnea* and also one of the brightest is *E. carnea præcox rubra*. It is one of the set of twelve varieties sent out by Messrs. Backhouse in 1912. It is of comparatively erect growth, and bears dainty spikes of bloom of a good rose-carmine with madder

brown tips to each. It is a gem for the Heath or rock garden, and is at present (January 13th) in almost full beauty.—S. ARNOTT.

Roses in south-west Scotland.—Having been informed that climbing Roses had suffered from the early frost this winter in the south-west of Scotland I have been making inquiries, with the result that there appear to be few places where such has happened. In my own garden some unripened growths have been killed, but the damage done is no worse than usual. Some inquiries regarding some of the other Roses have brought me the information that Comtesse du Cayla has suffered very severely in one nursery in which Roses are a speciality.—ST. CUTHBERT'S.

The Gladwin (*Iris fœtidissima*).—In mentioning various berries and late-flowering plants no one seems to have noted the Gladwin (*Iris fœtidissima*), the bright orange-scarlet fruits of which rival many of our flowers. Here in Dorset, where it grows wild in abundance, I do not know what I should do without it. I grow it in the shrubbery. I notice one reader complaining of *Petasites fragrans* flagging in water. The flowers will not flag if the vase is taken to the plant and the blossoms put into the water immediately they are cut. *Heliotropes*, *Helianthus*, *Lilacs*, and other things likely to flag I treat in the same way.—M. B.

Colchicum montanum.—This winter-flowering Meadow Saffron is in bloom at present and will remain in flower for a considerable time. It is a most useful rock garden or border species, and deserves consideration for the sake of its purplish cups of bloom. They are not so starchy in form as those of some *Colchicums*, and look well when showing through a carpet of a mossy Rockfoil. *C. montanum* is rather variable, and several forms are recognised by Baker. The one here is, I believe, what is recognised as the type, said to bloom from October to June. I grow it on rockwork and facing south-west, but where it receives little winter sunshine.—S. ARNOTT.

Wagner's Snowflake in Scotland.—*Leucojum vernum* var. *Vagneri* is now in full bloom in several parts of the garden. In most years a much larger proportion of Snowdrops is in bloom before the Snowflake appears than this season. This Snowflake is one of the most precious of flowers, and for some time I have been gradually adding to the number of bulbs

here as opportunity offered, apart from the normal increase by offsets. It is bolder, earlier, and more effective than the ordinary *L. vernum*, while its earliness is a strong point in its favour. Its habit of producing at least two flowers, with very deep green spots, on a stem is pretty constant, but in some places it will give up to four blooms. Here, sheltered by a piece of wall-garden from the west winds, and a wall from those from the east and north, it has come very early. Some blooms on plants perched on the summit of a part of the rock garden look charming above the level of the eye.—S. ARNOTT.

The Poppy Anemone in winter.—Visiting the district in which I lived for a number of years I found the Poppy Anemone (*Anemone coronaria*) in bloom on January 6th. The garden is within a stone's throw of one of the upper reaches of the Solway. Yet the fact of *A. coronaria* being in bloom was worth noting for the encouragement of those who live in mild localities and have not tried this Windflower there. Even in colder districts Poppy Anemones can often be had in bloom all winter by covering them with a frame if they are grown in a sunny place, but seaside gardens may be able to dispense with this. Carsethorn, where the garden in question is, is not one of the mildest of the Solway seaside localities. The plants were established and the soil is fairly light and well drained.—S. ARNOTT.

The Algerian Iris (*Iris unguicularis*) in the Midlands.—The first flowers of this Iris were picked the first week in December, since when it has thrown up flowers daily. The number of flowers produced by plants of this Iris during the winter is well-nigh incredible. The best results are obtained when it can be grown in a single line at the foot of a sunny south wall, when it blooms very freely. It is so particular about the amount of sun and air it gets that if planted in a square mass the outside plants only bloom. Although not a difficult plant to establish, it does not usually flower freely for some years after it has been moved. The most suitable soil is a light, sandy loam with a good quantity of mortar-rubble added. Plenty of drainage should be provided in the way of broken bricks. A sharp look-out has to be kept for slugs and earwigs, or they will spoil the blooms as fast as they appear. I find lime-water and hunting for the slugs and small snails the best remedy. In gathering the blooms of this Iris it is best to cut them in the bud state, for then there

is less risk of damaging the flowers, which are very tender. The type with its broad, upright leaves is the first to flower, and is followed closely by the white variety, whilst var. *speciosa*, with narrow leaves and larger, deeper-coloured flowers, does not usually bloom till a month or six weeks later.—F. W. GALLOP, *Lilford Hall, Oundle*.

Christmas Roses.—There are Christmas Roses and Christmas Roses. Four years ago I put in several clumps, all apparently of the same species. Some died out, others flourished and grew. The soil is unkind, hungry, harsh, wet and clammy in winter, and bone dry in summer. The bed which faces N.E. is shaded by a large Elm-tree and overhung by Walnut-trees. It was an ugly little corner, where nothing thrived. I filled it with *Magnolia stellata*, *Philadelphus microphyllus*, and Laurel, with an under-planting of Ferns, Solomon's Seal, white *Scilla*, and Christmas Roses. The Christmas Roses are now strong, healthy clumps. No manure and very little attention are given. In a garden four miles away nothing will induce them to grow.—TOCKENHAM, *Wilts*.

Vitis Coignetia and V. Thunbergi.—Mr. Markham (p. 30) says *V. Thunbergi* is "similar to *V. Coignetia*, for which it is often mistaken." Those who know the two varieties will not agree with this, which is misleading and does not do justice to *V. Thunbergi*, which is the best of all the *Vitis* family. Mr. James H. Veitch, in his book on "Hardy Ornamental Vines," refers to the two varieties thus: "*V. Thunbergi*, a native of both China and Japan, resembles *V. Coignetia* somewhat in general appearance, but differs from that species in its slightly less vigorous growth, its larger leaves, and its richer, more brilliant autumn tints. The leaves are very beautiful, a foot or more in diameter. In the autumn the hues assumed by the leaves of this species are even more brilliant than those of *V. Coignetia*." I find that *V. Thunbergi* is much more brilliantly coloured than *V. Coignetia*, which seldom colours. In many other gardens, too, it is the same. I think *V. Thunbergi* infinitely superior as regards the colour of its leaves in the autumn.—E. MOLYNEUX.

Bagging Pears.—Having had some three years' experience of paper bags (*Papier cristallé*) I was interested in the correspondence on the subject. The bags I used stood a great deal of wetting, much more than any cotton material would do, as they are oiled and slightly stiff. Out of some 200 or more only about three suffered during a severe hailstorm once. Of course, they are not fitted for tying, but I used to snip them about 1 inch down the centre of folded bag at the opening before placing the fruit in, then doubled down each side hem fashion and pinned each side close. I bought the fine long pillow-case pins from a Bedford shop at 1d. a packet. These did not rust and can be used again, and by flattening the hem and the long pin, I found no earwigs got in. I could hear of no papers of this kind from any of the large seed dealers in England, but they enabled the Pears to grow a better shape and colour, and, according to Vilmorin, the material used gives extra heat instead of interfering with it, and probably prevents sudden chills at night, and in most cases was an advantage in rainy weather. Most muslin net bags are useless then and stick so tightly to the fruit that flies, wasps, and butterflies can feed through them. The bags are quite cheap in three sizes, and are sold by ½ gross or gross for a franc or two.—A. H. C.

PLANTS AND FLOWERS.

ROSES.

THE ROSE GARDEN IN FEBRUARY.

It is wise to take advantage of any favourable weather and make good any arrears in Rose-planting, while those who intend to do a little budding will find no better time than the present to put out their stocks. Seedling Briars are planted in rows 2½ feet to 3 feet apart, 8 inches being allowed from plant to plant. The roots of the seedlings are cut back to 4 inches or 5 inches from the collar, and the tops to 2 inches or 3 inches. Make the holes for the seedlings with a good-sized dibber, and take care that the roots go straight down and are not bent or curled. After completing a row, with a hoe draw up a quantity of fine soil on either side of the plants after the manner of moulding up Potatoes. It is getting late now to plant standard Briars for budding, but if care is taken to supply the knobs with a quantity of light, gritty soil good results might follow.

It is now time to cut down all stocks budded last summer. The whole of the top of the stock is removed, the cut being made just above the Rose-eye. A good sharp knife makes a cleaner cut than can be made with the secateurs. It is usual to start with the Manetti, following on with the Briar cuttings and Grifferaie, the seedling Briars being left until last. The budded arms of standards are also trimmed back now to within a few inches of the eye. The portion of the main stem projecting above the top budded lateral is also removed to within ½ inch of the latter. These cuts should be sealed with grafting-wax or some such material, first to prevent the sap running to waste, secondly to combat the ravages of the boring-grubs, which often attack freshly-cut standards, eating their way down the pithy centre of the stem and arms. It will now be necessary to provide supports to which the young, delicate Rose growths may be tied. This is done in the case of standards by tying a split cane or light stick of any sort to the top of the stem, allowing it to project 18 inches to 2 feet above the stem. This top-stick must be very firmly secured to provide a good support for the young bud against the roughest wind. In the case of dwarfs a 2-foot stick is firmly placed in the ground about 1½ inches in front of the eye.

The Rose-beds may now be lightly forked over before the ground becomes hard. Those who wish may first give a light dressing of short manure, which should be worked under the surface during the forking up. Late in the month a start may be made with the

PRUNING, the hardier climbers and Ramblers being dealt with first. Many of the older limbs may be entirely removed with advantage, the lateral growths on the remaining shoots being cut back to three or four eyes. Do not forget the Rose hedges, which retain their freshness and vigour much longer if annually thinned out. There is usually plenty of young growths that may be used to fill up any gaps caused by removing the older limbs.

POT ROSES under glass will now need constant care. The earliest batch should soon be showing flower-buds, and these may be helped with supplies of weak liquid manure twice weekly. The plants will appreciate a good syringing on bright mornings, and a little top ventilation may also be allowed, but must be withdrawn early in the afternoon. Keep the thermometer between 55 degs. and 60 degs. by day

and avoid sudden fluctuations. On the appearance of aphid or red spider the house should be thoroughly fumigated. Mildew is best held in check by syringing the plants with a hot solution of soft soap and quassia. Sulphur dusted over the foliage through a muslin bag is also effective against this pest, but it gives the plants rather an unsightly appearance. Plants that were potted early in the autumn and are now in the cold house will probably be pushing into growth. If so, the most forward may be placed in the cooler part of the forcing-house and lightly pruned, when in about ten weeks they will bear some very nice flowers. Do not supply much water to the roots, but syringe often and well.

EGLANTINE.

Rose Roger Lamberlin.—This was introduced by Schwartz in 1890. Its pedigree can only be surmised, but it probably sported from that old favourite Prince Camille de Rohan, for not only is it similar in habit, but occasionally it produces blooms very similar to, if not identical with, those of Prince Camille de Rohan. Roger Lamberlin is a vigorous grower, sending up long, semi-pendulous shoots, the blooms being produced at the tips and also on laterals thrown out from the shoot. The buds are very firm and appear somewhat malformed, but, as they expand, the short petals arrange themselves quite symmetrically. The colour is equally unique and quite distinct from anything else in the Rose world. The base colour is like that of Prince Camille de Rohan, a dark, rich crimson-maroon, each petal distinctly edged with pure white. The blooms are still more attractive by reason of their sweet scent. As a large, freely-grown bush it is excellent, while it is also very suitable for pegging down.—EGLANTINE.

Rose Jersey Beauty.—Grown on a pillar, a trellis, a wall, or as a standard, Jersey Beauty unfailingly gives pleasure. It should receive a little more favour now that single Roses are being more sought after, though it rests its claims upon higher grounds than those of the vagaries of fashion in flowers. In bud the flowers are of a charming pale yellow, and when open show a paler shade of the same colour, passing off to cream, and made still more pleasing by the yellow stamens. It is difficult to say in what way it should be grown to show its fullest beauty, as any of the positions referred to above will show its value well.—SUB ROSA.

Rose Edgar Andrieu.—Of the new Rambler Roses introduced during the last few years, none is perhaps more worthy of notice than the Wichuraiana Edgar Andrieu. The colour is a rich blood-red, shaded crimson. The individual blooms are much larger than those of Excelsa, and the effect obtained from large trusses of these flowers can readily be imagined. Of all the existing crimson Wichuraiana Roses, this is certainly the most effective, whether grown on an arch, a pillar, or as a weeping standard.—EGLANTINE.

Ayrshire Rose Dundee Rambler.—For clambering through trees or covering high walls or trellises, pergolas, or arches the Ayrshire Roses, though only summer bloomers, should not be neglected. They are ever-green, and when not too severely pruned bloom very freely. Among the prettiest is Dundee Rambler, whose white flowers, prettily edged with pink, most people appreciate.—SCOTCH ROSE.

Hybrid Sweet Briars.—As hedges or division lines across the lawn or in any position where required, these are very useful. When flowering is over a beautiful crop of hips brightens up the place. It is well to grow a batch of Sweet Briars in pots for the sake of the sweet foliage to mix with other Roses. The common varieties may do for this work.—E. H.

Rose Juliet.—It is pleasant to note the favour which is being shown to this Rose in northern gardens. One of its many recommendations is its delightful perfume. It is also free in growth and in bloom. The reverse of the petals is a good old gold, the inside a charming carmine-crimson changing to pink.—SCOTCH ROSE.

TREES AND SHRUBS.

VIBURNUM RHYTIDOPHYLLUM.

This is one of the most remarkable of the new shrubs which have been introduced during the present century. A native of Central and Western China, Mr. E. H. Wilson sent seeds to Messrs. Veitch in 1900. The young wood and the undersides of the evergreen leaves are covered with a dense felty mass of light-brownish hairs, the upper surface of the leaves having a curiously netted or wrinkled appearance. The flower-buds are formed on the completion of growth, and sometimes a few blooms expand in autumn, but May is the correct blooming time, the flower-heads being then 6 inches to 8 inches across, the colour creamy-white. They are succeeded by a generous crop of fruit, which ripens in August, the fruits being alternately red and black. It should not



Part of a plant of *Viburnum rhytidophyllum* at Lilford Hall. May, 1915.

be exposed to cutting winds, and is benefited by a little shelter.

Mr. F. W. Gallop, The Gardens, Lilford Hall, Oundle, sends us the following regarding the plant, a part of which we figure this week:—

"This beautiful Chinese shrub is quite hardy in these gardens and does not require the shelter of a wall as many suppose. Moreover, when planted against a wall half of its beauty is lost, as its natural bush-like form requires plenty of room for development. The plant here figured is growing in a border with other shrubs, sheltered only by evergreens at the back. The soil is a medium loam containing lime. The flowers, which are nearly pure white, usually set large clusters of berries, which in August are red, turning to a dark purple when ripe."

Birds and berries.—While the majority of the Hollies were stripped of their fruits before Christmas, one particular tree is yet well laden with berries, although the birds (chiefly mistle-thrushes) were more numerous than usual. The variety is *Ilex glabra*, one of the

most prolific of the berry-bearing Hollies, and the berries appear to be distasteful to birds. On two occasions I picked up a couple of thrushes which had evidently partaken of the fruit of this particular tree. They were lying in a semi-comatose condition in its close vicinity, and the berries had apparently acted as an emetic. After a short time they recovered.—W. McG., *Balmac*.

WALNUTS.

[To the Editor of GARDENING ILLUSTRATED.]

SIR,—Your correspondent, W. J. Farmer, enquired (p. 730, December 4th, 1915) regarding Walnuts suitable for making Walnut butter, and also for the name of a bush Walnut. I have been hoping to see some information given in reply. Here in East Suffolk the Walnut appears to grow well, and there are three sizes of nuts produced in some of the gardens in Woodbridge. One is called the "soft-shelled," and is a large nut, another is of ordinary size, and a third bears small nuts not much bigger than a Cobnut or Damson Plum.

In your issue of March 16th, 1912, p. 169, you gave a detailed account of the best French varieties, extracted from an article by M. F. Lesourd in *Revue Horticole*. Of those, *Juglans regia racemosa*, called by the French a *grappes*, and grown in Indre and Vienne, might perhaps be what "W. J. F." is looking for, fertile, hardy, and bearing nuts in bunches of a dozen or more. Several were mentioned as being grown for oil, and probably the Walnut butter is a French product. In an old book, "Pomarium Britannicum," by Henry Phillips, F.H.S., 1829, it is said of the oil: "They eat it instead of butter at Berry in France." He remarks of the Walnut as an English tree that Gerard mentions it and Turner also in his "Herbal" dated 1564. He instances a tree planted in the garden of a Mrs. Maxwell, of Terraughtie (about 1810), which produced good nuts twelve years later, and he continues: "There are at this time" (say 1822) "seven Walnut-trees growing in a little meadow at Greenwich not exceeding $\frac{3}{4}$ acre of land, the fruit of which has been sold for some years past to one person at £30 per annum." The owner, he says, refused 1,000 guineas for them for the timber. This refers to the high prices paid by contractors for Walnut wood during the war, and doubtless, then, England was being denuded of Walnut-trees. He quotes Evelyn's "Sylva," showing how profitable Walnuts were in former days. They were planted by the thousand by improving landowners in Essex, Hants, Surrey, etc. He also mentions some Walnuts shown at the Horticultural Society in 1820 called "Highflyer," of a long, oval shape, very thin-shelled, with kernel full and high-flavoured. They came from a tree in a small garden of a grocer in Thetford, and he says: "They seem to have been originally confined to the neighbourhood of that place and of Bury St. Edmunds." EAST SUFFOLK.

The Monterey Pine (*Pinus insignis*).—Visitors to the south-west counties of England and Wales cannot fail to be interested in this Pine, for it is widely grown there. It is also found in other parts of the southern counties, and in some places is represented by excellent examples, but, as a rule, it is not seen to so great advantage as in Devonshire and Cornwall, except in favoured situations near the coast. In a state of Nature it only occurs over a small area in Monterey, California, having for a companion *Cupressus macrocarpa*. The cones are distinct and, as a rule, remain on the branches for many years, the scales remaining closed and the seeds perfectly fresh. On vigorous shoots whorls of several cones are produced, but elsewhere they may be borne singly. When planted under suitable conditions growth in height and trunk diameter is very rapid, trees adding to their height from 2½ feet to 3 feet each year for many years in succession. Although tender when grown inland it is quite hardy in the places named, and stands considerable exposure to winds from the sea; in fact, it can be planted to give shelter to more exacting subjects. It must be planted permanently whilst quite small. The species is sometimes called *P. radiata*, and has been grown here since 1833, when it was introduced by David Douglas.—D.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

A man who owns a small holding had a fine old tree which he wanted removed, but no one would give him enough for the log to pay for cutting it down (some 10s. or 12s.). I bought the log eventually and have had some furniture made out of it after three years' seasoning. If I enquire for English Walnut from the cabinet-makers the price is high, so one can only suppose that it should be worth planting even for timber. In former days it was considered highly profitable to plant Walnuts in England, but perhaps nowadays a little sum in arithmetic would show that the foreigner can do it more cheaply.

The old idea was that if the taproot be cut when the seedling tree is young the tree will break into branches near the ground. Is that possibly the sort of bush-tree that "W. J. F." has heard of? But if the nut be sown where it is to grow, and never transplanted, it will form a tall stem and make a large tree. Walnuts grow from nuts as freely as Oaks from acorns, so anyone can try.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

THE ALPINE-HOUSE.

THERE is a deal of truth in what "Kirk" (page 1) says of the alpine-house, but it is a question as to which there are two sides. I think that "Kirk" is rather unfortunate in his choice of plants to enforce his view that the "increased use of the alpine-house is to be deprecated." There are many parts of the country where *Iris reticulata* has but a short time of beauty in the open unless protected in some way, especially in an early season. Of course, this shelter may be afforded by using a bell-glass or hand-light, but even that appears artificial in the case of a hardy bulb such as this. Then many of the earliest flowers are soon rendered useless by even a short spell of bad weather, without taking into account the stormy times which often prevail for weeks at a stretch. One might mention such things as *Saxifraga Burseriana major*, *S. apiculata*, *Synthiris reniformis*, and a number of other plants whose beauty is prolonged when grown and flowered under glass during the earliest months of the year. For such Irises as *Histrio*, *histrioides*, *Bakeriana*, and *Rosenbachiana* it is a great boon to be able to shelter them during their flowering season. In certain seasons, also, it is almost hopeless in many places to attempt the winter-flowering *Crocus* species, such as *C. hyemalis* or *C. vitellinus*. When we come to consider the later flowers the opinion of "Kirk" will have greater support. None of our alpine look so well in a pot and under glass as in the open, and there is little need to shelter these in the alpine-house when they normally come into bloom in April or May. Even March is not so unkindly in most seasons. An alpine never looks so well as among as natural surroundings as can be had in a garden, and the later flowering plants, as a rule, never show their true character when cultivated under glass. Is it worth while to devote a house to alpinics for the sake of, say, a couple of months? I do not think that it is, unless it can be utilised later for growing other things. Growing alpinics under glass increases the work in the average garden very considerably. In these times of shortage of labour and economy in other directions it is very probable that the alpine-house will not make much headway.

Δ LOVER OF ALPINES.

NOTES AND REPLIES.

Saxifraga apiculata.—With its Primrose-coloured little flowers on a carpet of green, *Saxifraga apiculata* is again in bloom. It is many years since I first made its acquaintance under the name of *S. Frederici-Augusti*. In those days it was more prized than now, as it was the earliest and best of the yellow-flowered Saxifrages then in commerce, but it is still worthy of consideration. It has anticipated *S. L. C. Godseff*, another yellow-flowered Rockfoil which is usually very early, and looks charming nestling close to the grey chips in which it is placed and showing its close carpet of green well spangled with pale yellow flowers.—S. ARNOTT.

Saxifraga Burseriana major.—This still remains one of the earliest Saxifrages, and has been in full bloom since the middle of January this year in a moraine facing almost due south, but with no protection of any kind. This moraine, composed of chips with an admixture of old mortar rubbish, suits *S. Burseriana major* splendidly. This is one of the most valuable of the *Burseriana* varieties.—S. ARNOTT.

OUTDOOR PLANTS.

EARLY SPRING FLOWERS.

THE garden that is without a Forget-me-not is certainly wanting in one of the greatest charms that the spring sunshine brings with it. We have quite a number of beautiful varieties very much superior to the old kind. That lovely kind

Myosotis dissitiflora, which had such a warm welcome when it made its appearance in English gardens, never in the true sense of the word became popular. No plant can become so unless it can be easily increased. Really popular things are required by the thousand. There is also the liability to injury from spring frosts, which not infrequently destroy its beauty just when it has become effective. Unlike the Forget-me-nots in common use, and which are weed-like as regards their reproductive powers, this species produces seed so sparingly that raising a large stock is not a very easy matter. Many who wished to employ this Forget-me-not largely had to resort to propagation by means of cuttings, which, of course, is comparatively a slow process. The easiest way I found was to grow a few plants on a north border and surface the soil with leaf-soil. In this way a certain number of self-sown seedlings were obtained without trouble, and by watering in dry weather, young growths came up from the base which, taken off with a heel, made roots freely and formed nice plants. This species must be regarded as the aristocrat of the family, endowed with a finer constitution, and must be treated accordingly. Putting it in the open, where it may catch cold winds and early frosts, is not the way to realise its beauty. It should be in intimate association with a superior vegetation, such as deciduous trees and shrubs, which give the necessary protection.

OMPHALODES VERNA, which has been termed the creeping Forget-me-not, is a good companion plant and flowers very early in sheltered positions, the first blooms opening in February. It extends freely by means of creeping rhizomes, and is a true perennial, quickly covering a square yard of ground, but the soil must be free, as in close, heavy ground it has a miserable appearance. Put it at the foot of an evergreen hedge south or west aspect, or in a cosy corner among shrubs, and you will be gratified with its pretty little blossoms when the Snowdrops open. I have never grown these in close companionship, but they should make a pleasing picture. The *Omphalodes* as a carpet with Snowdrops coming up through ought to be a success.

WINTER ACONITE, the Snowdrop, and the Snow Glory so intimately connect winter with spring that one hardly knows to what season they properly belong. In sheltered positions the Aconite sometimes opens at Christmas, but this year it is much later. Do any of your readers grow the Aconite in the Grass? It is charming there, and the foliage dies off early, so that mowing is but little retarded.

Snowdrops may sometimes be gathered in January. What precious little bulbous flowers these are, giving us an interest in our gardens when the days are short and leaden skies prevail, and at such a trifling cost, and, once established, a joy for years without renewal or removal.

ANEMONE BLANDA and *Cyclamen Coum* also belong to that limited number of hardy flowers that bridge the winter with the spring. They are now (January 20th) expanding their first blossoms, and the last will appear when the full spring flower season arrives. *Saxifraga apiculata*, *S. Burseriana*, and *S. marginata* are in the

same category, and in their wake come those little Daffodils *N. minimus* and *N. nanus*. *N. minimus* is a dainty little thing, very desirable but, unfortunately, rather capricious, only succeeding in warm, well-drained soils. BYELEET.

AMONG THE HARDY FLOWERS.

SOME DESIRABLE PLANTS TO RAISE FROM SEEDS.—I find that the *Delphiniums* come very well from seeds, and that a good strain gives a considerable variety of colour. These seedlings may not be quite up to the standard aimed at by the expert, but there will be a number of really excellent varieties. These Larkspurs will flower the second year, even if only sown in the open air in May. *Pyrethrums* come easily from seeds. I like the single varieties, but from a packet of seeds said to be saved from single varieties I had a good proportion of double flowers. *Potentillas* are easily raised. It is also well worth while to buy a packet of seeds of mixed *Lupins*, which come very well from seeds, and we can have a good variety. I have not found the perennial *Phloxes* so easily raised from seeds, as they do not seem to germinate so satisfactorily. Some dealers offer packets of mixed seeds of *Saxifrages*, but I anticipate that a good deal of trouble might be involved in getting the resulting plants named. With varieties one need not mind so much, but I think that species or forms of these should be known to us by name.

CLEMATIS DAVIDIANA.—I am told that this *Clematis* should be called *C. heracleifolia* var. *Davidiana*, but we may shorten it to *C. Davidiana*, or, to use an English name, David's *Clematis*. It is quite a nice herbaceous plant, but I would like to learn the experience of others as to its liability to disease. It does not suffer from disease with me, but some correspondents tell me that it will not grow well with them. I like its growth and its blue, fragrant flowers. Few amateurs seem to know these non-climbing *Clematisses*, but they deserve to be much more largely grown.

DRYAS DRUMMONDI.—In a catalogue I had some two or three years ago I read of *Drummond's Mountain Avens*, and was tempted to purchase a plant on the faith of the statement that it has "showy yellow flowers." Judge of my disappointment when I found that these "showy" flowers never opened fully. *Dryas octopetala* has nice white flowers, and I pictured a similar plant, the white flowers replaced by equally fine yellow ones. I have come to the conclusion that *Drummond's Mountain Avens* must be put on the fire-heap. If anybody has any knowledge of how to induce *Dryas Drummondii* to open its flowers fully I shall be under a debt of gratitude if the information is made public through these pages.

CYCLAMEN COUM.—This is just showing its crimson petals through the enveloping perianths. I always feel cheered by the sight of this and other early flowers. I find that it thrives equally well in a sunny place as in a shady one. I bought a corm and planted it in loam, leaf-soil, a little sand, and a small proportion of old broken mortar, and with the crown about an inch deep. This was according to the directions I had given me, and the "one ewe lamb" has proved successful.

AN AMATEUR OF HARDY FLOWERS.

NOTES AND REPLIES.

Gladiolus The Bride.—Although October is, perhaps, the best time for planting *The Bride* and other early-flowering *Gladioli*, corms may yet be planted. For pots a good compost is one of turfy loam, a little leaf-mould, and some sand, made rather

moist, but not so wet as to cling when pressed in the hand. A 6-inch pot may contain seven corms, and they should be planted about an inch deep and the pots plunged in Cocoanut fibre or ashes out of doors. If indoors they can be put under the stage of the greenhouse, but not near the pipes. If early bloom is needed the pots can be put into a temperature of 50 degs. to 55 degs. If planted in the open at this season they may be put 4 inches deep with a little sand about the corms.—S. ARNOTT.

Hyacinthus azureus.—I have a very early form of *Hyacinthus azureus* (syn. *Muscari azureum*) called by some H. a. lineatus, but why I do not know. It generally flowers early in February, though, as this year, I have had it sooner. To-day (January 25th) I have found a few of the spikes with open flowers. The spikes are now only a couple of inches or so above the ground, but they will soon extend, and before the flowers are all open



Flowering shoots of Freesia Chapmani.

will be from 4 inches to 6 inches high. I used to grow it facing south-west and partially sheltered by an upright-growing *Helianthemum*, but some alterations led to its removal, and now *H. azureus* is on a ledge on low rockwork and facing almost due south. It is growing in sandy loam.—DUMFRIES.

Hardy flower borders.—Further progress was made with the necessary forking and digging of these borders. Bulbs grow increasingly prominent with the advancing year, so that danger from fork or spade is minimised. Tulips, Narcissi, Squills, Hyacinths—in fact, bulbs generally—are coming away very strongly and regularly, while Anemones are already in leaf. *Dielytra spectabilis* begins to be prominent. This can be hurried on by the use of hand-lights, but as there are apt to be late frosts it is, perhaps, just as well to permit the clumps to come away naturally, except in very sheltered situations. Lifting, dividing, and replanting are being done where necessary as the work proceeds.

INDOOR PLANTS.

FREESIA CHAPMANI.

This is the result of the inter-crossing of the somewhat weak-growing *Freesia aurea*, whose blossoms are of a rich golden hue, but absolutely scentless, and the well-known and popular *Freesia refracta alba*, the flowers of which possess a delicious fragrance, followed by fertilising the blooms of the latter with the pollen of the seedlings resulting from the first cross. The hybrid (*Chapmani*) partakes of the characters of both parents, the growth and size of the flowers being suggestive of those of *F. refracta alba*, while in colour it shows a decided affinity to *F. aurea*. The blossoms of *F. Chapmani* are in colour soft yellow, with a golden sheen, and blotched inside with rich bright orange. They have a little of the perfume of *F. refracta alba*, but this feature is not at all pronounced. This first flowered in

carefully from the seed-pot, so as scarcely to disturb the rest, and prick off into 2½-inch pots in which the soil has a convex surface. Follow this process as plants are ready until all the seedlings have been transferred. When potting on allow the leaves to rest on the soil, but avoid covering the hearts. An early batch of tubers may now be started. I prefer using shallow boxes filled loosely with half-decayed leaves and plenty of sand. Place about two-thirds of the bulb in the compost and start in a temperature of 60 degs. to 65 degs.—F. W. GALLOP.

STOVE AND GREENHOUSE PLANTS CERTIFICATED IN 1915.

As with trees and shrubs, no stove and greenhouse plant received a first-class certificate during the year 1915, and the Awards of Merit were but few. Excluding Carnations and Chrysanthemums, which are dealt with by specialists, the following only were honoured:—

ABUTILON TRIUMPH.—A variety with very large pink blossoms of a semi-double character. The pedicels are stiff and the flowers have not the pendulous habit common to most of the garden varieties of *Abutilon*. This variety was sent out by M. Lemoine, of Nancy, about ten years ago. September 28th.

AURICULA EDENSIDE.—A very pretty Auricula from the well-known Douglas collection. The foliage is mealy, the flowers pale heliotrope suffused with lilac. White centre. April 13th.

BEGONIA FIREFLAME.—This is a very desirable variety of the *socotrana* hybrids of *Begonia*. The colour is orange with a rosy suffusion, and the habit of the plant good. It will no doubt become popular. November 9th.

BEGONIA LORD METHUEN.—A member of the tuberous-rooted section, the flowers being large, double, finely-shaped, and of an intense scarlet colour. July 6th.

BEGONIA MRS. W. CUTHBERTSON.—Another tuberous-rooted variety, whose flowers are of a soft clear pink. July 6th.

HYDRANGEA RADIANT.—One of the many seedling *Hydrangeas* distributed by M. Lemoine, of Nancy, within recent years. In this variety the flowers are of a clear rich pink colour. April 27th.

NERINE ROSEBUD.—A very pretty *Nerine*, whose rich pink flowers shade off towards a light-coloured centre. September 28th.

NERINE VIVID.—Of a vivid scarlet tint. A fine bold truss. September 28th.

PELARGONIUM KATHLEEN BUNYARD.—A member of the Ivy-leaved section, with richly-coloured flowers borne in great profusion. It is of considerable promise as a market variety. July 20th.

PRIMULA ADONIS.—A hybrid showing traces of *Primula viscosa*. It is somewhat suggestive of a large, bold-flowered alpine *Auricula*; colour, bright mauve. April 27th.

PRIMULA MALACOIDES ROSE QUEEN.—This strong-growing variety of the popular *Primula malacoides* has flowers of a particularly pleasing shade of rose pink. It is full of promise for greenhouse decoration. February 16th.

SENECIO MULTIBRACTEATUS, CLARE LODGE VARIETY.—A *Cineraria*-like plant with yellow disc and rosy-mauve coloured ray florets. It promises to be a useful greenhouse plant. May 18th.

SOLANUM ACULEATISSIMUM.—This is the *Solanum* which attracted a good deal of attention at one of the meetings of the Royal Horticultural Society about a year ago under the name of *Solanum ciliatum*. The Kew authorities have, however, determined that the correct name is as above. It is of a somewhat straggling habit with spiny shoots. The comparatively large,

1906 and was given an Award of Merit by the Floral Committee of the Royal Horticultural Society in 1907.

Gloxinias can be flowered in the most satisfactory manner within six months of the date of sowing the seed. By successive sowings and judicious management it is possible to have *Gloxinias* in bloom almost the year through. The most important months for sowing seed are January, February, and March. The most suitable receptacles are 5½-inch or 6-inch pots, which must be thoroughly cleaned and nearly half-filled with clean crocks, as free drainage is essential to success. Fill the pots to within ½ inch of the top with a light, porous compost consisting of fibrous loam, peat, and coarse sand. Sow thinly and evenly, slightly covering the seed with very fine soil. Place the pots in a warm, moist position, carefully shading from the sun. A light sprinkling of water daily will be necessary. Immediately any plants are large enough for shifting lift them

rich, scarlet-coloured fruits are borne in great profusion. November 9th.

VERBENA CHAMÆDRYOIDES.—An old species of Verbena with intense scarlet flowers. It would, however, appear to have been lost to cultivation till reintroduced within recent years. It has proved to be hardy in many districts, but even where such is not the case it can be readily wintered in the greenhouse and planted out during the summer. July 6th.

NOTES AND REPLIES.

Perpetual-flowering Carnations.—Cuttings that were inserted in boxes during the first week in January will now be rooted, and may be removed to a light house where a little air can be admitted, so that they may be hardened a little before potting off singly into small pots. Where space is limited it is a mistake to grow too many varieties. Better select eight or ten choice sorts which are known to do well in the particular district. Enchantress, White Enchantress, White Wonder, Empire Day, May Day, Lucy, Mikado, Triumph, and Beacon are sorts that do well with me. The shoots of flowering plants should be tied neatly and the surface soil stirred lightly with a pointed stick. It is not advisable to feed the plants with fertilisers until February, when Clay's fertiliser and soot mixed in equal quantities may be applied once a fortnight at the rate of a dessertspoonful to each plant.—F. W. GALLOP.

Cyclamens.—Complaints are by no means infrequent that the flowers do not develop as they should. More than one cause may be answerable for this, but especially the following three. In the first place an insidious mite, similar to, if not the same, as that which attacks the winter-flowering Begonias, will cause the leaves to thicken and the flowers to become deformed. This needs to be carefully watched for, and at the least sign vaporising or dipping in a solution of nicotine should be carried out. Thrips, again, disfigure the leaves and cripple the blossoms, but vaporising will keep these in check. The flower-stems, too, sometimes damp off almost as soon as they are pushed out from the corn. This may be caused by too moist an atmosphere, by an excess of stimulants, or very frequently by want of care in watering. If the water is dashed into the crown of the plant decay is almost sure to set in, as the moisture collects at the base of the stems and many of them rot off. Watering needs, especially at this season, to be carefully done.—T.

Asparagus Sprengeri.—This variety of Asparagus, when well grown, rivals the Smilax for dinner-table decoration, as the trails can be used either for laying on the cloth, the entwining of candelabra, etc., with equal effect. Old plants in baskets usually produce a good lot of seed in autumn, which, if taken care of and sown now, germinates readily in warmth. For the first season the young plants are very serviceable for room decoration and similar purposes. To obtain long trails, basket culture must be resorted to. Growths can then be had 2 yards in length if the plants are given plenty of heat and moisture. Seed can also be purchased, but it does not, as a rule, germinate so readily as that which has been home saved.—G. P.

Clivia miniata.—Disappointment is sometimes expressed at the pale tint of the blooms. This is merely a matter of position, for it will be found that the paleness is due to lack of exposure to the light. If the plants are placed where they get the benefit of any sunshine in the early part of the year the colour of the blooms will be satisfactory. *C. miniata* will remain in robust health for many years without repotting, but stimulants of some kind must be regularly given during the period of growth and blooming.—KIRK.

Asparagus plumosus.—The cut sprays of this plant are highly valued for a variety of purposes, and now is the time to increase the stock—of which it is seldom there is an overabundance—by sowing seed and raising it in heat.

GARDEN FOOD.

VEGETABLES OVER-BOILED.

THE importance of garden food is growing every year, and next to good cultivation the most essential thing is the intelligent cookery of such food. One of the mistakes commonly made is over-boiling tender green vegetables. In that way they lose their crispness and true flavour, and also the natural salts which make them wholesome. The Cauliflower over-boiled becomes so much pap and is useless as food. Experiments which have been made with animals show that over-boiling lessens digestibility. Those experiments were not made with man, but we know enough to be able to state that over-boiled food is productive of certain unpleasant effects.

Our country is richer in the Brassica tribe than any other perhaps. In the right season there are some of these that are very pleasant and wholesome food, as some of the Kales that bud in the spring, unless by over-boiling we lessen their value or cause them to lose their shape or flavour. Pouring melted-butter or sauces over such things is a mistake, as in the case of Seakale and sometimes Brussels Sprouts. If sauces are required with such things a little fresh butter or gravy is usually at hand. Even vegetables like Spinach, which are reduced to a finely-cut state, may be spoiled by over-boiling. On the other hand, dried pulse and cereals, being hard, want a considerable amount of cooking to make them digestible. The vast mass of vegetable food which is grouped under the head of pulse suffers very much from under-cooking.

COOKING CELERIAC.

(REPLY TO "GARDENING COOK.")

The blackening or discolouring of this when boiled is due to lack of care in the cooking. The Celeriac should be fresh, peeled quickly, and immediately plunged into salted water, while the remainder of the roots is being prepared. Cut into quarters and place into boiling water. Take up immediately the vegetable is tender, drain, and cover with the sauce with which it is served. If eaten plain it is as well to add a liberal allowance of milk to the water in which it is boiled, as this helps to keep the roots of a nice colour. Celeriac is, however, nicest when made into stews or other dishes, much in the same way as Celery is cooked. A nice white stew is made by cutting the Celeriac into slices, about $\frac{1}{2}$ inch thick, and boiling them for ten minutes in salted water. Drain away the water and cover with equal quantities of fresh milk and a thin white stock, and simmer until the slices are tender, but not broken. Melt a dessertspoonful of butter in a clean pan and sprinkle in a dessertspoonful of flour and fry for three minutes, taking care not to allow the butter and flour to brown. Add some of the liquid in which the Celeriac has been boiled and simmer, stirring the whole time until the sauce is smooth and cooked. Pour in the rest of the liquid, stir well, and add the slices of celeriac and simmer for a quarter of an hour longer.

A delicious supper-dish is made by boiling the Celeriac as in the previous recipe, and then chopping it rather coarsely. Flavour lightly and return to the pan with a dessertspoonful of butter. Toss in the pan until the vegetable is coated with the butter and very hot. Butter a deep pie-dish and place a thick layer of bread-crumbs at the bottom. Sprinkle a little Onion juice over and pour in the Celeriac, and cover with a thin layer of grated

cheese. Two tablespoonfuls will be sufficient. Fill up the rest of the pie-dish with a layer of bread-crumbs and pour in at the side a large cupful of the liquid in which the Celeriac was boiled. Sprinkle a little dissolved butter on top and bake in a moderate oven until the top is coloured a rich brown. Send to table in the dish in which it was baked.

To make a brown stew of Celeriac take a tablespoonful of butter and melt in a clean stewpan, add a tablespoonful of chopped Onion, and fry until nicely browned. Sprinkle in a tablespoonful of flour and continue frying for five minutes, but do not allow the contents of the pan to burn. Meanwhile slice the Celeriac and boil in a good stock until tender. Add a little boiling stock to the contents of the stewpan and simmer, stirring the whole time until the fried flour, butter, and Onions are smoothly blended with the stock, add the cooked Celeriac, and sufficient of the liquid in which it has been boiled to make the gravy of the right thickness. Season very lightly or not at all, according to taste, and cook for fifteen minutes longer. Send to table very hot.

H. THOBURN CLARKE.

—IN GARDENING ILLUSTRATED, January 1 (page 6), a question is asked as to keeping this vegetable of a good colour in the cooking. I have found that some roots, no matter how well cooked, go a bad colour. That is not the fault of the cooking but the culture, as I have found that roots that have been lifted above the soil are inclined to a bad colour when cooked. One often sees these roots exposed for sale in a shrivelled and soft condition. Such roots would not cook well, hence the importance of well covering the roots with soil or fine ashes when placed in the store, which should be only just frost proof; indeed, a few degrees would do no harm if the roots were well covered. In August or September I always draw the soil from between the rows well into the foliage to prevent discolouration when being cooked later on. To cook Celeriac, peel and quarter or halve the roots according to size, and plunge into boiling water with a liberal quantity of salt. Boil hard till quite tender, using plenty of water. I do not like the large German varieties, the smaller Paris Ameliore being better. The small Erfurt is of fine quality when cooked. C. F.

NOTES AND REPLIES.

Seakale and its use.—This is a product of our British gardens, and rarely in use in Continental Europe, a further reason, if needed, for making good and frequent use of it. It is often over-cooked and messed over with melted butter. The best way is to serve it simply, and not over-boiled, as that deprives us of the wholesome salts or potash, or whatever it may be called, of the fresh shoots. If anything in the way of sauce is desired to go with the Kale fresh butter or gravy may be used. The wild plant on our coasts is well worth looking after for those who are near the sea; the rising shoots are quite good unblanched. Some growths unblanched might well be kept for those who like it as it starts. It used to be eaten wild before the plant was cultivated in gardens.—W.

Carrots young and tender.—Carrots seem to be getting worse, if anything, in our English gardens. Is it owing to the *Daily Mail* 4-foot scale? I wish some of your learned readers would tell us how to grow in our gardens the little Carrots as grown for the Paris markets. My cook tells me she cannot get on with our Carrots. Certainly some soils are so stiff that Carrots will not do in them, but for the small supply wanted for the cook would it not be almost worth while to grow them in frames?—J. S.

FRUIT.

CONCERNING APPLES.

NEARLY twenty years ago now I could plainly see that several of our Apple-trees were giving out. The majority of these, I should add, were obtained about 1850 from a Mr. Ronalds, who then had a nursery at Brentford. So they had served a good time, and since I have been at Gunnersbury, even, they have borne good crops. Of these old trees that now remain the best are Blenheim Orange, Waltham Abbey Seedling, Wellington, Alfriston, and King of the Pippins. These rarely ever fail to give us a good return, last year very specially so. But these, even, are feeling the effects of age.

Foreseeing what was likely to happen in

colour. Later on I hope to use these for dessert.

I laid this orchard down on Grass and have up to the present time kept to the plan. I would now, however, do away with the Grass, but it is a question of labour. The soil is good loam, somewhat firm of texture—a lasting soil. It is, however, rather shallow, on an average not more than 18 inches before one touches the gravel which overlies the London clay in this spot. I had the holes well prepared, using a little well-rotted manure because of the shallow soil. I find I have to water the trees in a dry season so that they finish their crops well. I have helped the trees, however, with a mulch, and from time to time have extended the circle around the trees, which is kept free from Grass. The branches, as they extend, and

Keswick Codlin in this respect was second last season, and Ribston Pippin third. Bismarck has quite pale-coloured flowers, but they are none the less beautiful. I have for a long time thought that we might plant standard Apples in our shrubberies for pictorial effect.

JAS. HUDSON.

Gunnersbury House Gardens.

MISTAKES IN PRUNING GOOSE-BERRIES.

THE cultivation of Gooseberries has been much improved in recent years. It may, therefore, not be out of place to suggest at this season that in the different forms in which the fruit is grown it often happens that much remains to be desired in the pruning. As

CORDONS, some varieties are much more



Apple Newton Wonder in bloom, with Lane's Prince Albert showing on the left. From a photograph in the gardens at Gunnersbury House.

course of time I made another orchard close by. This would be nearly twenty years back now. For this purpose I selected dwarf trees on the Paradise stock. Most of these trees have done well and have borne heavy crops nearly every year. The best of these have proved to be Newton Wonder, Lane's Prince Albert, Gascoyne's Scarlet, Ribston Pippin, Bismarck, Cox's Orange Pippin, Pond's Seedling, Domino, Lord Grosvenor, Bramley's, Allington, American Mother, Mabbot's Pearmain, Rivers' Codlin, and St. Edmund's Pippin. Baumann's Red Reinette I found not satisfactory, so I replaced the trees of this with Royal Late Cooking, which has done well. Of Annie Elizabeth I have only one tree. It had a fine crop this past season, really handsome fruits that are still quite firm and of excellent

where not wanted to fill up the trees, are spur-pruned. Thus the trees are rigid and not influenced to any extent by the wind when carrying heavy crops of fruit.

The tallest of these trees measure about 11 feet and have a spread of 10½ feet. I planted at 12 feet apart each way, but if I were planting again I should allow somewhat more space each way for convenience both for gathering the fruits and for pruning. This pruning, I might say, is all winter pruning; I never touch the growth in the growing season. These trees began to bear when quite young, and I have had good crops nearly every year since. The most remarkable for consistent cropping of those I have named is Bismarck. To me this is rather singular, because I have noted for some years past that this variety is always the first to open its flowers.

suitable than others, and this should be taken into consideration when planting. Those of very pendulous habit, or inclined to be more than ordinarily long-jointed, are hardly acceptable. Given varieties of kindly habit it should be remembered that once the tree is formed the after-cultivation will practically be entirely on the spur system, and care should be taken that these spurs are not allowed to stand out too far from the main stem, throwing a lot more wood than is required. After the trees have been established a few years it is just as well to remove a few spurs annually, selecting a strong back break, and so building up another lot of spurs well into the stem. In the matter of

BUSHES, I think in many gardens they are far too thick, occupy too much ground in proportion to the result obtained, the

fruit is of poor quality, and they are difficult to cover if it is necessary to protect the buds and fruits from birds. Given nicely-balanced bushes to start with, they can be kept well within bounds by judicious pruning, and sufficiently thinned out to admit light and air and allow for easy picking. One feels inclined to adopt drastic measures at the sight of huge bushes with big, gnarled, Moss-covered branches. It seems hardly recognised what an excellent hedge on a small scale, practically impervious to animals, can be made with Gooseberries. Finding the hedge round part of my small garden had been much neglected and getting bare at the bottom, and hardly caring to wait for growth that would follow heading back, I decided to keep it closely trimmed and plant Gooseberries inside. Strong-growing kinds, with shoots well equipped with thorns, were chosen. A few slight iron rods were inserted at intervals along the line and the shoots loosely tied in to lay the foundation for the hedge, taking care that some shoots were nearly close to the ground. The hedge is now a bit over 3 feet high, and, as noted, sufficiently thick to prevent the ingress of small animals, besides supplying plenty of fruit. I have noted above as to keeping bushes within reasonable bounds, and this is very necessary in this neighbourhood, where the number of bullfinches renders bud protection essential if good crops are looked for.

Hardwick.

E. B. S.

NEWLY-PLANTED VINES.

AMATEURS, who have not previously had any experience in the cultivation of Vines, generally wish to give their young ones plenty of heat right from the time that the Vines are planted. Instead of applying strong heat to the Vines in the latter part of winter and through the spring it would be much better to do without artificial heat altogether, provided frost is excluded. Unduly forcing young Vines that are intended to be permanent has the same result as follows overworking a young colt. Very careful treatment for a period of at least two years is needed. When young Vines are received from the nursery the canes measure from 5 feet to 8 feet in length as a rule. Amateurs hesitate to cut them back to within 1 foot of their base, or even to shorten them by two-thirds their length. Severe cutting back is, however, essential, and the cut ends must be immediately painted with styptic or ordinary painters' knotting to stop bleeding when the sap rises freely. If, however, the sap has begun to flow, such painting will be useless. The best plan is to arch the young rod, tying the point to the bottom part. The first buds to burst into growth will be the end ones, and, when they have attained a length of nearly 1 inch, rub them out; do not cut them. Continue to so remove the young growths until the desired point is reached, then allow the shoot to grow, and duly tie it in position. If, the first year, one leading shoot and two side shoots are retained, they will be sufficient. The side shoots should be stopped when they are about 30 inches long and all sub-laterals stopped beyond the first leaf. The leading shoot should be stopped when it has grown 5 feet long, but another leader in continuation may be allowed to grow. The stopping will result in the plumping up of the buds on the lower part of this young leader. Stop all sub-laterals on it beyond the first leaf also. Always maintain the soil in a medium state of moisture; mulch with manure and ventilate judiciously; freely after the end of May. BOURNE VALE.

NOTES AND REPLIES.

American blight on Apple-trees.—This is becoming a terrible pest. It is finding its way into the amateur's garden, and it will soon be difficult to find a garden free from it. Fruit-tree nurseries are not in all cases absolutely free from it. The question now is what are the best means to get rid of it. It certainly must be tackled in a determined manner, as half measures will not do. From what has come under my own observation, a solution of Gishurst compound thickened by adding lime and soot to the consistency of paint and then applying with a brush, rubbing it in well among the spurs will be useful, but not in all cases effectual. Some will be sure to escape, and will have to be dealt with during the summer with a small brush and a liquid insecticide or one of those spraying instruments so common now for labour saving. The tar mixture which has been so useful for killing mealy-bug on Vines will be found equally good for the destruction of this blight on Apple and other trees in the garden or orchard. Of course, the tar mixture should only be used in the winter when the buds are dormant, and it will be best to avoid the buds as much as possible when using it, and to dilute the tar with hot water in equal quantities. The clay must be dried, broken up, and well blended.—E. H.

Raspberry November Abundance.

—Though of late years we have had some introductions from the Continent, so far I have seen none superior to the above. Some of the new autumn-fruiterers are none too strong, but this is excellent in this respect if given good land and ample room. No matter what the variety, there must be ample room, as at the time the fruits ripen there must be plenty of space for the sun and light to get to the plants. The above variety, for an autumn fruit, is of excellent quality. To get the best results the plants must not remain too long in one place. Far better plant new, strong canes every third year. If this is done there will be a full supply, and later than most kinds. The fruits are borne freely in clusters and of large size when well grown. The well-known Superlative was one of its parents, and the newer variety crops as freely.—F. K.

The Worcester Damson or Damascene.

—In many parts of the country, especially where the Pershore or Large Yellow Egg Plum does so well, the Worcester Damson, or Damascene as it is frequently called, is a great success. In the Evesham district the above variety is a great favourite and an enormous cropper. Most of the trees are obtained from suckers, and this is a great gain to the small growers, who plant it largely in their garden hedges—indeed, in very unlikely places, as regards the well-doing of the trees. It is remarkable how well the trees succeed, soon coming into bearing, and giving very heavy crops. The fruits are of medium size, quite black, and somewhat acid till quite ripe. It makes a splendid preserve. Owing to their free cropping, the trees make a close growth with a mass of fruit buds.—F.

Melons.—Preparations are being made for planting the seedling Melons raised early in January. The house is thoroughly cleansed before the bed is made up. The soil is made very firm to promote a sturdy growth. Some growers prefer to plant in a small quantity of soil and add top-dressings as the growth advances, but I prefer to make the entire bed at once, using turfy loam and a good sprinkling of soot, wood-ashes, mortar-rubble, and coarse sand. Ram well as the work proceeds, finishing

off with a perfectly level surface. Then with the finest of the soil make small hillocks in which to plant. After planting insert neat sticks and secure these to the first wire of the trellis for training the young plants to. Spray the plants with tepid water when the weather is bright, and frequently damp the surroundings. Maintain a temperature of 65 degs. to 70 degs. at night, according to the conditions out of doors. Prevent cold draughts, and in the event of very cold weather cover the glass, which is preferable to using excessive fire-heat. Seeds have been sown for successional crops.—G.

Gooseberries and Currants.—Where these are grown unprotected by permanent erections of wire-netting birds are at this season of the year at times troublesome. Where this is the case, dustings with a mixture of lime and soot will be found of use in preventing the destruction of the embryo buds. It must be borne in mind, however, that copious rain or snow-falls wash off the mixture, which must accordingly be renewed from time to time as becomes needful. I have known a strong solution of Sunlight Soap—4 oz. to the gallon—equally effective, and of a more durable character than lime and soot in combination.—W. McG.

Pruning Red Currants and Gooseberries (R. S.).—Thin out and shorten back some of the longest of the branches on both kinds of bushes, leaving a goodly number of well-placed young shoots. The small side-shoots on the main branches of the Currant bushes should be cut back to two or three eyes, and slightly shorten the leading one, like a Vine is pruned; but, in the case of the Gooseberries, leave as much of the young wood in as possible, and nearly at full length. A good dressing of half-decayed stable-manure, lightly forked into the ground, would do much good, and a mulch of similar material later on would greatly assist the bushes in question.

GARDEN PESTS AND FRIENDS.

APPLE-TREE PESTS.

LAST year my trees suffered badly from Apple sucker and green-fly, and slightly from Pearmite and American-blight. The last is very bad in two adjacent gardens. The birds have just begun to eat the buds of berry bushes, and in some years I get scarcely any berries from this cause. Is there any general wash I could use now to protect buds and to destroy pests? I can get a lot of pigeon manure mixed with sawdust. Would it do harm spread on surface of Raspberry and Gooseberry plantations?—WM. CLARK McEWEN, Stirling.

[For the Apple-sucker and green-fly you cannot do better than spray the trees with a solution of Tobacco extract, for the former when the flower-buds are about to open, and, if necessary, after they have expanded, and for the latter from the middle to the end of April. The quantity of the extract recommended for use is 1 lb. to eight to ten gallons of water. The trees should also be sprayed in the winter with caustic alkali solution. Neither of the remedies is of much or any avail against American blight. Paraffin emulsion is far better. If you consult the list of various specifics sold by the leading manufacturers in the way of fungicides and insecticides you will find what you require in regard to a deterrent for preventing birds from disbudbing fruit trees and bushes mentioned therein. Neither fungicides nor insecticides are of the slightest use in coping with the larva of the Pear-gnat midge. There is no general wash to be had which would effect all you mention. As the pigeon manure is mixed with sawdust we cannot recommend its direct application to the soil in the manner suggested. Mixed with an equal bulk of soil, and allowed to lie for a year or two to become properly decomposed, it could then be either strewn on the surface or

dug in. Sawdust in a raw state breeds fungus if dug into the soil. Liquid manure cast over the heap occasionally would hasten decomposition. Adding the pigeon's dung and sawdust to a mass of fermenting stable manure would also bring about the same effect in much shorter time.]

DISEASES OF PEAS.

(Concluded from page 59.)

PEA RUST.

(*UROMYCES FABÆ*, De Bary.)

During certain years, especially when the weather has been hot and dry, Peas have been in some cases attacked by rust, which frequently causes much damage to the crop. There are three forms of fruit in the life-circle of this fungus, and all are produced in succession on the same plant. First appears the "cluster-cup" (or

various Vetches and other plants belonging to the Pea family.

METHODS OF CONTROL.—Spraying is practically of no avail against rusts. The most certain means to prevent a recurrence of the disease is to burn infected Pea-straw. If this is not done the winter-spores will be in some way returned to the land in a condition capable of infecting future crops.

PEA SPOT.

(*ASCOCHYTA PISI*, Lib.)

This fungus attacks the leaves and pods of Peas. Pale yellowish spots appear on the pods and gradually increase in size, and often encroach on each other. After a time the spots become dry, present a shrunken appearance, and are surrounded by a dark border, and the central sunken portion becomes studded with the minute black fruits (perithecia) of the summer-

stood to be due to a *Phytophthora*, perhaps *P. omnivora*, closely related to but quite distinct from that which causes the Irish or Late Blight of Potatoes.

METHODS OF CONTROL.—As this disease is often due to infected soil in the seed beds these should be sterilised. The beds should be thoroughly soaked with a solution of formalin (40 per cent. formaldehyde) in water in the proportion of 1 pint of formalin to 12 gallons of water. One gallon of the mixture should be used for each square foot of soil. After the watering is completed the soil should be covered for two or three days with coarse sacking to keep in the fumes. The watering should be done after the seed beds have been prepared for sowing, and a week or ten days should intervene between the watering and the sowing of seed, to allow for the complete escape of the formalin fumes and the drying of the soil.



Apple Royal Late Cooking in bloom in the gardens at Gunnersbury House. (See page 73.)

acidium) stage, followed by the summer-spore (or uredo-spore) condition, which forms numerous small, brown, powdery patches on the leaves, stipules, and stem. This condition reproduces itself throughout the growing period of the host-plant, and is responsible for the spread of the disease. When the plant is fading the summer-spore condition ceases to appear, and is followed, on the same parts of the plant, by a winter-spore (or teleuto-spore) stage. This takes the form of small, nearly circular blackish patches on the leaves and stipules, but the patches are often more or less elongated and streak-like on the stem. Only the spores of the winter form of fungus fruit are capable of infecting plants in the following season, and every care should be exercised in securing their destruction.

This rust, as the scientific name denotes, also attacks Broad Beans, on which it is much more general and destructive than in the case of Peas. It also attacks

spore stage of the fungus. When the pods are attacked while young they often become more or less contorted, and seed is not formed. Infected leaves soon shrivel and die. It has been stated that a fungus called *Mycosphaerella pinodes*, Stone, is the winter-fruit condition of Pea Spot.

METHODS OF CONTROL.—Spraying with Bordeaux mixture will hold the parasite in check if carried out when the earliest symptoms of the presence of the disease are observed.

BLACK ROOT ROT, BLACK NECK, COLLAR ROT.

This common and destructive disease of Sweet Peas, Asters, Antirrhinums, and many other plants, especially in the seedling stage, is characterised by a blackening of the collar or neck of the attacked plant, followed by a progressive rotting of the tissues, wilting, and rapid death. This has been attributed to attack by the fungus *Thielavia basicola*, Zopf, but is now under-

STREAK DISEASE.

The cause of this prevalent disease is still obscure, but there seems to be little doubt that in England typical streak disease is often caused by unsuitable conditions of growth, and may occur in the absence of either bacterial or fungus pests.

GENERAL METHODS OF CONTROL.—As Peas are annuals an outbreak of disease cannot be due to hibernating mycelium. There is also no evidence to show that the spores of any of the diseases discussed above are conveyed with the seed. Hence it follows that every infection must originate from some outside source. Freedom from disease must, therefore, mainly depend on preventive measures, the most important of which is promptness in destroying (preferably by burning) all diseased material, since this carries the spores, which are the only possible means of starting an infection the following season.—*Leaflet No. 287, Board of Agriculture and Fisheries.*

THE WEEK'S WORK.

OUTDOOR GARDENING.

IN BLOOM JANUARY 20TH.—*Jasminum nudiflorum*, *Winter Sweet* (*Chimonanthus fragrans*), *Genista hirsuta*, *Coronilla glauca*, *Edgeworthia chrysantha*, *Forsythia spectabilis*, *Garrya elliptica*, *Berberis japonica*, *B. Mahonia*, *Andromeda floribunda*, single pink *Camellias*, *Parrotia persica*, *Hamamelis arborea*, *H. Zuccarariana*, *Prostrate Rosemary*, *Erica carnea* (in variety), *E. alpina*, *E. mediterranea* (in variety), *E. lusitanaica*, *Daphne Mezereum* (various colours), *D. Dauphini*, *D. Lauricola*, *Pericinkles*, *Laurustinus* (in variety), *Strawberry-tree*, *Narcissus paltidus præcox*, *Lithospermum Heavenly Blue*, *L. rosmarinifolium*, *Iberis petraea*, the *Corsican Hellebore*, *Lenten* and *Christmas Roses* (in variety), *Primroses*, *Crocus Imperati*, *C. susianus*, *Aconites*, *Blue-eyed Mary* (*Omphalodes verna*), *Violet Cress*, *Polyanthus*, *Carpathian Snowflakes*, *Viols*, *Winter Heliotrope*, *Aubrietias*, *Tufted Pansies* (various), *Algerian Iris*, *Snowdrops* (in variety), *Cyclamen Coum*, *Triteleia uniflora*, *Polygala Chamæbuxus purpurea*, *Mecaseca*, *Saxifraga apiculata*, *Anemone coronaria*, *Hepaticas*, *Anemone blanda*.

WORK OF THE WEEK.—A very large tree of the Willow-leaved Pear, having outgrown the space allotted it, has been well thinned out, being careful not to disfigure the tree, which is clothed during the summer with a fine old Rose and Clematis, to which has been added a plant of Polygonum Auberti. A small group of Clerodendron Fargesii planted a few years ago on a south border having pushed its suckers to an alarming extent among neighbouring shrubs, which they threatened to envelop, has, with the exception of one specimen, been dug out and the largest transferred to the home woods. A group of the fine scarlet Rhododendron Doncaster has been planted. *Abutilon vitifolium*, not making any headway where it was, has been transferred to a warm, sheltered border. *Lonicera pileata* is a charming dwarf evergreen shrub of the easiest cultivation. A plant having been put at the back of some taller-growing shrubs, it was decided to transplant it to a position where it could be better seen. All the lower part of the bush was found to have rooted wherever the branches had come into contact with the soil, and we were thus able to get a nice-sized group by severing these from the parent shrub and planting singly. A few more Hepaticas have been put out. Some of them are commencing to bloom. Pruning is still going ahead. The yellow *Jasminum nudiflorum* has been so beautiful this year that every shoot required for extension has been tied in, and, where possible, a few growths have been brought to the ground and a flat stone laid over them. In this way we find they root freely and may be detached from the parent plant the following season and planted separately. Having a few *Othonnopsis cheirifolia* to spare, a place was found for them on the ridge of a sunny bank over which the interesting blue-grey glaucous growths may fall freely. This plant revels in plenty of sunshine. The forking over and clearing up of shrub-berries are being carried out when the weather is at all favourable. A long and wide line of Violets which graces a retaining wall has been freshened up, cleaned, and top-dressed with a little fresh soil, and a line of flat stones placed upon their roots to dispel drought in

summer. Cuttings of a variety of the purple Willow called *Scharfenbergensis* have been put in by the waterside. E. M.

Sussex.

SOUTHERN COUNTIES.

Fruit-tree planting.—Several old trees having been blown down recently by rough winds and a few lost from old age in the orchard, the vacancies will be made good. The new trees will not, however, be planted in the places where the old ones stood. Plums will be planted where Apples previously stood, Apples in place of Plums; while Pears will succeed Apples. Holes $4\frac{1}{2}$ feet in diameter will be opened out two spits deep, the top spit, including the turf, placed on one side for putting into the bottom of the holes after the hard base has been loosened with a digging-fork. Stout stakes for the support of the trees (standards) will be driven in before planting and sufficient soil of a better quality for placing over and between the roots will be got ready by the side of each hole. Lengths of wire-netting to protect the stems of the trees from rabbits will also be got ready to put round them when planting is completed.

Scions for grafting.—These should be selected without further delay, tied in bundles, labeled, and heeled in under the north side of a wall or hedge to keep the bark firm and plump and the buds dormant. The stocks should now be partly cut back, whether they consist of young stocks not having yet been grafted or established, healthy trees on which it is desired to work another variety. In the latter instance the cutting back should be done in such a manner that shapely heads will result when the scions make growth and in due course furnish the trees anew with branches. In regard to Apples no scions should be taken from trees infested with American blight, nor from those which have been subject in the past to scab, black spot, and other fungoid diseases.

Propagation of Currants and Gooseberries.—As has on previous occasions been mentioned, it is always a good plan to have a reserve of bushes to which to resort for the making good of vacancies caused by death and so forth in the quarters. Both are easily propagated from cuttings, of which an ample supply is ready to hand beneath the recently-pruned bushes. Those of medium size and having the wood well ripened are the most suitable. The making can be deferred until a wet day occurs. In the meantime the cuttings must be kept from shrivelling by heeling them in to about half their length in a cool, damp position. No Gooseberry cuttings should be saved from bushes which have suffered from "mildew" in the past.

Spraying.—Work among hardy fruits is now sufficiently advanced to allow of a start being made with the spraying of the trees. By the time the spraying of those on walls is finished, pruning, the orchard excepted, will have been brought to a conclusion. As usual, a preparation which acts both as a fungicide as well as an insecticide will be used, this being applied at a less strength to Apricots, Peaches, and dessert Cherries than to other kinds of fruits. This dissolves readily in warm water, but the hotter the water the more searching is its effect when applied to the trees. The great difficulty in connection with spraying is to secure a period of calm weather in which to carry it out. If a breeze springs up the work has to be suspended and delay occurs. If persevered with, waste results, and spraying done under such conditions is never so effective

as when the operator is able to direct the spray on to all parts of the tree without let or hindrance.

Plant-cleaning.—Before the season becomes too far advanced it is the rule to give the occupants of the stove a thorough cleaning, using an approved insecticide for the purpose. Sponging cleans the foliage, but for mealy-bug on Gardenias and scale on Crotons or other plants small, stiff brushes are required to remove them. The cleaning requires to be carefully done, otherwise the foliage is damaged and the beauty of the plants marred. For creepers on the roof a galvanised foot-bath is a capital receptacle in which to lay and clean the various portions of the growths as they are detached from the trellis. If a sufficient quantity of insecticide is diluted to the proper strength and placed therein it can be made to do duty not only for cleaning creepers, but other subjects as well. The opportunity is also taken to give the interior of the house a good cleansing and to perform the requisite amount of whitewashing afterwards. After such a cleaning of both house and occupants no further trouble for a considerable time need be apprehended. A point is made of fuming the house periodically with a nicotine compound which keeps mealy-bug under.

Cattleyas.—These are also carefully cleaned at the same time. The principal insect foe to contend with in their case is the "stock seed scale," which secretes itself in the axils of the leaves and beneath the scaly covering of the pseudo-bulbs, and therefore requires care and judgment to effect its dislodgment without injury resulting either to the leaves or the dormant buds or breaks at the base of the pseudo-bulbs. For this reason the cleaning has to be entrusted to those conversant with the nature and habit of growth of such plants. Other species of Orchids will be looked over at the same time, after which the roof-glass, woodwork, and stages will be scrubbed down and a rearrangement of the plants afterwards carried out.

Lothian Stocks.—These have now been shifted from $4\frac{1}{2}$ -inch pots to those 6 inches and 7 inches in diameter, the compost employed being rich and made firm round the balls with a potting-stick. As a certain percentage of the plants will yield single flowers, allowance for this has been made by potting rather more of each variety than are actually required. Surplus plants are stood in a cold frame until they can be planted outdoors, where they flower considerably in advance of plants raised from seed sown at the present time. Until the flower-spikes begin to show and push up, the plants in pots will be kept on a shelf where they can have an abundance of light and air. To obtain a really fine display in beds and borders of Lothian Stocks the seed should be sown now. This is best done either in pans or boxes, as the seed can then be thinly distributed, with the result that the seedlings are sturdy. Slight warmth is needed in which to raise the seed, and after the seedlings appear they require a position where they will be close up to the light. A sandy compost is best for filling the pans or boxes with, with a thin layer of the same passed through a fine sieve and placed on top. This should be well watered with a fine rose before the seed is sown. The seed should be lightly covered with fine soil and shaded until the seedlings appear.

Tuberous Begonias.—Seed of both single and double varieties should be sown without further delay if plants are required for autumn blooming. As the seed is very fine great care is necessary when sowing. Heat

is necessary for the successful raising of the plants. The fibrous-rooted varieties for the flower garden should also be raised in the same way if good, strong plants are required.

Vine eyes.—It is time these were inserted either in turves, pans, or small pots. The last are by far the best, as no root-disturbance follows when the time arrives for shifting them into larger pots. The eyes must be taken from sound, thoroughly-ripened wood. Those situated near the base of the laterals are generally found to be the most satisfactory. The eye should be cut, with about $\frac{1}{2}$ inch of wood remaining on either side of the bud, and the under part pared flat to about half of its depth. The pots should be filled to within an inch of their rims with rich, loamy compost. Some sand should first be placed on the soil. On this place the eyes and then cover with soil, leaving nothing but the bud showing on the surface. Well water and plunge the pots in a propagating-case or in a bed of leaves in a house where forcing is being conducted.

A. W.

It is not advisable to disturb the roots after the plants have commenced to grow. The compost used for potting consists of good fibrous loam and peat, adding sufficient broken crocks and charcoal to keep the soil porous. Ferns should never be over-potted. Specimen plants may be kept healthy and in a thriving condition in pots of a moderate size with the aid of liquid manure during their growing season. Ferns are most useful for decoration when in small pots.

Liliums, Gladioli, and other bulbous plants plunged in cold frames are inspected occasionally, and as growth progresses are gradually inured to the light. A batch of

Gloxinias has been placed in the forcing-house, selecting those which already show signs of starting. The tubers have been stored in boxes and slightly covered with fibre, therefore they can be easily examined. A light, rich soil suits Gloxinias, and for the first potting I consider it unnecessary to add any manure. Start them

shoots and retaining as much of the strong wood as possible.

Penzance Briars are vigorous growers and suitable for forming hedges or screens. They are seen at their best when allowed to grow at will, very little pruning being necessary.

Austrian Briars are very beautiful, and a good specimen in bloom always attracts attention. The plants are not strong growers, therefore little pruning is necessary, the principal requirements being the removal of weak and worn-out shoots. The flowers are produced on shoots of the previous year. Any old Rose-trees which are showing signs of exhaustion should have a good portion of the surface-soil removed from about the roots and replaced with good loam and well-decayed farm-yard manure.

Jasminum nudiflorum.—This is now in fine bloom. It is often spoilt through neglect of pruning, thus allowing of accumulations of annual shoots that assume, as time goes on, a faggot-like form. The proper time to prune this plant is im-



Fatsia (Aralia) japonica in a bronze bowl.

MIDLAND COUNTIES.

Vineries.—Preparations for forcing having been made by washing the interior of the houses, thoroughly cleansing the Vines, watering and top-dressing the borders, the forcing of successional Vines and Muscat varieties will now be commenced. The Muscat of Alexandria and other Muscat Grapes require a long season of growth and skilful management to bring the fruit to perfection. The Vines which are to furnish the principal crops should be started early in February, so that the fruit may colour well and ripen perfectly. The vineries should be closed and a night temperature of 50 degs., rising to about 65 degs. by sun-heat, be maintained, the Vines and the interior of the vinery being syringed two or three times daily.

Early Peaches.—Trees which have set their fruits and are beginning to grow should be disbudded gradually, removing all fruits that are deformed or badly placed.

Ferns will now be given a general overhauling and those that require it repotted.

in a minimum temperature of 60 degs. in a moist atmosphere.

Pruning climbing Roses.—All the pruning necessary for climbing Roses growing where their extension is unnecessary is the removal of weak and superfluous shoots, together with dead and diseased branches, but specimens growing on pergolas, pillars, or walls need a more severe pruning. The best time for the work is immediately the flowers are over, as the plants have then practically the whole of the season in which to develop their growth. If the old flowering shoots were removed entirely and the new shoots that developed from the base of the plant thinned according to the amount of space to be furnished, all that is necessary is to cut off the unripened ends of the branches and secure them before growth recommences. The thinning of the shoots of climbing Roses has often to be deferred until the plants are given a general overhauling in the winter, and where this is the case the pruning must be done very sparingly, cutting out only old and weak

shoots immediately the flowering season is over. This may consist, in old plants, in the cutting away of much of the older wood, so that the new shoots may develop flowering twigs for the following season.

Autumn-sown Onions succeed best when raised in a seed-bed and transplanted to well-prepared ground early in spring. The transplanting of these will be done as soon as the weather is favourable. Being perfectly hardy their roots will commence to grow, provided the ground is not frost-bound. A few days before planting, the ground (which was previously trenched and manured) will be pointed over with a fork, adding a good dusting of lime and soot, after which the surface is raked finely. Place the plants at distances of 12 inches from each other, leaving 15 inches between the rows. This is an important crop, as the bulbs are ready at a time when good Onions are scarce.

Shallots should be planted as soon as the soil is dry enough, choosing a light, sandy border. Plant in lines 1 foot apart, simply pressing the bulbs into the soil at every

10 inches. Nothing more will be necessary until growth commences, when the soil between the rows should be lightly stirred with a Dutch hoe. Garlic should also be planted, allowing a space of 18 inches between the rows.

Potatoes growing in pits must be afforded plenty of fresh air whenever this is possible. If further plantations have to be made the soil should not be less than 9 inches deep. This will lessen the need for frequent top-dressings and waterings. Where it is impossible to devote a pit to Potatoes a few may be grown in pots. Three sets are sufficient for a 10-inch pot. The pot should be liberally crocked and half-filled with loam and leaf-mould in equal parts. The sets should then be planted, leaving the remainder of the space for earthing up the plants as growth advances. They must not be subjected to excessive heat or overwatered during the early stages of growth.

Digging and trenching.—This important work is in arrears, owing to the excessive rainfall during December, and must be pushed forward as quickly as possible, so that the soil brought up from the bottom may receive all the benefit possible from the winds and frost which may occur between now and the time for seed-sowing and planting. On heavy land it is not advisable to attempt this work when the ground is in a soddened condition, full advantage being taken of all dry weather.

F. W. GALLOP.

SCOTLAND.

Rose-planting.—This, which had been delayed on account of bad weather, was completed in the course of the week. The varieties dealt with were principally of the climbing sorts and included Dorothy Perkins, White Dorothy, Crimson Rambler, and Hiawatha, with a few pieces of Excelsa. As the situation in which these were planted is rather exposed the newly-planted specimens were afforded as much shelter as possible by pleaching long branches of Laurels round the fence in their immediate neighbourhood, which will, to some extent, break the severity of the winds which at times blow strongly from the east and the south-west. At the same time additions were made to the Hybrid Tea Roses in beds.

Hardy fruit.—The weather having improved in the earlier part of the week, further progress was made with the tying and training of Peaches and Nectarines in the open, and it is hoped that this work will be completed in the course of a day or two. This will finish the work upon the walls, and afterwards the whole of the trees will be given a mulch. Opinions differ as to the best time at which to mulch, but from observation I think that there is no time like the present. The soil is, as a rule, in a good state as regards moisture, and if mulching is resorted to at this time it protects the surface roots from any temporary dryness when the searching winds of spring begin, and which sometimes dry up the surface of the soil rapidly at a time when watering cannot very well be attended to. In the course of the week, also, the latest plantation of Raspberry canes was attended to. This plantation is now entering upon its third season of bearing, the canes are well matured, numerous, and strong, so that, as is usual in these gardens, a good return is anticipated. After training was completed the quarter was lightly forked up, and when time permits it will be top-dressed either with half-decayed manure or with decayed sifted vegetable mould, of which a good quantity is available.

Vegetable garden.—A considerable amount of digging has been done during the week. For a long time this work was put an end to by incessant rains, and even now the soil is in a rather sodden condition. Trenching is always preferred when possible, but with the advancing season there will be little time to trench, so that deep digging must be resorted to. Decayed and rotten leaves are regularly picked from among green vegetables, which continue to be plentiful and will provide sufficient material for a prolonged period. Leeks appear still to be growing. Savoys are useful, and Coleworts are not without value. Sprouts are firm and hard, the latest batch exceptionally so. I prefer to use a dwarf variety for the latest planting, as the plants do not suffer so much as the giant varieties from snowfalls or other extremes of winter weather. Seakale and Rhubarb from forced crowns are now in use, and further supplies have been put in.

Seed-sowing claimed attention in the course of the week. Among flower-seeds a good sowing of Lothian Stocks was put in. These ought to be sown early when they are intended to bloom in the late summer. Given a little heat in their early stages good plants can soon be worked up. These, if well hardened off, may safely go out in early May. Seed of Begonias, Lobelia, Ageratum, and Gloxinias was also sown, but the main sowings will be deferred until next month. Sowings of vegetable seeds included a few pans of Onions. The varieties preferred are Cranston's Excelsior and Ailsa Craig—two Onions which for general purposes yet hold their own. A small quantity of Leek seed was also sown for special purposes, but as there is always a danger of the plants from the first sowing bolting, a further sowing will be made in a fortnight's time. At the same time a sowing of Parsley was made, plants from this generally being useful to supplement the failing supply from beds or frames in late spring. Where Melons, Cucumbers, and Tomatoes are required, sowing ought not to be very much longer delayed. At this dull time rapid germination is needed in order to secure strong plants, and a heat of 80 degs. or 85 degs. is requisite. In the case of the flower and vegetable seeds referred to, a heat of from 60 degs. to 65 degs. will be ample, and after germination takes place care is necessary to prevent damping among the seedlings.

Stock-taking.—From time to time, as opportunity offers, stock is being taken of all plants in hand. It is always advisable to do this early in the season, so that there may be—in the case of bedding plants especially—no scarcity of any subject which may be required throughout the year. Propagation now is more easy of accomplishment, and should there have been any casualties during winter the losses can soon be made good. At the same time estimates ought to be made of the possible quantity required of each variety. After a few years' experience one can generally form a pretty good idea of the necessary numbers, but at the same time it is always better to have a few plants too many. A 10 per cent. margin is, generally speaking, quite safe, and allows for deaths or accidents after planting.

Propagating-pits should now be overhauled and cleaned. These, during the spring, are so indispensable that a little attention at this time is well repaid. Some use sand as a rooting medium, others prefer a mixture of sand and finely-sifted soil, but I find nothing equal to Cocoa-fibre, with the addition of a little finely-crushed shells. This mixture seems to

suit practically everything which is inserted—the cuttings root quickly and damping is unknown. If there are about 4 inches of fibre in the pit it will be found that it generates a mild bottom-heat which is lacking in the case of sand, or of sandy soil, and which is of much advantage when hot-water pipes are not led through the pit. Further, when fibre is used there is no danger from slugs, which, however careful one may be, are almost certain to be introduced when soil mixtures are used.

Pot Vines will make progress at the roots as soon as the foliage begins to move. They will then require a stimulant in the form of diluted liquid manure or of chemical fertilisers in solution. A further advantage will ensue if the pots can have a zinc collar affixed within which well-decayed fibrous old loam can be packed over the surface roots.

Plant-houses.—During the week pressure of other work has led to plant-houses receiving only the needful attention in respect to watering, ventilation, and firing. Owing to the rather sunless weather damp is more pronounced than usual, and a trifle more fire-heat than is usually necessary has been given, with, of course, as much ventilation as possible. Watering is done in the early part of the day, and, meantime, the ordinary washing-down of pathways is suspended. W. McGUFFOG.

Balmac Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

JANUARY 25TH, 1916.

THE fortnightly meeting held on the above date was of unusual interest for the season of the year, the earliest alpine—much earlier than usual by reason of the genial weather conditions—constituting a show in themselves. Of considerable charm was the representative collection of Violets from Corfe Mullen, finer than which have rarely been seen. Perpetual-flowering Carnations, too, were very fine, though not numerous shown, while early-flowering and other shrubs, with greenhouse plants and Ferns, contributed not a little variety. Orchids were freely and well shown. Many boxes of Canadian-grown Apples were on view.

HARDY FLOWERS.

These, coming from many sources, were for the most part well grown and nicely displayed. Without doubt one of the finer collections was that from

Mr. Maurice Prichard, Riverslea Nursery, Christchurch, Hants, his lot including a choice assortment of alpines, chiefly Saxifrages, with Lenten Roses and other things. Of the former the colonies of S. Elizabethæ, Mrs. Leng, apiculata, and Haagii, all yellow-flowered sorts of easy cultivation and much merit, were very effective, while such as S. Burseriana Gloria and S. B. tridentina (white-flowered) were a considerable attraction. The very shy-flowering S. Salomoni, one of the best of the small-growing, encrusted carpeting kinds, was full of bud and blossom. It also is white-flowered. Saxifraga (Megasea) speciosa rosea is a particularly good-coloured form and flowering well at this season is most welcome. Lenten Roses were beautiful or quaint, and always of interest.

Messrs. William Cutbush and Sons, Highgate, N., showed in excellent taste good, well-flowered tufts of Christmas Roses; also hardy Heaths, Hepaticas in red, white, and blue, Iris alata, and such choice Saxifrages as Kestonensis (very pure white), S. Burseriana major, and S. Boydi alba. Daphne japonica was also remarked. Forsythias, Prunus triloba, and others were in the background.

Mr. G. Reuthe, Keston, Kent, had many interesting plants, both flowering shrubs and alpines. Of the former none were more effective than the handsome flowering growths of *Berberis japonica*, which provide a wondrous profusion of yellow, fragrant flowers naturally at this season. Choice *Rhododendrons* as *moupinense* (white, copiously-spotted crimson), and *R. mucronulatum* and *R. dahuricum semper-virens* (both with reddish flowers) are also welcome now. *Ribes laurifolium*, in flower, was among rare things, though there were many of the choicer alpines on view.

Messrs. Waterer, Sons, and Crisp, Twyford, arranged a rock bank, planting it with alpines and shrubs. The finer flower masses were created by *Saxifraga Boydi* alba, *Soldanella alpina*, and *Sisyrinchium grandiflorum*, a plant we see all too rarely in established clumps in the garden.

Messrs. Whitelegg and Page, Chislehurst, also had a considerable display of alpines, showing among others the fine encrusted *Saxifraga calabrica*, which, however, was not in flower. Of those in bloom *S. coriophylla* and *S. Boydi* alba (white), *S. Faldonside*, *S. apiculata*, and *S. Elizabethæ* were all arranged in ample groups.

Messrs. Herbert Chapman, Limited, Rotherside Gardens, Rye, who specialise in early bulbous Irises, showed a nice assortment of these plants, the fine blue *I. Cantab* being very conspicuous. Others, as *I. Tauri* and *I. sind-pers*, were in smaller numbers, while a batch of seedlings contained many promising things. *Iris Little Bride* (whitish falls and bluish-white standards, almost an albino reticulata) gained an Award of merit.

Mr. Clarence Elliott, Stevenage, showed the best-flowered batch of *Saxifraga Boydi* alba we have seen for a long time, a score or two of plants being studded with the handsome pure white flowers. *S. Burseriana Gloria* was very good, the new pink-flowered *S. Irvingi* and the yellow-flowered *S. Faldonside* appealing respectively as the newest and best of this valuable race.

Messrs. Piper, Bayswater and Barnes, also had an extensive lot of alpines.

VIOLETS.

The superb gathering of Violets from Mr. J. J. Kettle, Corfe Mullen, near Wimborne, was a great attraction, as welcome for fragrance as for the handsome bunches of well-grown flowers. Nearly forty varieties were displayed, and it is only rarely that such cultural excellence is observed at an exhibition. *La France* still leads as the finest single dark, *Luxonne*, *Ascania*, *Admiral Avellan*, *Princess of Wales*, and *Wellsiana* being all worthy sorts. The finer doubles were *Colcroonan* (rich lavender), *Jamie Higgins* (silvery-mauve), *La belle Parisienne* (an improved *Marie Louise*), *Mrs. J. J. Astor* (of reddish hue, very distinct), and *Mrs. J. J. Kettle* (a silvery-mauve novelty and one of the best of recent additions).

CARNATIONS.

These were in uncommonly good condition, the fine quality due, in no small degree, doubtless to the almost entire absence of fog this winter.

Messrs. William Cutbush and Sons, Highgate, N., showed their new perpetual Malmaison variety *Sabina*, a handsome flower of rich scarlet. The lovely salmon-coloured *Lady Ingestre* was very well displayed, while *Mrs. Mackinnon*, *White Swan*, and *Triumph* were noted among others.

Messrs. Allwood Brothers, Haywards Heath, arranged an extensive assortment

of high-class blooms. Some good novelties were here, particularly in the fancy class, *Mrs. B. P. Cheney* (white and scarlet), *Rosalind* (the best yellow-ground so far), and *Brilliant* (white fancy with maroon markings) being some of them. *Mary Allwood*, we think, has but rarely been better, the brilliant colour catching the eye at once. *Rosette* was the best *crise*, *Terrific* and *Mrs. C. F. Raphael* (pink and scarlet respectively) representing the perpetual-flowering *Malmaisons*.

Messrs. Stuart Low and Co., Enfield, also contributed handsomely of these flowers, their more striking sorts being *Mrs. Mackay Edgar* and *May Day Improved*, both of the clear salmon tone so much valued. *Philadelphia* stood out well among *crise*-coloured sorts; *White Wonder* and *Matchless*, indispensables in the white-flowered set, were also prominent. Messrs. Stuart Low also showed *Cyclamens* well.

GREENHOUSE FLOWERS AND FERNS.

Messrs. H. B. May and Sons, Limited, Edmonton, had an excellent group of greenhouse and hardy Ferns associated with groups of *Cinerarias*, *Euphorbia jacquiniæflora*, and *Primula japonica* in variety. Among Ferns, *Polypodium gluticum crispum* and *Adiantum Farleyense gloriosum* were prominent, the former striking and distinct, the latter one of the most graceful and beautiful. The hardy evergreen *Scolopendrium* were in considerable variety, such as *S. vulgare crispum Robinsoni*, and *S. v. grandiceps*, one of the best tasselled sorts, being noted.

Messrs. W. Wells, Limited, Merstham, had excellent stands of the late pink-flowered *Chrysanthemum Bertha Lachaux*, which should prove of much value. *Carnation Aviator* (rich scarlet) was well shown.

Messrs. Carter and Co., Raynes Park, exhibited an excellent lot of *Primula sinensis*. Of these *Princess May* is, without doubt, the gem of the pink-flowered lot, and, while of delightful colouring, produces a well-developed truss of handsome flowers. *Fairy Queen* is one of the best of the stellata group, an Apple-blossom association of pink and white that is singularly pretty. *Carter's White* belongs to the same section and is very pure and good. *King Edward VII.* is one of the large-flowered class and pure white.

SHRUBS.

Messrs. J. Cheal and Sons, Crawley, sent some interesting things in this section, the male and female forms of the Alder and the male form of *Hippophæ rhamnoides* being among the number. *Hamamelis* in variety, *Forsythias*, *Cydonias* of sorts, and *Garrya elliptica* were also remarked.

Mr. L. R. Russell, Richmond, showed two varieties of *Hamamelis Zuccariniana*; also *H. arborea* and *H. mollis*, all welcome at this season of the year. The groups of *Daphne Mezereum* and *D. M. alba* were particularly good.

ORCHIDS.

Sir Jeremiah Colman, Bart., Gatton Park (gardener, Mr. J. Collier) sent a remarkable exhibit of *Cymbidiums*, the chief of which were raised by him. They were in great variety, pink, rose, buff, yellow, and other shades. *Lady Colman Golden Queen* was one of the more distinct in a particularly good lot.

Messrs. Sander and Sons, St. Albans, had many well-flowered examples of *Dendrobium Wardianum giganteum*; also *Cattleya Snow Queen* and *Lælio-Cattleya J. F. Birkbeck* among others.

Messrs. Armstrong and Brown, Tun-

bridge Wells, showed superbly-flowered examples of *Miltonia Blueana*, the rare and beautiful *Cattleya Percivaliana alba* with *Odontoglossum Anzac*, and the fragrant white-flowered *Pilumna nobilior*. In a central group were several seedling *Odontoglossums* of much promise.

Messrs. J. Cypher and Sons, Cheltenham, had a group rich in *Cypripediums*, the pick of which were *C. Thompsoni*, *C. aureum virginale*, and *C. Lecanum Clinkaberry-anum*. *Sophronitis grandiflora* was brilliant at the margin; there were also good *Calanthes* and *Brassó-Cattleyas*.

Messrs. Charlesworth and Co., Haywards Heath, had some exceptionally good *Odontiodas*, of which *Langowoyi* and *O. Juan* in two distinct shades were the best. *Odontoglossum Lambeauianum* var. *Lyoth*, *O. Louise*, and *Sophró-Cattleya Saxa*, a most brilliant flower, were noted.

Messrs. J. and A. MacBean, Cooksbridge, contributed *Odontiodas*, *Cymbidiums*, and a nice lot of *Lælia anceps Williamsiana* (pure white with crimson markings), and *Odontoglossum Fascinator aureum*.

FRUIT.

Mr. J. A. Baker, M.P., Harlesden, showed cases of Canadian Apples, including such as *Northern Spy*, *Phœnix*, *Baldwin*, *Canada Red*, and others.

Mr. J. C. Allgrove, Middle Green, Langley, sent a dish of the late dessert *Pear Mrs. Seden*, a cross between *Seckle* and *Bergamotte Esperen*. The fruits, which are of medium size, are firm and juicy.

A complete list of the certificated plants and medals for groups appears in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Azalea leaves unhealthy (*G. A.*).—The leaves sent are badly attacked by thrips, caused by an overdry atmosphere. The affected plants should be frequently syringed with diluted Tobacco-liquor, or some other good insecticide, laying them on their sides, and getting at the under sides of the leaves. Forceful syringing (in the same way) with pure water will also do good.

Montbretias (*D. A.*).—As a rule, *Montbretias* flower abundantly if not too crowded, but in suitable soil their increase is so rapid that in a few years a solid mass of corms is formed. If allowed to get into this state the flowers will be few and far between. As soon as it is seen that the plants are crowded they should be lifted and replanted, the corms being placed from 2 inches to 3 inches apart, according to their size. The best time to lift is immediately the flower-spikes have shed their blossoms, as the corms then throw out roots before the winter sets in.

Increasing Aspidistras (*D. G.*).—The way to increase this plant is by division. In the spring, before growth commences, turn the plant out of the pot, wash the soil away from the roots, disentangle them, and then divide in pieces as may be required—say, in the case in question, divide the plant into four portions—re-pot these in good loam and sand, and place them in a temperature of 55 degs. to 60 degs. Keep rather close and moist for a time, and they will soon become re-established, when they can be gradually inured to full exposure to the air. After potting be very careful with the watering, as if too much water is given before the roots are moving freely in the fresh soil the plants will suffer.

Camellias doing badly (*R. W.*).—Your planted out trees are in bad condition, due to the beds being a mass of fungus, and doubtless the drainage is bad. Now is a good time to remedy this defect. Lift the plants this month or March, and clear out the old bed, giving new drainage and fresh soil, using plenty of turfy loam and peat, broken charcoal, and coarse sand. Many do not advise rough peat, but your plants will need it. You will, no doubt, find many of the large roots decayed. Replant firmly, and, if possible, shorten the tops where the foliage is bad. The conservatory must be kept much warmer for a time to encourage new growth. Also shade the trees, and syringe them overhead several times a day.

Asparagus plumosus (*Pteris*).—This is now taking the place of the *Adiantum*, and rightly so, for as a pot plant it stands the dry atmosphere of a room much better than a Fern, and when cut there is no comparison between

the two, either in point of lasting or lightness of appearance. This Asparagus, if grown for cutting, must have plenty of root-room, and for this reason it is much better planted out, using a light rich soil for it to root into. Grown thus it is astonishing the number of fronds that is cut from the plants. Young growths which start up from the bottom in the course of a few weeks will be from 10 feet to 12 feet long; the branches from these soon developing and being ready for cutting. Pieces may be had of all sizes, from 6 inches to 2 feet in length, and about the same in width.

TREES AND SHRUBS.

Ruscus racemosus (B. B.).—The specimen sent is the Alexandrian Laurel (*Ruscus racemosus*), a near relative of the common Butcher's Broom. It is quite hardy and not particular as to soil or situation, but it succeeds best where moderately moist and in a partially shaded spot. It is at home where associated with the hardy Bamboos, to some of which it bears a certain amount of resemblance, for the slender shoots, which are pushed up to a height of 3 feet to 4 feet, have a good deal the aspect of a Bamboo. Apart from its desirable features as a graceful evergreen shrub, this *Ruscus* is very valuable for cutting, as the slender shoots, clothed with their deep green foliage, are most effective when arranged in a vase, particularly if lit up by a few flowers. In this way the sprays keep fresh and bright for a long time; indeed, it is one of the most durable evergreens that we possess for such a purpose.

FRUIT.

Retarding Vines (T.).—You should prune your Vines at once close up to the rods; but your other question as to keeping them back is difficult, as you want to keep the house full of plants that require a temperature through the winter sufficient to start the Vines. We see no way out of the difficulty, unless you can get the Vines rods outside for the next two months; the other alternative being to keep your house much cooler and not study the plants, as your Vines under present conditions cannot rest. Vines at rest should have no fire-heat of any kind.

VEGETABLES.

Pithy Celery (A Kitchen Gardener).—The cause of your Celery going pithy is a check of some kind; it is often caused by rank manures at planting. Too early moulding checks top growth, and in soils like yours early moulding up in a wet season would have a tendency to cause such growth. Another, and the worse fault, is allowing a crowded growth before planting in the trenches. If the plants get a check in the seedling stage they never recover, but make a pithy, deformed growth.

Planting Rhubarb (A. H.).—Divide your large roots of Rhubarb late in February or early in March, the exact date depending upon the weather and state of the soil. As you want the roots for forcing next December, cut them up into, say, three to four pieces, each piece having two or three crowns. Plant in deep-dug, well-manured land at a distance of 3 feet between the rows and 2 feet between the roots, planting firmly and in an open, exposed position. Cover the surface with short manure after planting, and do not allow the flower-spikes to grow. The plants come true from seed if you only have one variety in bloom at the flowering time. Sow early in March—in a frame, if possible, or on a warm border in the open later.

SHORT REPLIES.

A. O.—Suspend two or three thicknesses of ordinary fishing-net in front of the trees, resting the net on Bamboo poles fixed in the ground and leaning on the top of the wall. This will be quite sufficient. We hope to deal with this subject in an early issue.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*A Regular Reader.*—*Habrothamnus elegans Newellii.*—*B. B.*—The specimen you send is the Alexandrian Laurel (*Ruscus racemosus*). See also note on this page.—*Evelyn G. Smith.*—The tubers you send are probably those of an *Oxalis*, but without flowers it is hard to say. Pot them up in some sandy loam, and stand them in the greenhouse. When leaves and flowers appear, please send same on, and we will do our best to help you as to the name.

Names of fruits.—*G. S.*—Apples: 1, Adam's Pearmain; 2, Ribston; 3, Annie Elizabeth.

CATALOGUES RECEIVED.

KELWAY AND SONS, Langport.—*Wholesale Catalogue of Flower and Vegetable Seeds.*
J. C. WHEELER AND SONS, Gloucester.—*List of Seeds for 1916.*
JNO. P. BAILEY, Sarnian Nurseries, Guernsey.—*List of Tomato Plants.*
THE PREMIER SEED CO., LTD., Brighton.—*Seed Guide, 1916.*
CHAS. H. PAGE, Cromwell House, High Holborn, W.C.—*Current Price List of Cordon Fruit-trees, Loganberries and their Hybrids, etc.*

LONDON COUNTY AND WESTMINSTER BANK, LIMITED.

(ESTABLISHED IN 1836.)

HEAD OFFICE:
41, LOTHBURY, E.C.

CAPITAL £14,000,000, IN 700,000 SHARES OF £20 EACH.

PAID-UP CAPITAL - £3,500,000. | RESERVE - - - - £4,000,000.

The Rt. Hon. The VISCOUNT GOSCHEN, *Chairman.*
WALTER LEAF, Esq., *Deputy-Chairman.*

Joint General Managers: F. J. BARTHORPE, J. W. BUCKHURST.
Secretary: A. A. KEMPE.

BALANCE SHEET, 31st. DECEMBER, 1915.

LIABILITIES.				ASSETS.						
	£	s.	d.	£	s.	d.	£	s.	d.	
CAPITAL—Subscribed ..	£14,000,000			CASH—						
700,000 Shares of £20 each, £5 paid ...	3,500,000	0	0	In hand and at Bank						
RESERVE	4,000,000	0	0	of England	23,250,541	15	3			
CURRENT AND DEPOSIT ACCOUNTS	106,938,701	1	5	Money at Call and						
CIRCULAR NOTES, LETTERS OF CREDIT,				Short Notice	5,141,897	5	9			
COMMISSION LOANS, AND OTHER AC-								28,392,439	1	0
COUNTS, including provision for				BILLS DISCOUNTED				11,351,683	15	6
Contingencies	2,222,225	14	11	*INVESTMENTS—						
ACCEPTANCES FOR CUSTOMERS AND OBLI-				Consols and 4½ per						
GATIONS under Treasury Minute of				cent. War Loan (of						
17th November, 1915	5,022,402	8	5	which £2,050,376 is						
ENDORSEMENTS ON BILLS NEGOTIATED				lodged for Public						
REBATE ON BILLS not due	72,853	0	0	Accounts, and under						
PROFIT AND LOSS BALANCE, as below ...	478,584	19	0	Treasury Minute of						
				17th November,						
				1915), and other						
				Securities of, or						
				guaranteed by, the						
				British Government	32,156,711	7	0			
				Indian Government						
				Stock, and Indian						
				Government Guar-						
				anteed Railway						
				Stocks and Deben-						
				tures	950,277	18	11			
				Colonial Government						
				Securities, British						
				Corporation Stocks,						
				and British Railway						
				Debenture Stocks	953,274	11	0			
				Other Investments ...	1,472,661	11	8			
								33,532,925	8	7
				LONDON COUNTY AND						
				WESTMINSTER BANK						
				(PARIS), LIMITED—						
				4,000 £20 Shares						
				fully paid				200,000	0	0
				16,000 £20 Shares						
				£7 10s. paid						
				ADVANCES TO CUS-						
				TOMERS AND OTHER						
				ACCOUNTS (including						
				pre-moratorium Stock						
				Exchange Loans) ...				39,941,301	17	6
				LIABILITY OF CUS-						
				TOMERS FOR ACCEPT-						
				ANCES, &c., as per						
				contra				5,022,402	8	5
				BILLS NEGOTIATED, as						
				per contra				72,853	0	0
				BANK AND OTHER FRE-						
				MISES (at cost, less						
				amounts written off) ...				1,782,663	18	5
								£122,296,269	9	5

Dr.				PROFIT AND LOSS ACCOUNT.				Cr.			
	£	s.	d.		£	s.	d.		£	s.	d.
To Interest paid to Customers	1,456,706	0	2	By Balance brought forward				from 31st December,			
" Salaries and all other expenses, in-				1914				160,112	3	3	
cluding Income Tax and Auditors'				" Gross Profit for the year				after making provision			
and Directors' Remuneration	1,472,234	2	10	for Bad Debts and Con-				tingencies, and includ-			
" Rebate on Bills not due carried to				ing Rebate brought				forward from 31st De-			
New Account	63,502	5	8	ember last				4,096,327	4	8	
" Interim Dividend of 9 per cent. paid											
in August last	315,000	0	0								
" Amount written off Investments, and											
further provision for Depreciation ...	472,412	0	0								
" Further Dividend of 9 per cent., pay-											
able 1st February next (making 18											
per cent. for the year) £315,000 0 0											
" Balance carried forward 161,584 19 0											
	478,584	19	0								
	£4,256,439	7	8					£4,256,439	7	8	

GOSCHEN, }
WALTER LEAF, } *Directors.*
ALFRED DENT, }

F. J. BARTHORPE, } *Joint General*
J. W. BUCKHURST, } *Managers.*
T. J. CARPENTER, } *Chief Accountant.*

AUDITORS' REPORT.

We have examined the above Balance Sheet and compared it with the Books at Lothbury and Lombard Street, and the certified Returns received from the Branches.
 We have verified the Cash in hand at Lothbury and Lombard Street and at the Bank of England and the Bills Discounted, and examined the Securities held against Money at Call and Short Notice, and those representing the Investments of the Bank.
 We have obtained all the information and explanations we have required, and in our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us, and as shown by the Books of the Company.
 FRED. JOHN YOUNG, F.C.A., } *Auditors.*
G. E. SENDELL, F.C.A., }

LONDON, 17th January, 1916.

GARDENING ILLUSTRATED.

No. 1927.—Vol. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

FEBRUARY 12, 1916.

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NOTES OF THE WEEK.

Spring flowers in Scotland.—Snowdrops are now (January 15th) fairly numerous, though later than usual. The Winter Aconite, like Snowdrops, is later than usual. The Vernal Snowflake looks as if it will be in flower about the usual time, and Iris reticulata promises well at the foot of a Peach-wall in company with *I. stylosa*.—W. McG., *Kirkcudbright*.

The Servian Quinces.—Some people are at last recognising the value of the two Servian Quinces introduced some years ago by Lemoine, of Nancy. The one is called *Cydonia Vranja* and the other *Cydonia Leskovatz*. They both require to be grown in a similar way to Apples, but then produce fruit of an enormous size and good flavour for mixing with Apples when cooked. In warm summers the fruit is beautifully coloured—yellow and red.—R. H. BEAMISH.

The Winter Jasmine in Scotland.—The general opinion in this district is that the display upon the Winter Jasmine at present is the best for a series of years. After the flowering season last spring, and just after the annual pruning, the weather was exceptionally mild, and that, combined with, on the whole, suitable conditions throughout the season, is responsible for the fine show. The value of *Jasminum nudiflorum* on walls at this season is great, and, when cut, the sprays last for a long time in water.—W. McG.

Adonis amurensis.—Nestling under the branches of the Yellow-barked variety of the Dogwood, *Adonis amurensis* has again come into bloom. This Amoor River *Adonis* is very welcome. It is partly shaded, but the Dogwood allows what little sun we have had to reach the flowers, so that they open on bright days. Even in stormy weather the closed blooms give the touch of gold we love in the dull season. I find a light loam suits it quite well, and it evidently does not object to the roots of the Dogwood robbing the soil of some of its nourishment.—S. ARNOTT.

Primula denticulata.—On January 19th the flowers of this *Primula* were showing colour, despite the continual rainfalls which have been experienced of late. This and *P. d. cashmeriana* thrive here in almost every position, flourishing alike in cold, heavy soil, in lighter and more porous mediums, and in the rock garden. Some of the finest pieces of last spring grew in a gravel walk upon which the seed had

been blown. Indeed, so suited are the conditions to its well-being that annually sturdy seedlings have to be hoed out of the walks which, in places, become perfectly green with them.—W. McG., *Kirkcudbright*.

Peat-ashes.—In reply to "R. B." (page 50, assuming that the Peat referred to is similar to that which is used for fuel in parts of Scotland, the ashes are distinctly useful. As "R. B." is probably aware, these are very fine and white, so that some considerable consumption of the material would be required to obtain a good bulk of ashes. These must be kept dry until required, for if wetted, even once, a proportion of their value is destroyed. Like wood-ashes, these can be utilised for Potato ground, for sowing in the drills prepared for Carrots or Onions; indeed, for any purpose for which wood-ashes are adapted. Peat-ashes are further valuable in potting composts, more particularly in the case of Ferns.—W. McG., *Balmae*.

A note from Hurst Court.—January at Hurst Court is like spring. A fortnight ago (January 15) I saw partridges paired, a most unusual sight so early. Violets (white and blue) are in flower and Peaches in bud. Weeping Willows are covered with golden-green leaves, and though *Lonicera fragrantissima* has been out a month and Double Daisies are in full bloom (not merely one or two), yet not one *Iris stylosa* has made its appearance, though *I. reticulata* (the red-purple one) has been out a fortnight and the dark blue is just coming into flower. One spike of *Kniphofia* (Torch Lily) is out. I do not know the name of this variety, but here it flowers from early spring till autumn, and in a damp, cold border with no sun. After these the mention of *Omphalodes verna*, *Arabis*, etc., seems rather tame.—ALICE MARTINEAU.

Rhododendron dahuricum sempervirens.—Even admitting its great fault—that of scragginess—this *Rhododendron* is well worth growing, because of its early flowering. It gives us small, fine purple flowers at a time when they are extremely welcome. Writing now (January 25th), when none of the other early *Rhododendrons*, such as *nobleanum*, are in bloom, *R. dahuricum sempervirens* is in flower. It is in a bed on the shady side of a hedge which protects it from the gales which sweep across the Galloway hills and penetrate to my garden. It is erect-growing, scraggy, and apt to become bare in its

lower parts, but the branches are crowned with evergreen leaves and little clusters of small deep purple flowers. I prefer the rose-coloured flowers of the type to those of the form referred to here.—DUMFRIES.

Hamamelis arborea.—The statement made by "E. M." (page 51), that this is quite the best of the group may be taken as representing his view, but whether it would be endorsed by the majority is open to question. I should give preference to the Chinese *Hamamelis mollis*, but where opinions vary so much as in the relative beauty of different plants one must not be too egotistical. However, such an authority as Mr. Bean speaks of it as undoubtedly the finest of all known *Witch Hazels*, so that I am not alone in thinking of it in this way. "E. M." also refers to *H. arborea* as being one of the first to bloom. It is certainly in a general way later than *H. mollis*, which is sometimes beautifully in flower by Christmas.—W. T.

Iris reticulata and its diseases.—"S. A." (page 34), I think, rather misses my point. I merely meant that, given clean and healthy bulbs to begin with, and suitable soil, disease could quite conceivably be kept at bay. I am not clear as to whether *Myrosporum adustum* is parasitical to the bulb, or whether it is found under certain conditions of soil and moisture, and attacks the bulb, but in any case it is reasonable to infer that healthy bulbs planted in a favourable situation and with congenial soil would remain healthy. Equally, if the spores are in the soil a good position and exposure would assist in maintaining such bulbs in vigorous health and less liable to be affected by disease. The point appears to me to be interesting, for, beyond question, many bulbs of *Iris reticulata* are annually ruined by being put out, in a manner of speaking, in a haphazard way among more vigorous plants in the bulb borders.—KIRK.

Abies bracteata.—This beautiful Silver Fir, which was given a first-class certificate at the meeting of the Royal Horticultural Society on January 11th, has been long grown in this country. A native of California, it was first discovered by Douglas during his journey in 1830 to 1832. He was, however, not successful in introducing it, that honour falling to William Lobb, who, travelling on behalf of Messrs. Veitch, sent home in 1853 a supply of seeds from which a number of plants was obtained.

tained. *Abies bracteata* is more tender than most of the Silver Firs. For this reason it is more fitted for southern and western districts than for northern localities, while late spring frosts sometimes injure the young growths. The specific name of *bracteata* is derived from the long bracts with which the cones are furnished. The branch shown at the Horticultural Hall from Bury Hill, Dorking, had fifteen cones upon it.

Primula amœna.—This delightful *Primula* is now in full bloom out-of-doors, and has been for some days—a striking illustration of the mildness of the winter. Usually it does not start to bloom until April, for the district is an exposed one. Those readers who have not got it should purchase plants in small pots and plant on a light portion of the rock garden in February or March. It only reaches the height of about 3 inches, but it is well worth growing. Its flowers may be described as light purple, and are given freely when the plant is established.—E. T. ELLIS, *Westwood, Ecclesall, Sheffield.*

The Carpathian Snowflake (*Leucojum vernum carpathicum*).—This is now coming into bloom, its fragrant blossoms, each 1 inch across, on stalks about 1 foot in length, droop gracefully, each petal conspicuously tipped with a bright green spot. It is a more robust variety than *L. vernum*, and is more quickly established, while its value either when cut or in the garden cannot be over-estimated. I use it in a variety of ways, such as growing through long, broad lines of *Aubrietias*, among *Daphne Cneorum* and dwarf Heaths. For nooks in the rock garden associated with *Crocus Imperati*, the whole carpeted with *Saxifraga apiculata*, it would be useful, as all flower about the same time. It should be more often seen in gardens, its cultivation presenting no difficulty. Beautiful as the Snowdrops are, it is difficult to understand why they are so often preferred to this attractive and more ornamental form of the Snowflake. Planted beneath deciduous shrubs, or naturalised in the wild garden, it is quite a success. The bulbs, when established, flower freely.—E. MARKHAM.

Gardening has become a fashionable pursuit, and *The Times* is telling its readers how to grow Peas and Beans. What would John Delane have said of this phase of its activities?

For planting outside later we may sow Peas (Little Marvel) in boxes, in groups of three, at 4 inches apart, and Broad Beans, by twos (Mammoth Longpod). By sowing in groups the plants move with very little check when put out. Seeds which may be sown at once in boxes 3 inches to 4 inches deep are Onion (*Ailsa Craig*), Cauliflower (First Crop or Early London), Cos Lettuce (Dwarf Perfection), Cabbage Lettuces (Ideal and Golden Ball), and Brussels Sprouts (Matchless). These are moved when quite young to boxes at 1½ inches apart and later to a cold frame. Potatoes for planting in February may be set on end in a box and put in a greenhouse to sprout. Leeks (Prizetaker and The Lyon) and Celery (Solid White) may be sown at the end of January.

Mustard and Cress, the reader is told, may also be sown every week in a box. The *Morning Post* now has gardening articles in the same large type. The *Daily Mail* has evolved the common Carrot into a thing 4 feet long, but I am not a believer in evolution, and I have sent to Paris for seed of the little chubby Carrot one sees in the markets there. W.

FRUIT.

APRICOTS.

I AM not surprised to read "W.'s" remarks at p. 16 on the failure of Apricots. We certainly fail more with the Apricot than other fruit-trees, and I think in many cases the failure is due to late growth caused by excessive rainfall in the autumn; also by badly-drained or heavy soil. Many years ago, when living in the west-midlands, where stone fruits did well, it was nothing out of the common to see very old Apricot-trees on the gable ends of houses and buildings, often almost close to the chimneys, and in most cases on sloping borders. These trees bore regularly enormous crops. There was scarcely any winter pruning, as, what was done, was done in the growing season to admit sun and air to the fruit. Though often done roughly there was no canker or disease, but frequently far too many fruits. After the fruits were set the trees were given soap-suds and any waste water, but none was given after the crop was cleared. There was no rank growth as one often sees in these trees in rich borders. I think in a great measure the success obtained was brought about by the efficient drainage and abundance of limestone in the soil. The trees made a sturdy growth with a mass of fruit-spurs.

Many years later, in a locality further south, wishing to get similar results, I planted largely, but with indifferent success. I grew the trees in much the same way as the Peach or Nectarine, but I had to depend on worked trees and failed. I then planted on a wall facing west, with a drop of 6 feet to 8 feet on the other side of the wall. The border was largely composed of brick rubbish and chalk mixed with the loam, which was of a light nature. I got good results as regards fruit, and by no means rank growth, but I had losses from canker. To prevent this I lifted the trees every three years and kept the roots near the surface. Much water was needed from June to August, but none was given afterwards. As the trees attained age, and were too large to lift, I had losses. This brings me to the question of stocks, which, as "W." notes, are important. In the earlier days referred to most of the trees were seedlings, this in a large measure accounting for the splendid crops obtained. C. R.

TREATMENT OF OUTDOOR VINE.

I SHALL be much obliged if you will tell me the proper way to treat an outside Vine. It is growing up the house, and has not been pruned or attended to for some years. Last year there was plenty of bunches, but all went mildewed, and never ripened. It is a black Grape and very small. Will you please tell me how the Vine ought to be pruned and the proper time to do it?—E. R. G.

[Assuming the Vine in question has in the past been trained on the usual lines it will contain a series of stems or rods laid out either in a vertical or horizontal fashion, or it may be in the form of a fan. On these rods there will, or should be, spurs situated on either side at intervals throughout their entire length. It is the annual growths which emanate from these spurs which bear fruit when the Vines have proper attention. We therefore strongly suspect that this is where the neglect comes in, and is the reason for the Vine being in its present state. You will not, of course, be able to get the Vine back to its original condition in a season or two, and perhaps not at all, but your efforts should be directed towards attaining that end by cutting back the surplus wood to a point as near to the spurs as possible where young wood is situated,

which should be cut back to one or two buds. The effect of the cutting back may cause latent buds to push on the old spurs, and if such be the case the resulting shoots when next winter arrives should be spurred in or cut back to two buds. The portion projecting beyond the old spurs, or to where the cutting back will now take place, may then be dispensed with. It is a most difficult matter to explain in a reply of this description how, in such a case, the pruning should be carried out. Your best plan would be to get a practical gardener in your locality to do the pruning for you. This, we may add, should be done without further delay, as there is a risk of the Vine "bleeding," or much loss of sap following if it is left till warmer weather sets in. In regard to "starting," this will, when spring comes in, take place naturally. In "Vines and Vine Culture," by A. F. Barron, there is a chapter devoted to the cultivation of Vines on open walls, which you would find helpful. This publication can be obtained from Mrs. A. F. Barron, 13, Sutton Court-road, Chiswick, London, W., post free 5s. 6d.]

OUTDOOR PEACHES.

MANY people in the Midlands and further north have an idea that the Peach can only be grown successfully under glass, but if only a fraction of the labour annually bestowed on indoor Peaches were given to the culture of Peach-trees on suitable walls the results would be surprising. The trees should have a place where they will have a good chance to succeed, and special preparation of the soil is necessary to ensure success. If the soil is close and damp it should be rendered porous by the addition of broken bricks and lime-rubble, and as growth is far more difficult to deal with out of doors than under glass none of the stimulants generally recommended for Peaches under glass should be added to outside borders. In the case of a very poor and light soil a little well-decayed farmyard manure and bone-meal may, with advantage, be applied. Soot and wood-ashes in small proportions do much to render wood growth firm and fruitful, assisted when the trees get into full bearing by liquid manure and mulchings. When systematic pinching and stopping are practised the winter pruning will only consist in the removal of any semi-exhausted wood that may have been overlooked when thinning out the wood after the fruit was gathered. Nothing should be left on a tree which will die back. This winter pruning may advisedly be left till the beginning of March; indeed, the pruning must be guided by the climate of the district. The early blossoming of the Peach is one of the chief causes of failure out of doors, and if the flowering period can be delayed there is a much better chance of success. To this end the trees should be detached from the wall during winter and fixed to stakes or rods 3 feet or more from the wall, this retarding the flowering period for quite a fortnight. F. W. G.

Litford Hall, Oundle.

NOTES AND REPLIES.

Early vinery.—When the young shoots have fairly started, all those which may not be required ought to be rubbed out without delay. Canes which are right at the roots, and, consequently, healthy, will produce shoots much in excess of requirements, and the sooner those which are superfluous are got rid of the better. For a time the night temperature may range in the neighbourhood of 60 degs. with a fall of a degree or two towards morning should the weather be frosty. The shoots ought to be tied down to the wires as soon as

possible, but this should be done by degrees in order to prevent splintering or breaking the brittle young wood. There should be sufficient atmospheric moisture to induce and to maintain cleanliness and progress.—W. McG.

The best Apples.—It is interesting to note the persistent advocacy of the claims of Ribston Pippin in the pages of GARDENING ILLUSTRATED, and it is to be hoped it may lead to largely-increased planting and improved cultivation. Memory goes back to many orchards in the south of England in which were to be found Ribston trees in more or less numbers, and the wonderful difference in the fruit, as the result of good or bad cultivation, was very noticeable. One particular orchard I remember in which were some half-a-dozen standards of medium size as carefully tended as wall-trees which produced clean fruit of large size and splendid quality. There was little or no trouble with the enemies, now, unfortunately, only too prevalent in the shape of canker, American blight, and

asking what quantity of lime should be used, and the obvious answer would be it would depend upon the condition of the land. In no case would half a bushel per rod do any harm to a vegetable or fruit garden. The best time to apply it is when the land is uncropped. There are times when lime can be used as a dressing to check slugs and other insects, or as a dressing for fungus and other soil troubles. The best way of applying it as a dressing to fruit-trees and bushes is either with or without an addition of soot or sulphur. I have used the mixture in certain cases effectually, especially to check the depredations of bud-eating birds upon Pines and bush fruits. The best way of using lime in the fruit garden is to take the slaked lime in a box-barrow on the windward side of the trees and scatter the lime over the trees with a handy shovel. It is best done early in the morning when the trees are damp.—E. H.

Spot in Apples.—This disease is more widely spread and assumes a more virulent

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

A GARDEN SHELTER.

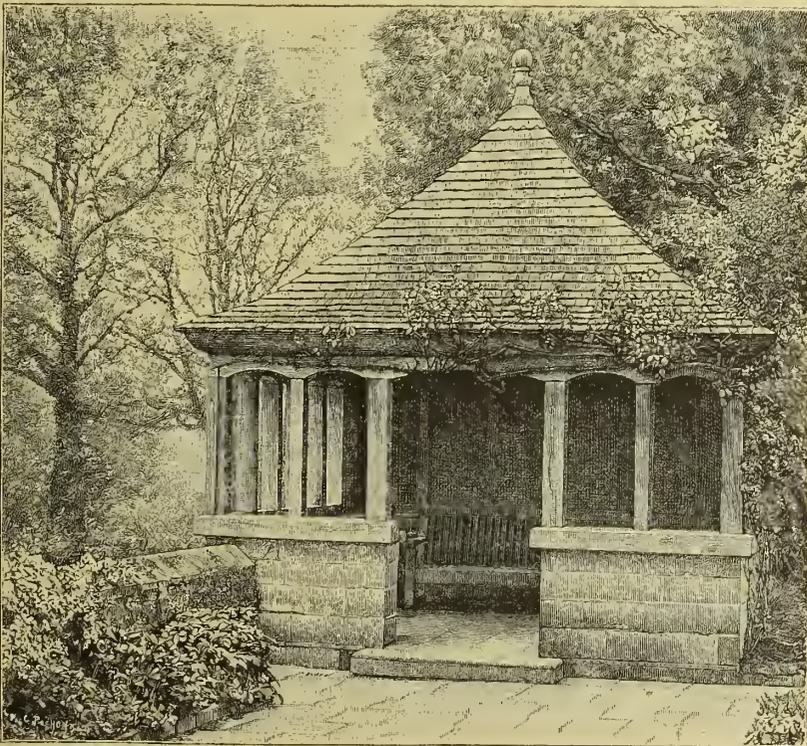
At one time the taste for garden houses was of an elaborate description, but the result did not show well in the end. Such garden houses were, as a rule, neglected, as being too far from the house or in some way useful for any human need. Still, a garden house on a simpler plan may here and there be worth having, and this one is made of sandstone blocks found on the place, with Oak timbers and shingle roof. If I had to do it again I think I should use stone slates, as more enduring and more friendly to Mosses and other plants that grow on such roofs.

W.

TRANSPLANTING CHRISTMAS ROSES.

The end of January is by no means the best time for dividing and transplanting the above-named subjects. Mr. F. W. Gallop, who, at page 62, advocates the practice, would have stood a far better chance of more quickly resuscitating the plants he refers to had he taken in hand the dividing and replanting in September last instead of to-day. Christmas Roses in an "unsatisfactory condition" are the commonplace of many a garden, and will remain so until gardeners realise the peculiar nature of their rooting, and more particularly when and how those roots are formed. Only in this relation can the Christmas Rose be said to be exacting or fastidious. Only, too, can it be said of it that the plant is impatient of removal or of being disturbed when its rooting peculiarities are ignored, and the plants divided and replanted at any time convenient to the planter. The vast majority of gardeners fail to grow this most precious of all hardy winter flowers either from this cause alone or in conjunction with "lifting and potting for flowering at Christmas," as not a few calendar writers recommend. Such plants, when the flowering is over, are often returned to their places, and with very little ceremony. It is but the beginning of the end with many of them, the last state of such plants being worse than the first. In this way our gardens are being depleted—or probably have long since been depleted—of many of the finer tufts, and the best varieties are not easy to obtain.

But very few hardy herbaceous plants, so far as my experience goes, have the peculiar periodical root action of this section of the Hellebore race—the Paeony is almost like circumstanced, and to some extent the Flag or Bearded Irises, if at another season of the year. The majority, happily, are not only vigorous enough, but—and this is the all important matter—sufficiently continuous or perpetual in their rooting to permit of being transplanted with impunity over a considerable period of time. For all such the ordinary methods suffice, while for the minority, which includes the Christmas Rose, special means must be adopted if we are to obtain from them all the good they are capable of giving. To this end an essential is early autumn planting—September, before all else. I say this with the full knowledge that a certain measure of success obtains from planting at other times, and in certain districts till spring. I learnt that way as a boy from my father, and in a county where the Christmas Rose generally did well. Since that time I have studied the root action of the Christmas Rose for my-



A garden shelter.

spot. It can hardly be too strongly enforced that it is only by good and careful cultivation alike below and above ground that the best results can be obtained, and there is no doubt that one is amply rewarded for the attention. Ribston Pippin, Cornish Gilliflower, and Cox's Orange Pippin are our three best Apples from a quality standpoint, and as Cornish Gilliflower is notoriously shy the pride of place must be awarded the Ribston. I have never tasted any Canadian Ribstons quite so good as our best home-grown fruit, but the extra specials in the imported fruit may not have fallen to my lot. The quality of the Newtown is excellent, but it is hardly likely to compete as a home-grown fruit with either Ribston or Cox's.—E. B. S., Hardwick.

Value of lime in the garden.—Do we use enough lime in our gardens? My impression is we do not, especially for opening up and improving clay soils. If we used more lime there would be less disease. We may narrow the question down by

form than in bygone years, and it looks as if spraying will have to be generally, if not universally, adopted if one is to get sound fruit. It was much in evidence in this neighbourhood last year, although some varieties seem much more susceptible to it than others. Last autumn I noticed a nice young standard of Warner's King carrying what appeared from the distance to be a lot of splendid fruit, but closer inspection showed nearly every Apple to be badly spotted, and in this case the disease had struck deeply, and a considerable portion of the Apple had to be cut away before getting to sound flesh. When one remembers that a few years back this Apple had the reputation of being a free, healthy grower unaffected by disease it looks, as above noted, that this black spot is getting much more common. The Blenheim, of which there are some fine old trees in several gardens, were, fortunately, very little affected.—E. B. S., Hardwick.

self and am well satisfied that the fullest measure of success is earliest reached by dividing and planting at the season I advocate. In conjunction with these, deep cultivation is a matter of importance, the roots descending fully 3 feet where the soil permits. In respect of

SOIL, the plant is not greatly fastidious, preferring a medium loam, perhaps, before all else, and a cool, though perfectly drained, bottom. Constant wet at the roots, or a sodden condition of the soil in winter, is fatal. Where such exists perfect drainage is of the first importance—an essential to success. In light, sandy, stony, poorly-cultivated soils the plants are dwarfed. In hot and sandy soils, too, they welcome thin shade, which in cooler-rooting mediums is much less needed. Cold, sunless positions, the product of a wrongly-selected site adjacent to high walls or buildings, are often detrimental to success.

Mr. Gallop rightly touches on what elsewhere I refer to as "the fallacy of the big clump," and nothing is more fatal to good results than transplanting in the clump intact. Why your correspondent recommends "tepid water" for getting the soil away from the roots of this perfectly hardy subject I do not know; it is as needless, though not quite so frivolous, as a "single-jet syringe," which he also advocates.

Big clumps laid on their sides are easily wrenched asunder with a couple of small handforks placed back to back. The operation is also more quickly performed, loss of root is practically nil, washing out unnecessary. Badly conditioned plants may often be wrenched asunder by the hand, their 3-inch to 6-inch long rapidly-decaying roots too often mutely demonstrating the very rough time they have experienced at the hands of the unthinking gardener.

E. H. JENKINS.

SPRING FLOWERS.

In the majority of public and private places the percentage of bulbs planted in the autumn of 1915 was far below the average, and the spring display, so far as they are concerned, will be proportionately trifling. Under such circumstances one will miss the glorious colours of Daffodils, Hyacinths, and Tulips, and be fortunate if able to fall back on batches of good stocky spring-flowering plants easily raised from seed or cuttings, like Wallflowers, Polyanthus, Myosotis, Tufted Pansies, and Double Arabis. If, however, one has to rely mainly on the above for the spring display it must be remembered that, although the raising is an easy matter, considerable attention is necessary to secure a good display, this only being obtained by the aid of nice bushy plants acquired by early sowing or striking, transplanting, and careful lifting. There are now so many different shades in Wallflowers that a certain number of beds can be reserved for this plant either in separate colours or mixed, as the taste of the planter may incline. I never cared for mixing bulbs with Wallflowers (a popular form being the May-flowering *Poeticus* Daffodil with *Vulcan* Wallflower). It was not at all a happy combination; in fact, we have had too much mixing of late years with little discrimination shown in the association of the right families. Similarly Polyanthus are best alone, with an occasional exception of a very dwarf plant like some of the *Aubrietias*. Small beds may be reserved for seedlings, and larger beds for strong clumps, the result of division in spring and keeping over in nursery quarters until planting time. I always think a bed of a really good strain of seedling

Polyanthus a wonderfully pretty feature, and the foliage being rich and luxuriant, and stems and trusses extra strong, a dwarf-flowering carpet is acceptable. To obtain these seedlings in first-class form early sowing and transplanting are absolutely essential.

Tufted Pansies, with care and attention, will last in flower the greater part of the summer. Occasional spaces may be left at planting time for the insertion of a summer-flowering plant like *Fuchsia* or *Heliotrope*. It is in association with trailing plants like *Myosotis* and some of the *Silenes* that the Tulips and late-flowering Hyacinths will be most missed, but substitutes will doubtless be found. Small clumps of the double-white *Arabis*, for instance, that in good soil grows very strongly, would be acceptable for breaking the otherwise flat appearance of the beds.

In places where the opportunity offers for naturalising bulbs, and this may be done even on a small scale, the display and the material for cutting will be very welcome if there are but few bulb inmates of flower-beds from autumn planting. Where one has no wide expanse to deal with, odd corners, nooks, and bits of rough grass, or portions of ground under a standard Apple or Pear, can be utilised for Daffodils in variety.

E. B. S.

Hardwick.

NOTES AND REPLIES.

Antirrhinums.—The value of these, especially the intermediate varieties, is now generally recognised. The present is the time to sow the seed and raise it in gentle warmth. Pans or boxes, according to the number of plants required, are the best receptacles in which to sow the seed. These should be filled with light, rich soil and the surface made firm and level. The seeds being small, a slight covering of fine sandy soil suffices. To avoid disturbing the seed the soil should be well watered before sowing. Shading with paper hastens germination and prevents the undue drying of the surface. A position where an abundance of light can be had is necessary to prevent the plants becoming drawn. As soon as the seedlings are strong enough they are pricked out into a frame. Varieties are numerous, and, as a rule, come fairly true. The most attractive of these are *Fire King*, *Orange King*, *Coral Red*, *Bonfire*, *Cloth of Gold*, *Pure White*, *Carmine Pink*, and *Rosy Queen*. *Nelrose* proved a great acquisition last year and will be grown again this season. *Golden Chamois* and *Crimson and Gold* are two tall varieties which are very effective when used in mixed borders.

Michaux's Bellflower (*Michauxia campanuloides*).—This fine Bellflower does not meet with the attention which it merits, and now, when the seed-list is being made up, a packet of seed of *M. campanuloides* might very well be included. The seeds germinate well under greenhouse temperature, and the seedlings should be handled as soon as possible. In July plant them out in rich soil in a sheltered exposure, and encourage growth as much as possible. During late autumn transfer them to their flowering quarters, and during the following season a rich display of white, pink, and pale-blue spikes, almost 6 feet in height, will follow. After flowering, the majority of the plants will succumb. It is advisable, therefore, to raise a batch of seedlings annually.—KIRK.

Tellima grandiflora.—This will grow on shady banks in rich soil, and is thus suited to places where many things would not survive. It grows from 1 foot to 3 feet high, has leaves something like those of a *Heuchera*, and long racemes bearing greenish-yellow flowers, which are often tinted with rose.—S. A.

INDOOR PLANTS.

CASSIA CORYMBOSA.

This, a native of Buenos Ayres, is worthy of outdoor cultivation wherever possible. It grows some 15 feet to 20 feet in height and in the early and late autumn produces corymbs of golden-yellow flowers which are so numerous as to nearly conceal the plant when at their best. It requires to be planted against the hottest wall and grown in rich, well-drained soil, as this treatment will tend to develop it to the greatest advantage. It should be planted deeper than most shrubs in order to minimise the effects of winter frosts. If this is carefully done and if it is afforded some slight protection during the winter months it may succeed in many places where it has hitherto failed, but in which it would, owing to the rich colour of the flowers, prove a valuable addition to a garden.

R. H. BEAMISH.

FLOWERING PLANTS FOR THE GREENHOUSE.

I HAVE a large greenhouse in which in the spring I have in flower *Primulas*, *Cyclamens*, *Deutzias*, *Genistas*, *Azaleas*, and *Arum Lilies*; in the summer, *Begonias*, *Gloxinias*, and *Pelargoniums*; in the autumn, *Chrysanthemums*, *Cinerarias*, *Coleus*, with fine-leaved plants as *Dracenas* and *Ferns*; in the winter, *Hyacinths*, *Tulips*, and *Daffodils*. I want more plants for the hall and the house, and will be glad if you can kindly help me by adding to the list and giving some hints as to their culture.—SINGLETON, *Bradfield*.

[In addition to the

SPRING-FLOWERING SUBJECTS mentioned by you, quite a long list of flowering plants suitable for the greenhouse might be named, among the best being *Acacias* of different sorts, especially *A. armata*, *A. Drummondii*, *A. hastulata*, *A. lineata*, and *A. ovata*. All of these have flowers of some shade of yellow. They may all be stood outside during the summer. *Alonsoa incisifolia*, an easily-grown, half-shrubby plant, bears spikes of orange-red flowers over a lengthened period. It is easily propagated in spring by seeds or cuttings. Some of the *Auriculas* are very expensive, but the alpine varieties are comparatively cheap and very effective in the greenhouse. Of *Boronias*—a class of hard-wooded plants that need much the same treatment as *Indian Azaleas*—the best are *Boronia megastigma*, with yellowish-brown, deliciously-fragrant blossoms, and *B. heterophylla*, whose flowers are carmine in colour. *Carnations* of the perpetual-flowering class are so generally grown that they must on no account be omitted. *Camellias* are well-known flowering shrubs for the greenhouse. Sown in summer, the herbaceous *Calceolarias* make a goodly show in spring. Beside the ordinary forms the graceful habited *C. Clibrani* can be recommended. *Clivia miniata* forms a handsome tuft of dark-green, strap-shaped leaves, from which are pushed up large hemispherical heads of orange-red flowers. *Clarkias* are very showy annuals, which, if sown in the autumn, will flower in the spring. *Coronilla glauca* has bright yellow, Pea-shaped blossoms. *Dielytra spectabilis* (*Bleeding Heart*) is a herbaceous perennial whose drooping, rose-coloured flowers are very effective when it is grown in pots. *Epacris* are Heath-like plants with flowers of different colours. Several Heaths flower in the spring, notably *Erica Spenceriana*, *E. Wilmoreana*, *E. eandidissima*, and *E. persoluta*. *Hippeastrums* (*Amaryllis*) are bulbous plants with large, showy Lily-like blossoms of different colours. If good clumps of Lily of the Valley are potted up the flowers will come on nicely

in the greenhouse. A great many Primulas are available for greenhouse decoration in spring, as apart from the Chinese Primula, there are *P. obconica* of various colours, *P. malacoides* lilac, *P. Kewensis* (pale yellow), and *P. floribunda* (rich yellow). All these can be raised from seeds sown in the spring. Rhododendrons of the greenhouse kinds are very showy when at their best. They should be given the same treatment as Azaleas. *Richardia Elliottiana* (the golden-flowered Calla) passes the

very pretty. *Agapanthus umbellatus* produces its heads of blue flowers towards the end of summer. The small tubers of *Achimenes* should be kept nearly dry in the winter and shaken clear of the old soil, and if repotted in early spring they will grow away freely and produce a large quantity of showy blossoms in summer.

The dwarfier varieties of Cannas are very effective when in bloom. *Celosia plumosa* is remarkable for its feathery

white flowers. Fuchsias, too, should be largely grown, while the fragrant blossoms of *Heliotrope* render it a universal favourite.

There are now several desirable species of Impatiens, of which *I. Holsti* (vermillion), and *I. Oliveri* (mauve) are among the best. The Balsam (*I. Balsamea*) is also a very beautiful tender annual. Lantanas are little shrubby plants, whose heads of blossoms, suggestive of a Verbena, are of different colours.

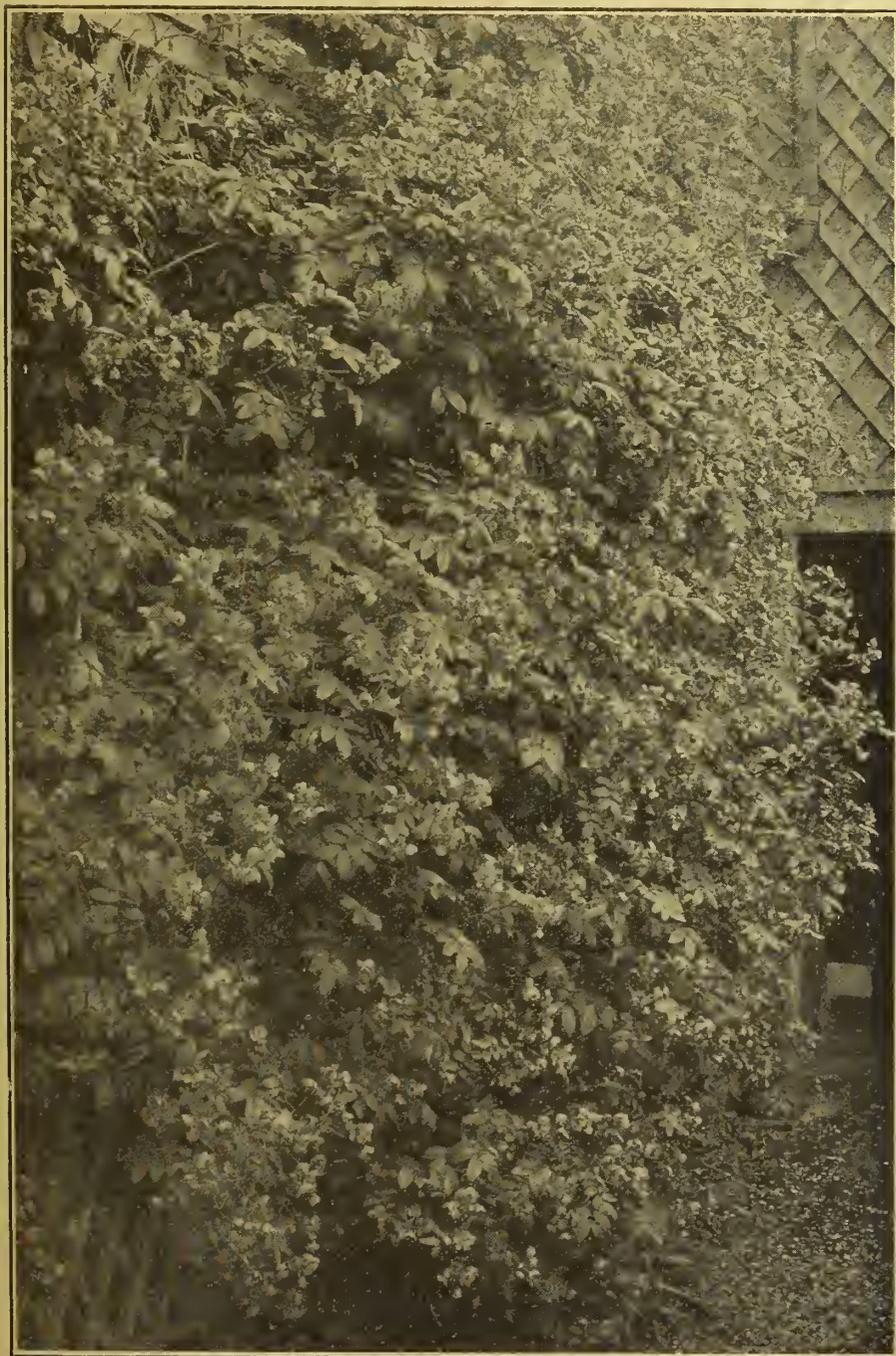
The long, silvery trumpets of *Lilium longiflorum* are much appreciated for greenhouse decoration. The bulbs should be potted early in the year and kept just safe from frost. Other Lilies available for the same purpose are *L. auratum* and *L. testaceum*. Several forms of Marguerite are now in cultivation, the most generally grown being the double-flowered Mrs. F. Sander. The Nemesias are charming annuals for pot culture. Three plants in a 5-inch pot will form delightful little specimens. Seed should be sown in spring. Petunias are well known and easily-grown, free-flowering plants, that may be increased either by seeds or cuttings in spring. Phyllocaeti are among the showiest of all the Cactus family. Except when in bloom they need full exposure to the sun. *Rhodauthe Manglesi* is a pretty everlasting annual with pink or white blossoms. Six to eight plants will suffice for a 5-inch pot. The blue flowers of *Statice profusa* last long in beauty. The flowers of the *Streptocarpus* are somewhat like small forms of *Gloxinia*, the cultural requirements of the two being about the same. Seed of *Torenia*s, pretty tender annuals with purple and yellow flowers, should be sown in spring.

All of the autumn-flowering Bouvardias are pretty, free-flowering, little shrubs with neat clusters of tubular blossoms of different colours, easily increased from cuttings of the young shoots in spring like Fuchsias. Some of the shrubby Begonias, such as *B. semperflorens*, *B. Weltoniensis*, and *B. Corbeille de Feu*, as well as the earliest of what are regarded as winter-flowering varieties, bloom in the autumn.

HEATHS.—Of the greenhouse Heaths that flower in the autumn *E. gracilis* is the best, its rosy-purple blossoms being borne in great profusion. There is a white variety—*navalis*. If *Lilium speciosum* is grown out-of-doors till the buds are on the point of expanding the flowers will come in nicely during September. *Lilium nepalense* and *sulphureum* flower later. Nerines are a class of remarkably showy bulbs whose flowers vary from white to crimson. The shades of scarlet and orange are particularly bright. They remain dormant in summer, during which time they need to be well exposed to the sun and kept quite dry. *Salvias* are plants of easy growth, that may be increased either by seeds or cuttings in spring. The best are *Salvia splendens* (scarlet), *S. azurea grandiflora* (light blue), and *S. leucantha* (white with mauve hairs). *Vallota purpurea*, a bulbous plant, has bright red, Lily-like flowers.

There is now a great number of varieties of *Veronica speciosa*, all of which will flower freely when grown as neat little bushes. They may be stood out-of-doors in the summer and taken under cover before frosts set in.

WINTER FLOWERING.—*Agathæa cœlestis* is a little bushy plant with Daisy-like flowers of a pale-blue colour. To obtain blooms in winter it should not be allowed to flower during the summer. Seeds or cuttings. The winter-flowering Begonias



Part of a plant of *Cassia corymbosa* in the open air at Ashbourne, Glounthaune, Co. Cork.

winter in a dormant state, when it should be kept dry and flowers in the spring. *Schizanthus* must be sown in autumn for spring and in spring for summer flowering.

Many shrubs are of great value in the greenhouse, particularly Lilacs, Azaleas, Double-flowered Cherry, *Andromeda floribunda*, and others. *Spiræa japonica* is much used for greenhouse decoration, the feathery plumes being much admired. The pink form, Queen Alexandra, is also

heads of blossoms of varying, but very pronounced, shades of colour. Seed should be sown in spring and the plants grown on freely. *Crassula coccinea*, a South African succulent, grows a little over a foot high and bears clusters of tubular-shaped, bright-crimson flowers. *Diplacus glutinosus* is a neat little shrub with flowers like a *Mimulus*, but buff in colour. A variety with orange flowers is known as Sunbeam. *Francoa ramosa* (Bridal Wreath) bears long spikes of pretty

are now a very important race. From the crosses between *B. socotrana* and the tuberous-rooted varieties we have flowers of various colours. Besides these there is the popular *Gloire de Lorraine*, represented by several forms. All of these should, after flowering, be kept somewhat drier, but not parched up, for a month or so. Then, with brighter weather and increased moisture, young shoots will be pushed out, which may be taken as cuttings. *Browallia viscosa* forms a freely-branched plant a foot or more in height. The flowers are of a rich blue with a white centre. It is of easy culture. Seeds or cuttings. *Chorizemas* are hard-wooded shrubs with harsh, somewhat Holly-like leaves and orange-coloured, Pea-shaped blossoms. They need sandy peat and firm potting. *Erlangea tomentosa* is an *Ageratum*-like plant, with pale lilac-coloured blossoms. Very easy to grow. A particularly good *Eupatorium* is *E. petiolare*. It grows from 18 inches to a yard high, and bears double, Daisy-like flowers of a blush tint. Strikes very easily from cuttings in the spring.

The best winter-flowering greenhouse Heath is *Erica byemalis*. Of this there is also a white variety. *Jacobinia chryso-stephana* bears its tubular-shaped, orange-yellow blossoms in terminal crowns. *Lindenbergia grandiflora* is something like a Giant Musk, its golden-yellow blossoms being borne throughout the winter.

The orange-yellow flowers of *Linum trigynum* form a bright and cheerful mid-winter feature. *Sparmannia africana* will form quite a big bush, while on the other hand it will flower well in 5-inch or 6-inch pots if well exposed to the sun during the latter part of July and in August. The brush-like crowd of stamens, purple and gold in colour, is very striking.

As some fine-foliaged plants are included in the list the following additions may be made:—*Asparagus plumosus nanus*, *Asparagus Sprengeri*, *Aralia Sieboldi*, *Araucaria excelsa*, *Aspidistra*, *Coprosma Baueriana variegata*, *Eurya latifolia variegata*, *Grevillea robusta*, and *Ophiopogon spicatum variegatum*.]

NOTES AND REPLIES.

Stapelia variegata.—Can you tell me anything about the cultivation of *Stapelia variegata*? What temperature is required?—W. M. CROWFOOT.

[*Stapelia variegata*, of which *S. Curtisii* is a synonym, is, like all the members of the genus, a native of South Africa. It needs a soil mainly composed of good loam lightened by an admixture of broken brick rubble and silver sand. The pots, too, must be effectually drained. The night temperature during the winter should fall little, if any, below 50 degs. With this consideration it may throughout the winter be regarded as a greenhouse plant. A shelf near the glass in a light, sunny, airy structure is the best place for it at all seasons. During the growing period it must be kept moderately watered, but in the winter very little should be given. Do not give stimulants at any time.]

Tulip Artus under glass.—When the earliest Tulips, such as the Van Thol family, are over, a good and useful variety may be found in *Artus*. Taller than the Van Thols, this variety is more striking and effective, its brick-red colour being very noticeable when grouped. *Artus* forces readily, and where a quantity of bulbs can be boxed the blooms are appreciated early in January for cutting.—KIRK.

Hydrangea hortensis.—Young plants struck from cuttings last season have been shifted into larger-sized pots, in which they will flower and be put into the early vinery. A number of plants raised from cuttings two years since has also been shaken out and reported. These, when in flower, will be most useful for filling bowls and other receptacles for room decoration.

GARDEN FOOD.

MILL DUST AND HEALTH.

I HAVE NOW the pleasure of eating really good oatmeal, that is, oatmeal groats prepared in Scotland. They are nearly the full size of the grain, divested of its chaff, and entirely free of mill dust. Oatmeal is the most wholesome food grown in the British Isles, and it deserves careful attention at our hands. It is often spoiled in cooking, and, further, it is often supplied in the form of dust. Groats or pin-head oatmeal, as supplied by Scotch or Irish millers, is the best form in which to use this excellent food. I get mine from Coopers, of Annan. I mention them because it is not easy to get this form of oatmeal.

Most of our cereal foods are spoiled by being reduced to cereal dust. In this form it does harm to the human economy, and the grains are better taken in their natural form. Reducing any of them to dust brings them to simple, starchy, pappy foods, and in this way they have a bad effect on child or man. This reducing of such foods to fine dust also leads to adulteration, and if not that to the destruction of their fine natural flavours, as the dust absorbs other odours from the air and its surroundings. Our teeth were not given us for nothing, and if we grind and chew well all our best food we find good and useful work for our teeth. It is not, however, easy to masticate properly these foods in the pappy state, and by eating them without chewing we injure ourselves. Then, again, the juices of the mouth and stomach cannot well permeate these masses of sloppy food, and some indigestion may result from their use. The groats should be partially cooked over-night and left in the warm oven or on the stove until morning, when they are soon prepared for the table. I generally have them for breakfast, served with a little honey and water in a cup. W.

SOME SIMPLE DISHES.

HOT SLAW.—Shred the Cabbage finely, as for cold slaw or Cabbage salad, boil rapidly in salted water until tender, and drain thoroughly. Make, meanwhile, a sauce of one tablespoonful of butter, half a teaspoonful of salt, a little pepper and cayenne, and, if it is liked sharp, as much as a cupful of vinegar. The vinegar must be a good one, however, either malt or cider, for the cheap brands contain acetic acid and are very harmful. Pour the sauce over the Cabbage, put the cover on the saucepan, and let it stand on the side of the range for five minutes, when sauce and Cabbage should be perfectly blended.

CARROTS AND TURNIPS.—Do not serve Carrots so hard and raw that it would make a horse hungry to look at them. Young Carrots are delicious served whole. Boil them in salted water, and then drop them into a saucepan, with a lump of butter, some pepper, salt, and a pinch of brown sugar, and sauté them for a few minutes before serving. Turnips should be treated in the same way. Some people prefer to do without the sugar, but if the taste of it is almost imperceptible it seems to bring out the flavour of the vegetable.

CAULIFLOWER AND TOMATO SAUCE.—Soak a Cauliflower in cold water for an hour and then cook it. Take two or three fresh Tomatoes, or half an ordinary-sized can of Tomatoes, strain them and bring to a boil. Add Onion juice, salt, and pepper, a tablespoonful of butter and a tablespoonful of flour. Stir until smooth, and let the sauce simmer slowly for five or six minutes until the flour is thoroughly cooked. When the Cauliflower is quite tender, break it into pieces, put into a hot, deep dish, and pour the Tomato sauce over it.

DRIED LIMA BEANS—BOILED.—Soak a cupful overnight in cold water, drain, and cook in boiling salted water until thoroughly soft. There should be practically no water left to pour off when the Beans are cooked, but what there is should go into the stock-pot. Add three-quarters of a cup of cream to the Beans, season with pepper, butter, and salt, and put them back into the saucepan to get thoroughly hot again before serving.

BAKED CABBAGE AND CHEESE.—Boil the Cabbage in two waters, drain thoroughly, and let it get cold. Make a sauce by mixing a table-

spoonful of butter with one of flour, and cooking them together until they bubble, stir in a cupful of milk until thoroughly blended, and season with pepper and salt. Now take a baking dish, butter it well, and sprinkle with pepper and salt. Place in it a layer of the cold Cabbage, pour some of the sauce over it, and sprinkle a heaped tablespoonful of grated cheese on top. Repeat this process till the dish is full, and add a layer of fine bread-crumbs on the top. Bake covered for about half an hour, and then remove the cover until the top is browned. This dish is practically a meal in itself, and makes a most delicious course for a dinner.

CELERY AU JUS.—Remove the coarsest stalks and trim the roots of several heads of Celery, cutting them into pieces 6 inches long, but leaving them still attached to the root. Now make a brown roux with two tablespoonfuls of flour, two of butter, a quarter of a teaspoonful of pepper, and a pinch of Nutmeg. When this is well browned, add two cupfuls of stock, put the Celery in it, cover and stew very quietly for twenty-five minutes. Take out the Celery and arrange it neatly on a dish, straining the gravy and pouring it over and around.—HON. MRS. GUEST, in *Daily Chronicle*.

NOTES AND REPLIES.

Celery worth having.—My Celery this year is coarse and almost useless. Have readers any notion of a hardy, above all crisp, eating Celery? Mine is far too large, loose in habit, useless for the cook, and worse still to eat in salad. Also it is apt to decay in the centre. There is, I hope, some kind worth having?—W.

Apples in salads.—It is a mistake to give up the idea of having good winter salads, and among the things that go to make them a well-flavoured Apple is a help. My salad is now of Lamb's Lettuce, bits of good Celery, and slices of Newtown Pippin Apple mixed. Any first-rate and not mawkish or over-sweet Apple will do as well, and a very little of anything like Chervil may be sprinkled in.—W.

Barley in the home.—Just now everyone is interested in economy in cooking, so I think perhaps some may be interested to know of the uses to which I put Barley. Long before the war Barley-water was the beverage in this house. It was made of a wineglassful of Pearl Barley well washed. Put into an enamelled saucepan in cold water, boil it ten minutes, put the peel of half a lemon into a large jug with 1 oz. candy sugar, tie muslin over the jug, strain the juice of the half lemon through this, then strain the Barley-water into the jug. We occasionally made a pudding from this Barley. Leaving it in the saucepan, you add Sultanas and a little water, boil for an hour, pour into a pie-dish, add milk and a little sugar, and bake slowly for two or three hours. Another way is to substitute grated cheese, pepper, and salt for former ingredients. When we did not use the Barley thus we gave it to the chickens, but since the war the chickens go without and we make savouries as well as puddings. Put the Barley into a casserole, with a liberal allowance of Tomato sauce, salt to taste, and a teacupful or more of water; stew several hours. Yet another dish.—Substitute in place of Tomato sauce chopped Onion, Apple, a few bones or bits of meat, curry powder, teaspoonful of vinegar and sugar. Both these are good supper dishes and economical, as the Barley does first for Barley-water, secondly for supper dishes.—A Suffolk lady writing to the *East Anglian Daily Times*.

Bottled fruits.—Bottled fruits—Gooseberries, Plums, and Blackberries—are just now (late January), with Apples getting a bit over and Rhubarb hardly ready, very acceptable. They were treated in the simplest manner—just put into wide-mouthed glass jars, which were placed in the oven until thoroughly warmed through, then filled up with boiling water and fastened down with some grease-proof paper and a starch plaster. The Blackberries are specially good. I was fortunate in getting extra fine fruit, free from dust, and thoroughly ripe.—E. B. S., *Hardwick*.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

THE WATER GARDEN.

The water garden has become a most popular adjunct to the garden proper, and often as much interest and enthusiasm are centred round a small artificially-constructed pond accommodating only a few water plants as over a larger expanse of water offering greater possibilities. To construct a water garden on a site where the environs are altogether out of sympathy has only to be attempted to realise the difficulty, unless, of course, quite a formal one is decided on, then it is only a matter of following out the details of

The artificial appearance of a dam is always troublesome to disguise, and when bricks and concrete are used in its construction no part of the materials should be visible. This can usually be overcome by heaping up soil in front of the dam as well as behind, and by the judicious planting of shrubs and plants on the dam and groups of water plants in front of it the formal outline can be obliterated. The back of a dam offers much scope for rock-work, and when large boulders of rock are placed in natural positions a very bold effect is produced and a home made for an endless variety of handsome, fine-foliaged and flowering plants. The result is that in place of a long mound of soil faced nearest the water with a brick wall is a

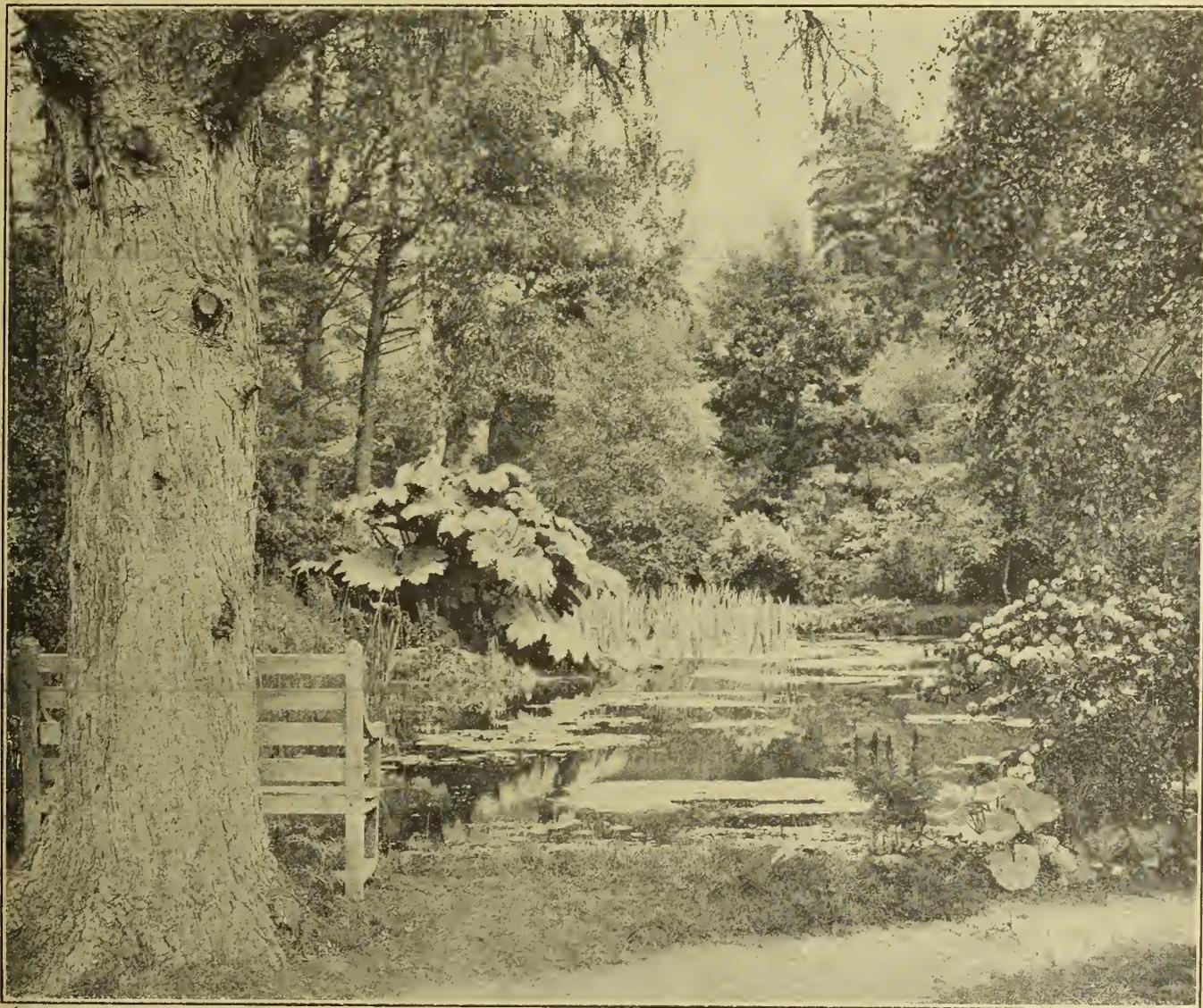
pseudo acorus, though common, is beautiful, *Pontederia cordata* likes shallow water, *Calla æthiopica* planted in a foot of water in a sunny position flowers freely in early summer, as also does *Sagittaria sagittifolia*, the double form of which is handsome and likes full sun.

T. B. FIELD.

Wych Cross Place, Forest Row, Sussex.

NOTES AND REPLIES.

Erysimum pumilum.—The dwarf *Erysimum* is one of the most appreciated of the yellow rock plants of spring. In the rock garden or in the moraine it affords, when in bloom, a bright patch of colour. It is dwarfier than *E. pulchellum* and has not



Part of the water garden at Wych Cross Place, Forest Row, Sussex.

some devised plan, but if the idea is to imitate Nature, then it entails much observation and tact in carrying it out.

The illustration is a portion of a water garden made some four years ago, the existing surroundings being all that could be desired when the site was chosen. It is part of a wooded dell with a stream of clear water running through it, and by making a dam across at a place where the stream was most sluggish a fair-sized pool was obtained varying in depth to 5 feet in the deepest part. The sides of the dell now forming the boundary of the pond were left quite natural, no shaping being done to them, a detail of importance under such circumstances, as the natural outline of the banks could not be improved upon.

site made interesting with waterside subjects thriving with very little attention.

The irregular path seen in the extreme front of the illustration continues over a dam similarly treated, and *Viburnum plicatum* can be seen in full flower. *Spiræa Lindleyana* is another beautiful flowering shrub for the purpose, revelling in the moisture. Japanese Maples have been very successful in sunny, sheltered positions, and groups of Sweet Briar and some of the strongest-growing Penzance Briars, such as Meg Merillees, Jeannie Deans, Amy Robsart, and Anne of Gierstein, are most attractive planted so as to reflect in the water. Amongst water plants the following were easy to establish, soon forming nice groups. Iris

the loose-flowered style of this, while the blooms are brighter and more numerous. The flowers open a pale sulphur, but in time they take on a deeper and brighter hue. It is only a few inches high and forms a spreading carpet of green, which in spring is almost hidden by the yellow Wallflower-like blooms. It can be easily raised from seeds or propagated from cuttings.—S. A.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3½d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

TREES AND SHRUBS.

NANDINA DOMESTICA.

I HAVE read with much interest the article on this beautiful shrub in the issue of January 29th (p. 53). The description therein given is quite in accord with what I saw of the plant at Pau, in France, when doing a tour amidst the Pyrenees about Easter a few years back. It was in beautiful condition there, being planted near to, and within the shelter of, the Casino in the public park, facing nearly due south, and fully exposed to the sun. It is this full exposure to the warmth of the sun's rays, and the consequent thorough ripening of the wood, that renders it able to withstand a fairly sharp snap of frost. The colour of the foliage there was lovely, the habit rather stiff, being nearly erect. The group, or it might have been originally one plant only, was well furnished with foliage to the ground, and would be about 7 feet in height. In "Japanese Gardens" Mrs. Basil Taylor gives her impression of this *Nandina* as she saw it in Japan. This lady speaks of the "reddening berries of the *Nandina*," and "*Nandina domestica*, known (along with several other plants) as the 'Holly of the Orient,' has brilliant red fruit." I am afraid it is hopeless to expect to see this description applied to it in this country. Mr. James H. Veitch, in "A Traveller's Notes," states that it is one of the plants upon which the Japanese experiment in their dwarfing practices; also that "it is a very common plant in the nurseries, growing from 6 feet to 7 feet high, bearing a profusion of red berries." Later on, and when at Melbourne, in Australia, Mr. Veitch noted it about 5 feet high and as much through. In Japan he observed a variety with white berries, and Mrs. Basil Taylor describes another with yellow berries. These might, however, be the same form. When I used to grow it here I plunged it outside during the summer, being afraid to risk full exposure.

JAMES HUDSON.

Gunnersbury House, Acton, W.

NOTES AND REPLIES.

Cupressus macrocarpa.—I put out several thousands every season, raising them from seed sown about the end of March, and planting them out in their permanent quarters as one-year seedlings, when a large proportion of them are about a foot in height. They are planted out any time between October and April, and I cannot say that I notice very much difference in the results. I have planted this species in several parts of the country, and I find that where the land is rich and the situation is sheltered the trees grow up so fast that they have a difficulty in maintaining an erect position without the aid of stakes. On the other hand, where the plants are used on bare, exposed, and poor chalk on the South Downs, the growth is much slower and the trees are much more resistant to wind; in fact, under these circumstances I do not find that this species has a greater tendency to be swayed or blown over than any other species that I have used. Under the conditions of soil and exposure that the South Downs offer, I find that no other species of tree grows or promises so well as *Cupressus macrocarpa*.—PROFESSOR SOMERVILLE in *The Garden*.

The Mexican Orange-flower (*Choisya ternata*).—This is to be found in almost every garden where flowering shrubs are favoured. Nor is this to be wondered at. When in bloom its trusses of white, sweetly-scented flowers always attract at-

tention. This shrub is of a symmetrical habit, and, unlike many others, does not encroach unduly. This circumstance makes it peculiarly valuable for those who wish to grow the choicer shrubs and who have not too much space at their disposal, and, on the other hand, it can be effectively used by those who wish to margin taller and more robust shrubs with one of a dwarfer nature. The foliage, too, is attractive at all times of the year—never more so than in the depth of winter. In the matter of soil the Mexican Orange-flower is not exacting. Certainly it succeeds better when the staple is of a peaty nature, but peat is not absolutely necessary. A deep, dark, loamy soil, such as is to be found in many old gardens, will suit well, or the average mould of the shrubbery enriched with plenty of half-decayed leaves will be found sufficient. The shrub does not object to partial shade if it gets a fair proportion of sun at some period of the day, and, when established, it gives but little trouble afterwards. One place *C. ternata* objects to, and that is at the foot of a south wall, fully exposed to the sun in rather shallow but otherwise suitable soil. With a view to making a specially fine piece a plant was put out in such a position. From the beginning it was a disappointment, it made little or no progress, but on being lifted and moved to a cooler spot it speedily took hold and grew within a few years into an almost perfect specimen. *C. ternata* is easily propagated by means of layers—more easily by cuttings, although cuttings take a longer time to make plants.—K. BRIGHT.

VEGETABLES.

SALT IN THE GARDEN.

I HAVE some garden salt for an *Asparagus* bed I am making. How much should I use? I have more salt than I need for the *Asparagus*. Can I use it for other vegetables? If so, for which? When should I put it on the ground? Is it actually harmful to anything in the vegetable garden?—A. H.

[Salt, if applied at the proper time, is a safe and fairly good stimulant for *Asparagus*. It must not, however, be used on newly-planted beds, as it then exercises an adverse effect on the root system of the plants or crowns. You must therefore wait until the crowns become properly established, which, if growth is satisfactory during the coming summer, will be next spring. The time to apply the first dressing is about a fortnight or three weeks before the first lot of heads may be expected to appear above ground, or about the middle of March. A further dressing may be given early in May, and at intervals during the summer, but not afterwards. The quantity to use on the first occasion would be about 8 oz. per square yard. Many apply twice and thrice this quantity, but it is better to err on the safe side and apply too little than too much. On subsequent occasions use about half of the above-named quantity. If you wish to grow really fine *Asparagus* you would find fish guano superior in every way to salt. Other crops for which a little salt is beneficial are Beet, Parsnips, Carrots, Onions, and Seakale. For the first four sufficient of the salt may be sprinkled on the surface of the soil to whiten it when digging is about to take place. In regard to Onions it can be used in conjunction with well-rotted manure. A slight quantity sprinkled between the rows of Beet after the plants have been thinned and are growing freely will stimulate growth and tide them over a season of drought. For Seakale it is best used while growth is being made, and may therefore be applied at intervals during

the summer between the rows of plants. Salt is also a good thing to sprinkle on and mix with the soil when digging and pulverising it in readiness for the moulding of Celery.]

NOTES AND REPLIES.

Grubs in Brussels Sprouts.—I should be very much obliged if you would kindly give me some advice about the treatment of Brussels Sprouts. For some four years my plants have been troubled with a small green caterpillar. It is not visible when the vegetable is raw and cannot be removed by washing, but comes out during cooking. It is green when alive, and white when cooked. Ought all the plants to be destroyed, and how should the soil be treated? The blight does not appear, so far, to have spread to the other green vegetables. It is in the heart of the Sprouts.—MOLLINGTON.

[We have very closely examined the Brussels Sprouts submitted and fail to find the slightest sign of insect life in them, let alone grubs like the specimen sent. Under the circumstances the only thing we can advise you to do if you are still certain these grubs are secreted in the Sprouts is, when preparing them for cooking, to remove more of the outer leaves than usual and then to immerse them for half-an-hour in salt and water to which a little vinegar has been added. If sufficient salt is used the grubs will not be long in vacating the Sprouts and come to the surface of the water. If well washed before the Sprouts are put into the saucepan to cook the flavour will in no wise be impaired. Destroying the plants would be of no avail, but after they cease to yield sprouts it would be as well, when preparing the site for the succeeding crop, to dress the soil with one of the soil fumigants which are from time to time mentioned in our advertising columns. If it can be so arranged no kind of Brassica should be grown on the same plot for the next season or two. By adopting these suggestions the pest, whatever it may be, should be got rid of.]

Broad Beans, black-fly on.—Would you kindly tell me if there are any effective preventive measures against the Bean-aphis? I lost nearly all my Broad Beans last year, and so did a good many growers in the neighbourhood. I am only trying early—i.e., November and January—sowings, and dressed the plots well with Vaporite. Is it known when these pests breed, and is there any means of destroying them before they mature? For the present I am only using artificial manures, as the garden abounds in pests of all kinds, which is certainly partly due to a lavish use of stable-manure for a great many years. I am told it is even worse in a garden very near, which was made on a common less than a year ago.—R. N. F.

[As soon as you can see any of the fly on the Beans syringe the plants with paraffin emulsion or Quassia extract. A friend of ours uses X.L. All insecticide and finds it efficacious. Another way is to watch the plants closely, and as soon as the parasite is noticed to top the Beans, placing the shoots in baskets and at once burning them. An early start in topping may save trouble later, and it may be done while the plants are in flower.]

Celery.—A small sowing will be made early in the present month for the earliest supply. The plants from this sowing should be ready for use during August and September. I sow the seeds thinly in small, well-drained pans filled with finely-sifted loam, leaf-mould, and manure from a spent Mushroom bed, adding sufficient coarse sand to keep the soil open. Water the soil carefully through a fine rose and stand the pans in a forcing-house where a temperature of 55 degs. is maintained at night. Directly the seedlings appear stand the pans near to the roof-glass, and transplant the seedlings as soon as they are large enough into shallow boxes filled with the same compost as before, but in a slightly coarser condition, growing the plants on in the same house. An important

point is to keep the plants growing freely, as any check the plants may receive, especially in their infancy, such as getting very dry or overcrowded, is almost sure to end in a large percentage of them prematurely running to seed.—F. W. GALLOP.

Seakale.—Wherever this vegetable is appreciated a point should be made of growing a breadth outdoors to furnish a supply after or to succeed the last lot of forced crowns inside. This late Seakale requires nothing further in the way of attention to secure good returns than to exclude all light from the crowns. This can be ensured in various ways, such as the employment of pots, boxes, and so forth, but the least troublesome method is to cover each group of crowns with a good mound of fine ashes or soil. The Kale secured by this means comes perfectly blanched and

a trial. We have no lack of excellent varieties of both long and globe-shaped rooted varieties. Quite recently I was told by a lady she strongly objected to the globe-shaped Beets, as they lacked colour. If seed of the Globe Beet of a good strain is grown there is no comparison with the globe-shaped roots of the old days, which were of a poor colour and of inferior quality. I have found Intermediate an excellent introduction and one that may with advantage be grown on shallow soils. The flesh is of a deep red colour. In addition it is of excellent quality and a good keeper, as the roots, if given cool storage, may be had well into May. I would not advise too early sowing on poor land or shallow soil if the roots are required for winter and early spring supplies. If an early supply is wanted it is advisable to

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JANUARY 27TH. — *Berberis japonica*, *B. Mahonia*, *Winter Sweet*, *Andromeda floribunda*, *Jasminum nudiflorum*, *Forsythia suspensa*, *F. spectabilis*, *Edgeworthia chrysantha*, *Coronilla glauca*, *Genista hirsuta*, *Gorse*, *Cydonia japonica*, *Andromeda japonica*, *Daphne Dauphini*, *D. Laureola*, *D. Mezereum*, *Periwinkles*, *Garrya elliptica*, *Rhododendron Nobleanum*, *R. praeox*, *single pink Camellia*, *Ericas* (in variety), *Laurustinus* (in variety), *Parrotia persica*, *Strawberry-tree*, *Hamamelis arborea*, *H. Zuccariniana*, *Snowdrops* (in variety), *Violets* (in variety), *Cyclamen Coum*, *Trilectia uniflora*, *Violet Cress*, *Corsican Hellebore*, *Christmas and Lenten Roses* (in variety), *Picaria grandiflora*, the *Carpathian Snowflake*, *Tufted Pansies*, *Crocus Imperati*, *C. biflorus*, *C. Susianus*, *C. Sieberi*, the *Greek Anemone* (*A. blanda*), *Anemone coronaria* (various), *Winter Aconite*, *Eranthis hyemalis*, *E. cilicis*, *Narcissus pallidus praeox*, *Winter Heliotrope*, *Saxifraga* (*Megasca*), *Saxifraga apiculata*, *Polyanthus* (in variety), *Lithospermum rosmarinifolium*, *L. Heavenly Blue*, *Hepaticas* (in variety), *Blue-eyed Mary* (*Omphalodes verna*), *Prostrate Rosemary*, *Iberis petraea*, the *Cornelian Cherry* (*Cornus Mas*), *Spring Bitter Vetch* (*Orobis vernus*), *Lungwort* (*Pulmonaria saccharata picta*).

WORK OF THE WEEK.—Fresh tripods for Clematises have been fixed where the old supports had given way. Formerly, peeled Chestnut poles about 2 inches thick were used on account of their durability, but this wood not being available this year, Larch poles are being used. These are cut into lengths of 10 feet, 18 inches of this being in the ground. This part, in order to preserve it, has been given a coat of tar. A shrubbery which had become somewhat overgrown has been thinned and rearranged. *Eucryphia pinnatifida*, *Viburnum macrocephalum*, *Gleditschias*, etc., which had been planted at the back so as to be sheltered when in a small state, have now been placed in the foreground. A small group of *Plagianthus Lyalli* and a few other tall-growing shrubs have been transferred to more roomy quarters, where they will benefit from a background of native Hollies. Pruning and tying in of climbing plants on pergolas and arches are being done. Many of these climbers are already in active growth, especially Clematises, and, should sharp frosts set in, they are bound to suffer. The ever-green Clematis *Armandi* has already made over a foot of new growth. The soil of a long, narrow border running along the east side of the house and which for many years had been occupied by *Hepatica triloba* having become worn out, it was decided to renew the border with fresh soil and plant afresh, as in this position the *Hepaticas* have been such a feature every year that their absence would be disappointing. The soil was taken out to the depth of 1 foot and used for surface-dressing other borders. The new border was then made up with a mixture of maiden loam, leaf-soil, wood-ashes, lime, and sand. About 150 plants of the old single blue *Hepatica triloba* have been put out, and others will be added later. A batch of the Giant Forget-me-not has been planted beneath a shady wall, and a few plants of *Cyclamen Coum* have been given a place away from direct sunshine. A lot of *Tropaeolum speciosum* having come to hand, a place has been provided for it where it will be partially shaded. In some instances it is intended to fall over



Tuberous Begonias in a hanging basket.

tender, and a slight rinsing in cold water at once frees it of any soil or ashes that may become attached to the stems or lodged in the axils of the leaves. If the plot is divided into two or three portions, and the crowns in the first are covered down now, those in the second in three weeks' time, and in the third about the middle of next month, a good succession will result. The great thing is to see that a sufficiency of ashes or soil is mounded over the crowns, so that when growth takes place no portion of it can protrude and become discoloured. The first lot in my case has been covered with fine ashes after the removal of dead leaves and so forth.—G. P. K.

Beetroot Intermediate.—Those who object to the long-rooted Beets or who have a poor soil to deal with may with advantage at this season, when ordering their stock of vegetable seeds, give Intermediate

make two sowings, roots from the earlier sowing being valuable for a summer supply.—C. R.

Asparagus beds will be forked over as lightly as possible, taking care not to injure the crowns. Undecayed manure on the surface will be removed and dug into the alleys. This will lighten and enrich the soil for future top-dressing. As the work proceeds, some of the finest soil is placed over the crowns where necessary, regulating the quantity by the amount of covering already over them. When the work is finished the crowns should not be lower than 6 inches from the surface, whilst the soil should be light and rich.—F. W. GALLOP.

A good Celery (W.).—There are so many kinds of Celery nowadays that the inexperienced are often puzzled which to choose. Were we restricted to one sort only, we would certainly prefer Leicester Red. No better Celery could be grown for weight, crispness, and quality.

boulders, in others ramble among Hollies, Camellias, Thorns, and various other trees and shrubs. E. M.

Nusser.

SOUTHERN COUNTIES.

Pot Vines.—The shoots, being sufficiently advanced to allow of discrimination being exercised in regard to the selection of those showing the best bunches, the surplus shoots should now be pulled off. To induce the bunches to lengthen out quickly a further rise of temperature both by night and day is necessary. The shoots should be stopped with the finger and thumb at the second leaf beyond the bunches. The tying down of the shoots now requires attention, but its final accomplishment is best deferred till after the Vines have flowered and the berries set.

Bedding plants.—With the starting of a Peach-house to supply ripe fruit in the early part of July the potting of the above will now take place, as the plants will be accommodated therein on a portable stage erected in the body of the house. To economise space long toms or rimless pots will be employed, a piece of rough loam or Moss being placed in the bottom of each in lieu of crocks. A mixture of two parts loam and one of leaf-mould, with a little sand added, is used, and to save time the potting will be done in the house itself. The object in dispensing with the crocking of pots is to facilitate matters when planting out takes place, and that the plants may the more easily be knocked out of the pots the latter are washed before being used. The numbers will be carefully noted down as each variety or kind of plant is potted, with a view to ascertaining if there is a shortage and the number that will have to be propagated to make good the deficiency. Some few things, such as the smaller-leaved varieties of scented Pelargoniums, Verbenas, and Heliotropes, for instance, will for a time be placed in a warmer house to give them a start.

Fuchsias.—These will be taken from their winter quarters and pruned into shape, and then placed in the above-named house to break. The older plants will be used for supplying cuttings for propagating young stock for greenhouse decoration in late summer and autumn, and be afterwards planted out. The young plants raised from cuttings last year will, after they have broken, be partially shaken out and repotted, and grown on into large-sized bushy specimens for house decoration. Young shoots taken with a heel root quickly in a sandy compost in a propagating-case, 6-inch pots being suitable receptacles in which to root them.

Zonal Pelargoniums.—These have, generally speaking, been under a cloud for the past few years, but are again coming into favour for autumn and winter decoration. Nothing brightens the greenhouse and conservatory more during the dull months of the year than Zonals, and where accommodation can be found for the growing of the plants a collection should be found wherever a display is required at the season named. To grow them successfully they must be accorded a good long season of growth, and the wood should be well ripened by the end of summer. Propagation should, therefore, begin now. The best way is to insert the cuttings singly into thumb-pots, placing a pinch of sand at the base to facilitate callusing. When rooted they can then be shifted into larger pots without disturbing the roots. The cuttings may also be dibbled in round the sides of 6-inch pots. If placed in genial warmth they speedily root.

Perpetual - flowering Carnations.—Several hundred cuttings will now be taken, the number consisting of the varieties most appreciated. These cuttings will be dibbled into pure sand, in which they root sufficiently to enable potting off to be done in about four weeks' time.

Gloxinias.—These will be overhauled and placed in the early vinery to start, after which they will be shaken out and repotted. This method occasions fewer losses from dry rot of the tubers than when they are shaken out prior to giving them a start in heat.

Amaryllis.—The bulbs having had a good long season of rest, and as new roots are just beginning to be made, the shaking out and repotting of the same will now be taken in hand. When finished, a vinery just being started will provide them with congenial quarters until the flower-spikes push up.

Early Potatoes.—The soil has at last become sufficiently dry to allow of the first planting taking place on a border facing southwards. This having been manured and dug some few weeks ago, and the soil being light, it is now in excellent condition for the reception of the seed-tubers, which are being planted in drills drawn 2 feet apart. A good breadth will at the same time be planted in a sheltered position in the open. Varieties favoured for early work are Duke of York, Early Puritan, Edinburgh Castle, and, for general household purposes, Ninetyfold.

Pea-sowing.—A commencement has at last been made with the sowing of Peas outdoors, wet weather having hitherto caused its postponement. The drills are being drawn to run north and south, and stand 6 feet asunder, which admits of the vacant space between the rows being utilised for the growing of early Spinach, Turnips, Radishes, and Lettuces. Part of the sowing is taking place on a south border and part in the open, first earlies being used for the former and first and second early varieties for the latter, which will ensure a good succession. Seeing that the soil is yet very moist and cold, the drills are not being drawn very deep or quite so deep as usual, and the seed sown more thickly than is, under normal conditions, necessary.

Shallots.—The wet condition of the soil has prevented these being got out as early as usual. The planting in rows 1 foot asunder with a distance of 9 inches between the bulbs will now take place. A piece of ground in good heart has been allotted them, and as the demand is generally a fairly large one this is of sufficient area to allow of the planting of several long rows. The bulbs are pressed into shallow-drawn drills just deep enough for the soil when it is returned to hold them firmly in place. A good stock of Shallots is always useful, as, when Onions begin to get scarce in spring, they can in many ways be made to do duty for them.

Garlic.—Much less of this is required, a good row yielding sufficient bulbs for the season. The planting is done under precisely the same conditions as the preceding.

Chives.—These help to prolong the supply of Onions, as the tops can be used in lieu of the latter for the flavouring of soups and so forth. Now is the best time to lift and divide the clumps and replant them in a fresh position on the herb border in rows 18 inches apart with a distance of 9 inches between the plants.

Scorrel.—This is occasionally in request as a substitute for Spinach. To obtain a good supply of leaves the plants require generous treatment in the way of some

well-rotted manure dug in between the rows. Division of the clumps can also be effected now and the pieces replanted in another part of the herb border after it has undergone a course of preparation in the way of manuring and digging. The rows should stand 18 inches asunder and the plants 1 foot from each other. If care is taken to prevent the plants running to seed by cutting out the flower-stems when they push up, the clumps will yield a good supply of leaves for several years in succession before it is again necessary to lift and replant.

Common Thyme.—As this is apt to become untidy if left alone for any length of time a portion of the stock should be lifted, divided, and replanted at this time of year. By these means the plants are not only kept within bounds and look much neater, but when the herb is required for the kitchen an abundance of young shoots is thus always ready to hand.

Horseradish.—This is in request through the whole year, and to keep up a good supply it is necessary to lift and replant a portion of the bed each season, using sets consisting of straight, medium-sized pieces of roots from which all side roots have been rubbed off and with or without a crown or bud on the top. Plant with a bar in holes 18 inches deep.

Spinach.—A few drills have been sown to augment the supply of winter Spinach, the variety being the Round-leaved or summer kind.

Radishes.—A long drill of each of the following has also been sown, viz., Red and White Forcing (Turnip-rooted) and Early Frame (long-rooted). Owing to the partiality of birds for the seeds the rows have to be protected with wire seed-guards.

Lettuces.—For sowing now preference is given to the quick-growing, small-hearted Cabbage varieties, but a sowing is also made at the same time of the dwarf-growing Cos variety named Nonsuch, as it follows close on the heels of, if it is not ready for use before the preceding are over. A. W.

MIDLAND COUNTIES.

Strawberries.—The plants set out last autumn will be examined when the ground is not in a sticky condition, and made firm. Any gaps that occur in the beds will be made good with plants reserved for the purpose. The surface soil should be hoed frequently as soon as the weather is dry enough. Where it is intended to make fresh plantations next autumn a piece of ground which has been trenched and liberally manured for the first and second early varieties might be selected. Such a piece of ground would be in excellent condition for the Strawberries after the Peas have been gathered, which will be early in August. It would then require to be merely hoed over and have all the weeds and rubbish removed. A good dusting of soot might be applied and forked into the surface. Strawberry-beds are frequently kept too long in bearing, although certain varieties in some soils will continue to fruit longer than others. As a rule, a period of three years is long enough for a bed to bear.

Bush fruits.—These being more or less surface-rooting, quickly exhaust the top layer of soil, and an annual mulching or addition of fresh soil is necessary if the best results are to be obtained. A mixture of fibrous loam and well-decayed manure to which a proportion of bone-meal has been added forms a very suitable top-dressing. The planting of bush fruits should be completed without delay during snitable weather. If planted in quarters

or rows in the open ground allow a space between them of 6 feet to 7 feet each way; if trained against walls or to wires a distance of 3 feet or 4 feet apart will be sufficient. Gooseberries and Currants planted against a north wall will furnish a supply of fruit for many weeks after the general crop is over.

The fruit-room.—Apples are keeping well with me this season. They need to be examined frequently and all fruits showing signs of decay removed, laying the remainder out thinly over the shelves and benches. The room is kept cool, not too dry, and ventilation afforded on suitable occasions to sweeten the air. Late Apples are always valuable, and for this reason the season should be lengthened as much as possible. Cooking Apples in use from this date onwards include Alfriston, Annie Elizabeth, Lane's Prince Albert, Norfolk Beefing, Roundway Magnum Bonum, and Wellington.

Calanthes.—All the plants having passed out of bloom, they will be given a short period of rest, withholding water from the roots and arranging the plants closely together on a dry shelf in a house where the temperature does not fall below 60 degs. The plants will be kept in this position until new growths begin to develop at the base of the young pseudobulbs, when it will be necessary to repot them.

Pelargoniums of the show and fancy sections make useful pot plants, and are almost indispensable for conservatory and greenhouse decoration. They may be had in bloom at almost all seasons of the year, but it is after the bulbous plants are over that they are especially valuable, continuing in bloom until flowers are plentiful out of doors. Old plants that were started in September are well rooted and have been placed in their flowering-pots. Plants raised from cuttings inserted last summer have also been given a shift into 5½-inch pots. A suitable rooting medium is composed of rich fibrous loam, a small amount of well-decayed manure, lime-rubble, and bonc-meal.

Border Carnations.—Owing to the damp atmosphere in this district it is necessary to winter these in pots; they will be planted out at the first favourable opportunity. If planted early they have a longer season to become established, and, in consequence, flower more profusely. It also often happens that the weather in February is more favourable for planting than March and April.

East Lothian Stocks sown in January are large enough for transferring singly to 60-sized pots. After potting they will be kept growing freely near to the roof-glass in a cool pit. Later on they will need hardening off preparatory to planting out of doors.

Lupinus polyphyllus.—This species does splendidly grown as an annual. It can be flowered the same year by sowing it in the open, but it is worth the extra trouble to raise the plants under glass. Three-inch pots are a suitable size, placing one seed in each. The plants may be put into the border or bed in April. Several of the annual Lupins are also worth cultivating, but it is too early to sow any of these.

Pentstemons.—To increase named varieties of Pentstemons or a distinct and effective variety it is usual to propagate them from cuttings. If seed of a good strain is sown excellent plants may be obtained for putting out in the spring. The plants may, perhaps, be a little later in flowering than those raised from cuttings, but, nevertheless, they may be expected to produce a wealth of bloom, which will be continued until severe frosts occur. Among the

seedlings there may be certain varieties worth saving for another season. Sow the seeds in pans or boxes provided with good drainage and filled with a light, sandy compost. Sow thinly and evenly, and just cover the seeds with some of the finest of the soil, afterwards pressing the surface firmly and evenly. Water through a fine rose-can and place the pans or boxes in a house where an atmospheric temperature of 60 degs. is maintained. As soon as the seedlings can be handled prick out into boxes, using a moderately rich, open compost, placing the small plants at a distance of 2 inches apart. When they have recovered from the check of transplanting remove them to a cool house and later to a cold frame.

Brussels Sprouts.—A small sowing of this vegetable will be made to furnish plants for cropping in September. The seeds are sown in boxes and germinated in gentle heat. As soon as the seedlings make their appearance the boxes will be removed to a cold pit. When large enough to handle the seedlings are pricked off into beds, putting them 4 inches apart. The pit should be kept closed for a few days, but when growth commences air must be admitted to prevent the plants becoming drawn. After a time the lights should be removed gradually until the plants are ready to put out early in May.

Peas.—As soon as the ground is in working condition a sowing of early Peas will be made. Choosing a fine day, the ground will be lightly forked over in good time in the morning to dry. The rows should not be closer than 4 feet apart. I sow the earliest Peas wide enough apart to allow a sowing of Spinach to be made between them. The first sowing should be made a little thicker than the later ones. I prefer Pilot for first crop, with Early Marvel as a succession. Peas in 3-inch pots sown early in January are afforded plenty of ventilation, avoiding cold draughts at all times. Though moisture-loving plants, Peas will quickly suffer if overwatered. The growths will need supporting in good time with sticks.

Turnips.—A small sowing will be made on a very sheltered border as soon as the soil is in a fit condition. As there is a danger of the plants running to seed, only a small quantity of seed is sown at a time. When the seedlings are through the ground frequent dustings of soot and wood-ashes are afforded, and the surface of the bed lightly stirred with the Dutch hoe. Early Milan is a good variety for the first sowing.

Lettuces, Radishes, Carrots, and Cauliflowers.—Further sowings of these will be made during this month on mild hotbeds.

F. W. GALLOP.

SCOTLAND.

Tufted Pansies.—In the course of the week the cold frames into which the cuttings of Tufted Pansies were put during late autumn were inspected. On the whole, the cuttings have rooted well, and, with the exception of a few of the young plants which have suffered from damp, they are satisfactory. As early in February as the state of the soil permits, the Celery trenches for first crop will be got ready, and the Pansies removed to a prepared bed in the trenches. A little manure will be used, and 3 inches or 4 inches of sifted vegetable mould will be placed on the top. The young plants are then put out rather closely, and, under such conditions, they soon go ahead, making well-rooted and compact specimens which can be lifted with excellent balls when planting time comes round.

Similar treatment is followed in the case of Calceolarias, and equally good results are obtained.

Marguerites.—Only sufficient plants of the ordinary *Chrysanthemum frutescens* and of the double Mrs. Sanders are retained to provide stock for summer planting. The latter fine variety does not produce the right kind of cuttings at all freely in late autumn, so a number of plants is potted up and cut back. Having been recently given a fairly brisk heat, good cuttings are being freely produced, and, as they become ready, are slipped off with a heel and put into the propagating-pit. They soon emit roots, and, when boxed up, they, in their turn, provide cuttings until the necessary number has been secured. In the case of the commoner single variety the cuttings put in during October are now sufficiently advanced to permit of the tips of the plants being utilised for propagating. The leaf-boring maggot has been at work during the winter months and is being dealt with.

Lobelia Kathleen Mallard.—Although discarded for outside work a few plants of this double-flowered Lobelia are not without value under glass, and, during the week, a few cuttings were taken from plants saved over winter and put into the propagating-pit. Formerly used to some extent in summer bedding, it was found that during rainy spells the wet lodged among the flowers, which speedily damped off.

Lobelia floribunda.—After having lost sight of this very useful winter-flowering plant for a number of years some stock pieces were purchased, and these have been given a brisk heat in order that cuttings may be produced. As quickly as these become available they will be put in until the requisite quantity is obtained. The old plants will then be cut back, and when fresh growth is visible they will be repotted and given cool treatment until it is possible to place them out of doors for the summer upon a bed of ashes.

Nerines are still being given plenty of moisture, but they are only receiving a very moderate allowance of heat. Nerines flower best when undisturbed for a number of years, but when the foliage has thoroughly ripened off it will be necessary to break up several pots, owing to the increase of the bulbs. The pressure, indeed, is so great that some of these are forced nearly out of the pots, so that no benefit is derived from delaying repotting longer. Good loam and leaf-mould in equal proportions suit these showy bulbous plants well, with, of course, sufficient sharp sand to keep the mixture porous. The varieties to be dealt with are N. Bowdeni and N. Fothergilli, both useful sorts.

The rock garden.—An opportunity was taken in the course of the week to cut over such things as required it and to reduce others, after which all leaves, etc., were cleared out of the crevices. Leaves are rather troublesome just at this particular place, for there are many trees near to hand, and a wind from the south-west invariably blows up a fresh supply from the wood. Some plants are inclined to overrun their allotted spaces, notably the Cranesbill of different kinds, Veronica prostrata, and some of the mossy Saxifrages. These were rather severely handled in order to give choicer things more room. *Primula denticulata* is on the point of flowering, and *Narcissus minimus* comes on apace, although it will not bloom for some considerable time yet. *Anemone stellata* is pushing on rapidly in sheltered places, and will, apparently, be in bloom at much about its usual time. Damp seems

to have been fatal to some of the finer pinks.

Greenhouses.—The last Chrysanthemums of the season having been cut, advantage was taken of a stormy day to clean out and re-arrange a span-roofed house. A good batch of *Cineraria stellata* was made use of. The plants, just on the point of blooming, have been kept quite cool until now, and, as a result, are free of aphids. Nevertheless, when staging was completed, the house was vaporised on two successive nights, and this will probably save any trouble in the future. A quantity of *Arum Lilies* was also staged, as well as bulbs of different kinds. *Salvias*, now practically over, were dispensed with, excepting about half-a-dozen plants of each variety. These have been assembled on a stage and will be grown on in a comfortable temperature in order that cuttings may be produced as quickly as possible. Lack of sun is responsible for rather brisker firing than is usually given, and no unnecessary water is thrown about. *Clematis indivisa lobata* is now making excellent growth, and will be useful at a later date. A good batch of the variegated *Hydrangea hortensis* has been put into quite a cool house. These will ultimately be planted out of doors. A dozen plants of *Antirrhinum Nelrose*, now showing the flower-spikes, were also made use of, as well as odds and ends from the stove. Air is given freely on all suitable occasions.

Chrysanthemum cuttings.—In the course of the week a finish was made with the insertion of Chrysanthemum cuttings. The batches previously put in are now taking hold, so after the final lot was put in the old stools were taken to the heap of soil which accumulates from various sources, for the balls are much too valuable to waste. By-and-bye these will be broken down and sifted, the soil thus obtained being useful for seed-sowing and other purposes. At the same time all the pots were thoroughly scrubbed, the crocks collected and washed, and laid aside in readiness for the time when they will again be needed.

Hardy Chrysanthemums.—The stools lifted in November and wintered in a two-sash cold frame have done well, and cuttings are now ready in some quantity. It is early enough to begin propagation, but a few dozens have been put in. Generally speaking, it is better to delay propagation of hardy Chrysanthemums until the end of February. The cuttings root more readily at that time, and there is less chance of losses from damping. After growth begins the young plants ought to be grown on steadily, any check in their earlier stages being difficult to make good at a later date.

Seed Potatoes.—The earlier lot of seed Potatoes is being got ready. If placed in shallow boxes and packed on end closely, being afterwards covered with mats, the eyes soon start into growth. As soon as these are visible the mats are taken off and every endeavour made to keep the shoots as sturdy and robust as possible. For earliest crops no cut seed should be employed, and superfluous shoots must be rubbed out in good time. Late varieties should be inspected from time to time, and any doubtful tubers promptly removed.

Flower-stakes.—It has been absolutely impossible during the week to do any digging, or, indeed, to go upon the soil at all. In order to further the work in other ways advantage was taken of a comparatively dry spell to cut 500 or 600 stakes from an avenue of pollarded Sycamores. These trees are pollarded every few years, and annually provide plenty of excellent

stakes suitable in an especial degree for Chrysanthemums in pots. These are cut at a length of about 5 feet, and are then dressed and pointed. Although the stakes only last a season, yet they are worth the trouble involved. One grudges to cut Bamboo canes when they are too long, because thereby they may be spoiled for other purposes, but no compunction is felt in reducing the stakes referred to to a suitable size. Further quantities will be cut from time to time as opportunity offers until a sufficient number has been secured. Smaller sizes of the same material are useful in many ways, they are easily obtained, and are quite as good for many purposes as purchased stakes.

W. McGUIFFOG.

Balmac Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of course the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Green mould on Azalea stems (*A. R. Duncan*).—Are your Azaleas grown in pots or are they the hardy ones? We are assuming you are referring to *Azalea indica*. A green mould, such as you refer to, is apt to attack old plants, more particularly if the roots are in a bad condition, in which case the only remedy is to re-pot them. An excess of moisture would also tend to encourage this fungoid growth, for a fungus it undoubtedly is.

Gladiolus spawn (*L. M. S.*).—The bulbets or spawn should be taken off in the autumn when you lift the corms. Store them for the winter in sand in a cool greenhouse or in some place where frost will not reach them. In the spring, just as they begin to grow, plant them in a nursery bed of light, rich, sandy soil, lifting and storing the bulbs in the autumn, and treating as advised above. After two years' growth most of them should bloom well.

Primulas, Chinese, damping (*F. Longfield*).—You have buried your Primulas too deeply. These plants have soft, sappy stems, and are very susceptible to injury from damp if the wet accumulates near them, especially close to the base of the leaf-stems, as has been the case in the plant you send us. The plants should, as it were, just sit on the soil, and not be buried into it. If they have in any way become drawn, then it is usual to support them with short stakes put in around them, and tie them up with matting.

Treatment of Marguerites (*H. P.*).—The Marguerites can be cut back now a little, and the shoots they put forth, when about 3 inches or 4 inches in length, would make excellent cuttings, and should strike root freely. Young plants so raised will bloom in a small way in the summer; but if they are planted out in the open ground in May, and encouraged to grow by keeping the bloom-buds pinched off, watering, etc., and lifted and potted up towards the beginning of September, fine plants for winter blooming can be depended on.

Smilax from seed (*J. R.*).—Sow the seeds in a pot or pan in a mixture of loam, peat, and sand, plunge in a good hotbed, and keep the soil fairly moist. Spring is the best time to sow. When up and growing pot the seedlings singly, grow on in warmth, and when strong enough plant them out in a well-drained bed of nice light, rich soil, training the shoots singly to strings. The plant grows best in a mild stove or intermediate temperature, with a fairly moist atmosphere and light shade.

Gesnera (*A. Subscriber*).—The leaves you send are those of a Gesnera, but which we cannot determine without flowers. After their flowering season is over, Gesneras perfect their growth, and then go to rest, at which period scarcely any water should be given. Then on the return of spring they should be turned out of their pots, and the curious underground rhizomes or tubers picked out of the old soil. A suitable compost for them consists of equal parts loam and leaf-mould, with a liberal admixture of silver-sand and well-decayed manure. In potting, the upper part of the tuber should be just covered with the soil, which must be kept slightly moist till growth recommences. These Gesneras are much benefited by being started in the temperature of an intermediate-house, but in the summer they will succeed in the greenhouse. They are readily increased by their underground rhizomes, which are freely produced.

FRUIT.

Melons in frames (*J. F. Riley*).—The usual way is to have two plants to each light. Unless you can have a hotbed, it is much too early to think of planting in frames, April being quite soon enough to make a start. So early in the year there is always the chance of cold winds and sharp, frosty weather. Even those who are well equipped, as regards labour and material for maintaining the limes in a state of efficiency and in covering the frame with waterproof covers and mats at night, find the growing of Melons in frames at this season no child's play, and unceasing attention on the part of the grower is necessary if success is to be had. The end of March would be quite soon enough to sow the seeds.

VEGETABLES.

Market gardening (*Y.*).—This is a very extensive and varied business, and a very important one, and the first thing to do before you invest your money in it is to go and work in some good market garden, otherwise you will probably waste your time as well as lose your money.

Manuring a garden (*Mrs. F. J.*).—There is no doubt that for general garden purposes the use of a good dressing of mixed farmyard and stable manure would be most desirable, or supplemented by artificials selected for each crop. Many people are in the same position as yourself, and have to do the best they can without the dung. In regard to a general artificial manure, you cannot now obtain potash at any reasonable price, if at all, and the Potatoes will have to do without this. You should use some superphosphate or basic slag at once, and when the crops are beginning to move, or just before, give a dressing of from 1 cwt. to 2 cwt. per acre, or even more, of sulphate of ammonia, which is a home-made nitrogenous manure, and easily obtainable. In place of the sulphate, you may, if you prefer it, use nitrate of soda or nitrolim, but any one will be efficient. The dressing of slag may be at the rate of about 5 cwt. per acre; and of superphosphate, say, 3 cwt. to 4 cwt. A good manure for Potatoes would be $\frac{1}{2}$ cwt. nitrate of soda, $\frac{1}{2}$ cwt. sulphate of ammonia, 2 cwt. dissolved bones, 2 cwt. superphosphates, and 1 cwt. of sulphate of potash. But you will probably find it simpler to make use of the general dressing we have suggested, though the best and most economical way of using artificials is to adapt the dose to the particular crop, and whenever possible use them to supplement a dressing of well-decayed manure. The leaves possess value, and when well decayed should be mixed with the soil, which they will open, warm, and enrich, though it is easy to exaggerate their manurial value.

SHORT REPLIES.

A. P.—We should not destroy the tree, but plant the creepers against it as it is. The flowers of the climbers will be far more effective when seen through the background of green leaves.—*A. R. Duncan*—*Kalmia nana*, syn. *K. pumila*, is merely a dwarf form of *K. angustifolia*. We do not know what the variety of *Rosa* you refer to as *R. nana* is.—*Mrs. J. W. Procter*.—We have never heard of the Apple you mention, and have failed to find the name in any fruit book we have.

NAMES OF PLANTS AND FRUITS.

Name of plant.—*E. G. S.*—*Pieris japonica*.

CATALOGUES RECEIVED.

BARR AND SONS, King-street, Covent Garden, London, W.C.—*Seed Guide for 1916.*

E. P. DIXON AND SONS, LTD., Hull.—*List of Seeds for 1916.*

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NOTES OF THE WEEK.

The White Hepatica in bloom in January.—The white variety of the Hepatica (*Anemone Hepatica alba*) was in full bloom in the garden of Mr. Hornel at Broughton House, Kirkcudbright, on January 29th. It is, I think, unusually early. My own garden records, going back to 1891, though not kept annually, do not show *A. Hepatica* in bloom at such an early date.—S. ARNOTT.

Spring flowers in Scotland.—The progress made by bulbs during the past week or two has been phenomenal. Snowdrops have come on very rapidly, and to-day (January 28th) a colony of *Crocus* is in bloom. This is earlier than usual. The bulbs in question are, however, in a sheltered position, but in other places the display will shortly be general. Primroses, too, are beginning to be fairly numerous.—W. MCG., *Balmac, Kirkcudbright*.

Myosotis dissitiflora.—I note with surprise "Byfleet," February 5th (page 70), speaks of *Myosotis dissitiflora* as a shy seeder and difficult to keep a stock of. Perhaps my experience in Cornwall may interest him. Here I have had it for several years, and it never fails to give plenty of self-sown seedlings in all sorts of strange places. In hedges and paths I usually find literally thousands of seedlings, so many in fact as to be a nuisance were not this *Myosotis* such a priceless thing.—G. ALGAR-TEMPLE, *Scorrier, Cornwall*.

Clematis integrifolia Durandi.—A proposal of the article in GARDENING ILLUSTRATED of January 22, relative to the *Clematis integrifolia Durandi*, I am sending you, in a separate cover, an old catalogue of our firm of March, 1874. From it you will see that this fine plant was introduced in that year by my father, who had bought the entire stock of it from the raisers, M.M. Durand frères, of Lyons. As my father had dealings of a cordial nature with M.M. Thibaut and Keteleer, he was able to send them some plants at the time he brought out this novelty.—E. LEMOINE, *Nancy*.

Crocus Sieberi.—I had flowers of this in a sunny border fully open in the scant sun of a January day on the 30th of that month this year. My earliest record was in a former garden close to the sea, where in 1898 it bloomed on January 25th. The presence or absence of sunshine is an important factor, and it is not possible to

make an exact comparison, as the flowers were ready to expand some days before. *C. Sieberi* has pretty pale purple flowers with an orange base. The anthers and filaments are orange and the stigmata orange-scarlet.—DUMFRIES.

Abelia chinensis.—I envy those who can grow this fine shrub in the open. It has been repeatedly tried, but without such success as would warrant its retention. Even given a choice place on a warm wall with a southern exposure the plant never appeared to thrive. It is, evidently, a case of a few degrees in winter making all the difference, for when grown in pots in an unheated house *A. chinensis* does well.—W. MCG., *Balmac*.

Winter Aconites.—Mr. Arnott's note concerning the blooming of Winter Aconites at Broughton House on January 10th was interesting. *Balmac* is but five miles from Broughton House, yet it was not before the 16th of the month that the first flowers of Aconites were observed. In Mr. Hornel's garden, however, there are more shelter, and, perhaps, a more congenial soil, which, combined with the lower altitude, most probably account for the week's difference. Now (January 26th) the Winter Aconites are at their best.—W. MCG., *Balmac*.

Crocus Imperati.—This varies a little, but the ordinary form is perhaps as attractive as any. It has good-sized flowers, which are of a pale purple when open, the exterior of the segments a pretty buff feathered with dark purple. In some forms the purple feathering is absent, but this is no gam. I understand the unfeathered form comes from a different locality. It flowers, as a rule, rather earlier than the other. The white variety, *C. I. albus*, is not so vigorous as some of us would like. The form sold as *C. I. longiflorus* is also handsome. A variety, *C. I. Reidi*, with rose-coloured segments, is figured by Mr. George Maw in his monograph of the genus. *C. Imperati* was in bloom with me on January 30th.—S. ARNOTT, *Dumfries*.

Ardisia crenulata.—Upon a recent visit to Kew Gardens I was very pleased to see in No. 4 house (the flowering-house) some very fine examples of *Ardisia crenulata*. These were admirably grown, having evidently been well cared for from the seedling stage. These plants were bearing a profusion of dark scarlet berries, and in every sense highly decorative. More than fifty years back now this plant used to be

grown for use at Christmas, when its use upon the dinner-table or in vases as single plants in various ways was much appreciated. It was quite a reminder of past times to see it again represented in such excellent style. Like many other valuable plants, it has been thrust aside to give place to soft-wooded plants that can be grown into decorative plants in less than a year.—J. H.

Echeveria retusa.—A few plants of this succulent are useful during the dull months. If grown in a moderate stove heat no difficulty is experienced in obtaining blooms at the New Year, but, naturally, if only greenhouse temperature can be given, the flowers do not appear till spring. For winter flowering the plants ought to be shaken out and repotted in June, being afterwards placed in a cold frame until a vigorous growth has been obtained. A rather sandy soil is essential, and great care is needed for a time as regards moisture. On the approach of winter the plants can be removed to more comfortable quarters, and when in bloom its neat habit and brightly-coloured orange flowers make it welcome. *E. retusa* is useful for room decoration, and lasts well in heated or gaslit places.—KIRK.

The Winter Heliotrope.—I have, unfortunately, some reason to speak bitterly of this plant in the garden. Many years ago it was put out at the foot of a south wall and in a piece of rockwork. In both positions, especially in the latter, it has proved an unmitigated pest, and year by year much time is occupied in trying to get rid of it. As "W." remarks, its place is on a railway bank, but, I fear, railway companies would not welcome its use even there, for it might easily spread through the ballast of the permanent way and take possession. Here, too, are large colonies in the woods. These do not flower at all well, and have ousted the Primroses and Wood Hyacinths. I, therefore, have reason to write in no kind way of *Petasites fragrans*, but I have no desire to be unjust to it, or to any plant which, although a pest here, may be enjoyed by others.—W. MCG.

Notes from Bettws-y-Coed.—Your Editor has hurt my feelings by excising my reference to *Menziesia*, or *Dabecia polifolia*. I suppose he did so lest I should hurt the feelings of some reader of GARDENING ILLUSTRATED. "Notes from Bettws-y-Coed" are intended for various friends who hold the same antediluvian views as myself. Having all their lives

spoken of Saxifrages and Asters they do not care for Rockfoils and Starworts. I wonder whether *Arnebia echioides* has ever been in flower during the last fifty years at this season? On several plants the flowers are not absolutely open, but showing the brightest colours. The show of early Saxifrages has been wonderful. *S. Boydii* alba was in full flower at Christmas, *S. Elizabethæ* never so good before. On *S. Burseriana*, *S. Salomonii*, *S. Cherry-trees*, *S. sancta*, and *S. apiculata* there is also a number of flowers. *Omphalodes cappadocica*, white and red *Saxifraga oppositifolia*, *Rhododendron Silberrad* (a very pretty colour), and wild Daffodils are also in flower. *Daphne Blagayana* is splendid, and I really think *Omphalodes verna*, as it is this season, cannot be beaten for colour.—E. C. BUXTON.

Names of plants.—It is interesting to look at the names of flowers in old gardening books. That excellent guide, Miller, in his *Kalendar MDCCIX.* always calls *Mignonette* "Sweet reseda" or *Mignonette d'Egypt.* Pineapples are "Ananas," but there is no mention of "Girasoles," only Jerusalem Artichokes. In Belgium, by the way, these were called "Topinambours" on the hotel menus in old days. Nomenclature is a difficult subject. While lecturing in America I got hauled over the coals by the reporters for not calling the flowers by their "pet names." But the "pet names" varied in each State I was in. "Baby's Blue Eyes" nearly always meant *Nemophila*, Joe Pye-weed was always *Eupatorium purpureum*, but "Old Maids" for a yellow *Brodiaea* was quite local (Yosemite). No one in California knew what *Ceanothus* meant. It was "wild Lilac" to Californians, "Deers-bush" in parts of California. Consequently, cumbersome though they were, I invariably travelled with my Latin friends packed in my mental portmanteau instead of the fashionable innovation trunk.—A. MARTINEAU.

Trees and shrubs with ornamental bark.—In an interesting article on the above by "D." (p. 29), I was sorry to see no mention of *Cornus florida rubra*, which, apart from its summer and autumn display, is attractive during the winter, when the young wood takes on a charming greyish-blue tint. A good-sized group—the plants averaging 12 feet in height—when the sun streams through the plants, has a quite uncommon effect. Another interesting tree in winter is *Crataegus tomentosa*, whose light-grey bark is noticeable, especially under the influence of sunshine, the older wood appearing almost white from a distance. The young growths do not develop this colour the first year, but remain a pale green. *Elæagnus edulis*, too, is a very attractive shrub at the present time, its rich, golden-brown branches lighting up most effectively on fine days, while every little twig is crowded with buds on the point of bursting. It is used as a foreground to the evergreen species, and, like most things of a deciduous nature, is seen to the best advantage when so treated. The Silver Sage (*Perovskia atriplicifolia*) is not mentioned, but it is a fine plant in winter, where it has attained large dimensions, the long, silvery-grey stems and buds, which in their dormant state retain the well-known Sage odour, being very distinct, and adding to the value of this shrub.—E. M.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3½d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

FRUIT.

RASPBERRIES AND FAILURES.

We frequently see very inferior canes even in what one may term good gardens. In some cases the soil is at fault, but it is by no means difficult to improve the soil if there is sufficient labour. As Raspberries in a suitable root-run give such an excellent return the labour is well repaid. Many years ago I was told a soil I had to deal with would not grow the Raspberry. This was a thin soil resting on gravel, but by no means difficult to improve, as by removing the lower spit and replacing with heavy loam at least 2 feet deep there was no difficulty whatever in getting good crops. I had to mulch freely in dry summers and only allowed two or three strong canes to a stool. I have found it a good plan to make a new bed yearly on a fresh site. Another failure frequently occurs by leaving too many growths yearly at the base. Unless ample food and moisture are given there must be failures, especially in poor soils. The Raspberry, being such a free-grower and producing so many growths, unless restricted soon deteriorates, the result being weak canes and much smaller fruits. Some land suits the Raspberry so well that it gives very little trouble. I have frequently had new canes of Hornet from 8 feet to 9 feet high and as thick as a man's thumb, whereas in a poor, thin soil they are miserable objects. Though no doubt it is a good plan to plant in the autumn, no one need hesitate to plant now (February) and later with every hope of success, given a good root-run and attention later on. The worst failures I have seen have been on poor gravelly soil. A heavy, clay soil I would prefer, as one can by deep working make such suitable. As previously stated, much better results could often be obtained by planting more frequently. This done, the plants get better culture, and I have often found that by change of site excellent results can be had. I always got much better fruit from canes on a north border under a 10 feet wall. The border was 12 feet wide and 3 feet of that was given up to Morello Cherries. Though late, I got splendid crops, and the canes grown on this site lasted much longer than on open quarters, this showing that it is necessary to have diverse sites to get the best results. In a thin soil I think a little shade advantageous. Such varieties as the strong-growing Superlative will be found of great value. This may be had in fruit longer than most kinds by cutting the canes a little closer down to the stool for late fruits. Much benefit follows the removal of all old fruiting wood; also weak growths as soon as the fruits are cleared, not leaving them a day longer than necessary. F. K.

Fruit prospects.—The fruit garden is getting interesting now. The buds on the Plum-trees are getting forward and are numerous. If the weather is favourable the crop will be good. The last month has been mild and no frost to check things, but frost may come later and do much harm. At present we are living in hope. Hardy plants are springing up in the borders and the gardener is getting out his seed-bags to be in readiness to make small early sowings on the warm, sheltered spots. Hotbeds may be made for early Potatoes and Carrots, and Onions may be sown in boxes under glass and be ready to plant out in April. In the meantime prepare the land for the crop by manuring for Potatoes, not for tap-rooted plants, which should follow a crop like Celery, that does not exhaust the land when well worked and exposed.—E. II.

GARDEN PESTS AND FRIENDS.

NOTES AND REPLIES.

Mildew on Gooseberry bushes.—Would you kindly tell me whether a mixture such as I use for Apple-trees—viz., copper sulphate and caustic soda and lime—will answer the purpose if used for Gooseberry-trees which are suffering from the same sort of mildew, or what looks like the same, or, if not, what do you recommend that is not too costly?—DEVONIAN.

[If the Gooseberry bushes are, or have been, infested with ordinary Gooseberry mildew (*Microsphaeria grossularia*) you should spray them when the buds are about to break with a solution of liver of sulphur (sulphide of potassium), made by dissolving 5 oz. of the chemical in 10 gallons of warm water. As soap adds to the efficiency of the solution dissolve ½ lb. soft soap in the water before adding the sulphide. The bushes should be sprayed again a fortnight after the first application, and as often afterwards as may be necessary, that is to say, should there be a further outbreak of mildew. Be careful to keep weeds from growing around the bushes, as these are apt to act as host-plants and further the spread of the disease. Should it be the American Gooseberry mildew, and not the above, you must at once notify the Board of Agriculture and Fisheries. This is now compulsory, as American Gooseberry mildew is scheduled under the Contagious Diseases Act.]

Silver-leaf in fruit trees.—Re the article appearing in GARDENING ILLUSTRATED on "Silver-leaf in fruit trees," in the issues of January 15th and January 22nd, I should like to give my experience in connection with this fell disease. Some five or six years ago it first appeared in some Plum-trees I planted about sixteen years ago. They were just in full profit. I consulted one or two authorities on the subject of treatment, and they each advised spraying. The remedy recommended was of no use, so, thinking it too mild, I, the next season, tried a caustic spray. This likewise proved of no avail. Then, in the autumn of 1914, I trenched round the trees some 7 feet or 8 feet from the trunks, with the object of checking the roots that had got too far from home. Whilst doing so I found many of the roots (particularly so in connection with the trees mostly affected) covered with what appeared to be lime-wash. On examination I found it was a fungoid growth with a most pungent smell. The thought struck me that silver-leaf comes through the roots, so I purchased some commercial copperas, ground it to a powder, and sowed it on the surface around each tree in November at the rate of ½ lb. to each tree. Last year (1915) I anxiously watched for results, and to my great pleasure only two trees out of twelve showed any signs of the disease—one very slightly attacked, the other so bad that I feared its recovery, so I grubbed it out. I shall watch with great interest the coming season, and shall be pleased to send you an account of results. I shall hope to give another light dressing in the coming autumn. The attack each season, has always been on the western side of the trees. It never seemed to spread in the other directions.—J. W. DARBY, 68, Shaftesbury-road, Gosport.

—A great deal has been written as to the cause of silver-leaf in fruit-trees. What I would very much like to see is some definite means of checking its progress in a young tree and curing it. Many fruit growers—large and small—annually lose trees. One of my acquaintance has in a year to replace as many as 200 trees that have been attacked by it. What a boon a remedy would be! I note, too, the disease is spreading to Currants now. In Apples it has not long obtained a footing.—E. M.

TREES AND SHRUBS.

AZARA MICROPHYLLA ARGENTEA.

This interesting variety of *Azara microphylla* is not yet in commerce. Its leaves are silver with a slightly green centre, and although some fifteen years old, it retains all the characteristics of its variegation and forms a distinct and interesting contrast to the usual dark green species. It is hardy and thrives in well-drained, rich, sandy soil, blooming abundantly in the spring, the delicate vanilla-

beautiful, the brown tips adding a feature to the flowers. This is flowering very well this year and it is interesting to note the difference in this respect among the several varieties in different years. Some of them are not flowering so freely as others this season, and varieties which were good last year are scantily furnished with bloom this season.—S. ARNOTT.

VITIS COIGNETIÆ AND V. THUNBERGI.

Mr. MOLYNEUX (page 68) objects to my description (page 30) of the above, and

Coignetia, I was referring to growers in general, and not to gardeners who are well aware of its distinctness. In Mr. Molyneux's note I find the following: "*V. Thunbergi*, a native of both China and Japan, resembles *V. Coignetia* somewhat in general appearance," etc. This is what Mr. W. Watson says of this Vine in his "*Book of Climbing Plants*": "We owe to China a better knowledge of *V. Thunbergi*, formerly confused with the American *V. Labrusca*. Its foliage at the close of summer assumes rich colours—crimson, green, and yellow. In the garden



Azara microphylla argentea at Ashbourne, Glounthaune, Co. Cork.

like perfume of the flowers scenting the air. R. H. B.

Erica carnea Prince of Wales.—I have recently noted two or three of the newer varieties of *Erica carnea* as of special beauty. Prince of Wales, another of these, has come a little later than Pink Pearl, which it somewhat resembles a short way off, but when seen nearer presents some points of difference. Growing within 2 yards or 3 yards of Pink Pearl, it is a little later and is more graceful in habit. The colour, described by the introducers as a "soft grey-pink," is very

says it is misleading. His statements that *V. Thunbergi* is the best of the family, and that *V. Coignetia* seldom colours, are quite wrong. My notes were taken when these magnificent climbers were at their best, and described accordingly. I can only presume that Mr. Molyneux has not got the true *Vitis Coignetia*.

In describing *V. Thunbergi* as similar, and often mistaken for *V. Coignetia* I rather flattered that variety, for it is of slower and rather weaker growth, yet its autumn colour leaves nothing to be desired. As regards its similarity to *V.*

of Canon Ellacombe, Bitton, it is a striking object; at the same time it is not equal to *V. Coignetia*, also Chinese, which, in the nursery of Mr. A. Waterer, Woking, is magnificent in autumn, when the leaves are at their best. One has only to see it to realise the value of the big-leaved species of *Vitis* as garden plants."

In "*Trees and Shrubs Hardy in the British Isles*," W. J. Bean refers to *V. Coignetia* thus:—

"In the forests of Yezo, according to Sargent, it climbs into the tops of the largest trees, filling them with its

enormous leaves, which in autumn assume the most brilliant hues of scarlet.

"It is in this way that it grows in Mr. Waterer's nursery. It is also very fine at Castlewella and Narrow Water, in Ireland, in both places on a wall, each leaf frequently 1 foot or more across. In this respect, and in the richness of its colour in autumn, it is undoubtedly the finest of all Vines."

Of V. Thunbergi he says:—

"The name has generally been wrongly applied to a form of V. Coignetia, from which it is quite distinct in its comparatively small leaves, deeply lobed, like those of a Fig, and its slender, less woody, five-angled young shoots. V. Thunbergi is grown at Kew and at Bitton, where it turns rich crimson in autumn, and occasionally bears fruit. In my experience it is a rather weak grower, the ends of the shoots dying back considerably every winter."

E. MARKHAM.

— E. Molyneux (p. 68) is quite correct in saying that Vitis Coignetia and V. Thunbergi are distinct species, but he is evidently not referring to the true V. Thunbergi in his note, but to the garden V. Thunbergi typified by the fine plant in Mr. Anthony Waterer's nursery at Knap Hill, which is apparently a fine form of V. Coignetia. The true V. Thunbergi of Siebold is a very different plant, with much smaller and more deeply-lobed leaves. Mr. Bean, in "Trees and Shrubs Hardy in the British Isles," describes V. Thunbergi of Siebold as follows:—"A slender-stemmed, only moderately vigorous, deciduous climber, the young shoots angled, more or less woolly. Leaves variable but deeply three or five lobed, usually 2½ inches to 4 inches, sometimes 6 inches across, heart-shaped at the base; lobes ovate, often penetrating to half, or more than half, the depth of the blade." Of V. Coignetia he writes:—"V. Coignetia, Pulliat (V. Thunbergi, Hort. not Siebold): A very vigorous deciduous climber, reaching the tops of the highest trees; young shoots round, ribbed, and at first covered with a loose greyish gloss; there is a tendril missing at every third joint; leaves perhaps the largest among Vines, being sometimes 12 inches long and 10 inches broad, ordinarily 4 inches to 8 inches wide; roundish in the main, rather obscurely three or five lobed," etc. He further directs attention to the mix up between V. Coignetia and V. Thunbergi. There is certainly a difference between the largest leaved V. Coignetia and the plant introduced about 1893, but apparently the difference is no more than a varietal one, such as is often apparent in various plants. The 1893 plants are scarcely so effective as the Knap Hill specimen or as the large-leaved plants introduced by Messrs. Veitch at a later date.—D.

— Can you enlighten me about Vitis Coignetia and V. Thunbergi. I see in last week's GARDENING ILLUSTRATED E. Molyneux says the latter is much the better, and that V. Coignetia seldom has good autumn colouring. This is quite contrary to my experience as V. Coignetia is glorious in its colouring every autumn, and I should have said much the best of all Vines, as it will go to the top of an Oak-tree in a few years, and, what is more, seems to do the tree no injury?—M. YORKE.

Cutting back Willows and Dogwood.—When and how far back should Golden Willows and Dogwood be cut when they are only grown for the show of their coloured stems in winter?—D. P.

[They should be cut back at once to

within three or four eyes of the base. They will then make good, clean shoots, which will be very effective next winter.]

Magnolia stellata (syn. M. Halleana).—This is of slow growth, and can be kept down to a size which makes it suitable for the small garden, though it never grows tall. I cannot recollect ever meeting with it more than 6 feet or 7 feet high, and Mr. Henry Hoare speaks of it as growing to 7 feet. It is a general favourite and is so hardy and free flowering that it cannot be too highly prized. I have now grown it for a good many years, and it never fails to give satisfaction. The rose-coloured form, M. s. rosea, is very pretty.—DUMFRIES.

VEGETABLES.

Onions decaying.—I am enclosing an Onion, and should be much obliged if you could tell me the cause of it going soft in the top and decaying downwards. I have had a fine crop, which is keeping well, some going like the one I am sending. Several of my friends have had them the same.—W. J. CROSSMAN.

[We are unable to attribute the decaying condition of the Onion sent to anything else but injury from frost, as there are no fungus spores or mycelium to be found in any portion of the affected scales of the bulb. The decay, moreover, is superficial, the inner portion of the bulb, which is commencing to make growth, being quite sound.]

Early Spinach Victoria.—Spinach is always welcome as early in the spring as it can be obtained, and though the Perpetual or Spinach Beet may be considered a good substitute, I do not think it of much value when the true Spinach can be procured. For years I found it a good plan, if the land could be worked, to sow a small quantity late in January on a warm, sloping border. With a light soil this was usually possible, but, if not, I sowed as early in February as the land was dry enough. A large sowing need not be made. In many gardens the land may be unsuitable. I have in such cases used fine old mortar-rubble to great advantage; also in days gone by, when motor traffic was not what it is now, road scrapings from limestone roads. It is also well to sow in rather deep drills. If this is done one may protect with dry litter at the start should the weather be severe. For early work I have found the Victoria an excellent variety and a rapid grower. In the very severe winter of 1895 I was unable to sow this vegetable for early supplies in the open till March was well in, and I found it a great gain to sow seed in 48 or large 60 pots, placing these in cold frames or fruit-houses. These pot-raised seedlings made good material for planting out when the frost broke. The plants made a rapid growth and were very useful, as most green winter vegetables were destroyed that year.—F. K.

Broad Beans.—Plants from the November sowings are looking well. The surface-soil has been deeply stirred and a little earth drawn up to the stems to steady the plants. A full sowing of Green Windsor has recently been made in double drills, at 1 foot apart, with 3 feet spaces between. Broad Beans should be given a deep rich soil, and whatever manure is applied should be thoroughly decomposed.

Parsnips.—Ground intended for Parsnips having been trenched early in the winter should now be forked over on the first favourable opportunity. The Parsnip requires a long season of growth, and the main batch should be sown as soon as opportunity permits, but no attempt should be made to sow seeds of any kind unless the soil is in a suitable condition.—F. W. GALLOP.

GARDEN FOOD.

NOTES AND REPLIES.

Growing Celeriac.—I have read with interest the notes in your recent issues on the cooking of Celeriac. This vegetable I regard as an invaluable one, but, to my misfortune, I can never meet with success in its culture. Would you be so good as to give a cultural note in one of the forthcoming issues of your journal?—G. A. TEMPLE, Scorrier, Cornwall.

[Seed may be raised in spring and the seedlings treated in the same way as Celery. The seedlings may in May or June be planted out in their permanent quarters, care being taken to lift each plant with a good ball. Trenches as for Celery are not necessary, but in a very light soil it may be planted in drills, as these assist in retaining moisture. Well-manured, deeply-dug soil is necessary. The plant is not a success on heavy clay soil unless such aids as old fine mortar-rubble, burnt garden refuse, and lime are added to it to lighten it. The seedlings should have 2 feet between the rows and half the distance between the plants in the row. They give little trouble other than keeping clean, removing side-growths, and watering and feeding. The roots will be full-grown by the end of October, and on the approach of frost they may be lifted and stored in sand, fine soil, or ashes in a cool store, the same as Beetroot. In well-drained soil they may be left in their growing quarters and covered over in severe weather.]

Cooking Beetroot.—I should be much obliged if you would kindly tell me the proper way to cook Beetroot. My cook says that if the least chip is off the end there is no colour in the roots and that a Beet so damaged is not worth cooking.—A. RABY.

[In cooking Beetroot either by plain boiling or baking great care should be taken not to bruise or break the roots in any way, or loss of colour and to a great extent loss of flavour will ensue.]

Early Dwarf Maize.—Owing to so many soldiers coming to this country from distant lands, especially Canada, during the past year, there has been a great demand for this, so little grown in this country. Though I have for years in these pages advocated its culture, it is not a great favourite. There has been a large trade in canned sugar-corn from the States, and this, with a little care, could have been grown in this country. I admit it requires warmth and moisture, but it is surprising how soon the plants fruit if an early variety such as the Early Dwarf noted above is grown. I prefer the Early Dwarf to the larger varieties, although the Early Yellow Six Weeks or Quarantain is excellent. Both the above kinds ripen well in this country and are not tall growers—about 3 feet or less. I have found it best to sow the seeds in small 60-pots under glass, later on thinning to the strongest and planting out in May in deep drills or shallow trenches in good soil, watering freely in dry weather. Given a favourable summer I have had good material from seed sown in the open in early May in rows 2 feet apart, thinning to 1 foot in the row, but it is a great gain to give the plants a start under glass.—W. F.

Bagging Pears.—I am sorry to see, in GARDENING ILLUSTRATED of February 6th, that a printer's error has quite altered the article on papiers cristallé, written specially to answer about the difficulty in fixing the fruit bags. The article says pillow-case pins, instead of pillow-lace pins. The former are of a thick make, quite unusable with papiers cristallé; the lace pins being quite the reverse—long, thin, and sharp.—A. H. C.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

VIEW OF SCOTNEY FROM QUARRY.

MAKING a good use of accidents in the ground does not enter into the plan of the garden architect, as he calls himself. Yet a most essential thing in garden design is taking advantage of any differences of level or accidents in the ground. We have here one of the best evidences I have yet seen of this in an old quarry at Scotney, giving a view down to the old Castle. It was filled many years ago with

will be succeeded by the Poet's Daffodils and other Narcissi, with some later bulbs to keep up the interest. The Winter Aconite, common though it is, is one of the most charming things we have early in the year.—Ess.

AMONG THE HARDY FLOWERS.

THE CHIONODOXAS.—Were I called on to decide as to the best of the Glories of the Snow I should choose *Chionodoxa Lucillæ*, which appeals to me because of the brilliant blue and white of its colouring, reminding one of the *Nemophila*. *C. gigantea* is fine, no doubt, but I do not care so much for its colour, although that is, I suppose, a question of taste. *C.*

speaks of "amazonian March," with her "sleety arrows." It almost makes one shudder to think of some of our early flowers subjected to that month's hardships. The hand-light is too cumbersome for a small plant. The same may be said of the cloche. I have seen bottomless wooden boxes used with a sheet of glass laid over them, and this is possibly the cheapest way of covering a pet plant. The little continuous cloches do very well, and come next the glass-covered boxes in point of cheapness. They have the advantage over the latter that you are able to have a side view of the flower without uncovering the plant. The sheets of glass which are used by some to throw rain off their plants



Scotney Castle, from the quarry.

Azaleas, and makes a brilliant picture. This is the sort of thing that does not come into the calculations of the man who designs on a drawing-board in straight lines and avenues, and all sorts of facilities to hide the landscape. W.

The Winter Aconite (*Eranthis hyemalis*). This came into bloom with me about January 18th, a few days after writing my note which appeared on page 52. The first flowers to appear were those in a "bulb corner," where the bulbs are carpeted by other things, and where the White Honesty is allowed to sow itself. When the Winter Aconites, the Snowdrops, and the Crocuses are past in this corner they

sardensis is very pretty also, but it is, I think, not so handsome as *C. Lucillæ*. *C. Timolusi* is bright and comes nearer than any of the others to *C. Lucillæ*. I suppose with most of us it is a case of "t'other dear charmer."

PROTECTING EARLY BULBOUS FLOWERS.—It is surely worth while to consider the best way to protect the flowers, so that we may enjoy their beauties as long as possible. Our springs are not too favourable for the early flowers, and much as I dislike hand-lights, cloches, glass-covered boxes, and such like in the flower garden, I fear we must sometimes use them to protect some precious gem which we have just obtained. I think it is Swinburne who

in winter are not of much use for the purpose we have in view.

ASTILBE DAVIDI AND ITS HYBRIDS.—I have seen *Astilbe Davidi* very handsome in a garden, where it was planted by the side of a little stream which flowed through the place. It was the first time I had seen it, and I was naturally impressed by its handsome magenta-rose plumes. The colour is a bit hard, it is true, but the plant is effective when seen with its plumes 6 feet high, as these were. Soon afterwards I saw it in the garden of a friend who had planted it in a dry place. The difference was most marked, as the latter plant looked starved, poor, and unhappy. This and other pink

Asstilbes, to be seen at their best, must have plenty of moisture.

GALTONIA CANDICANS.—It is about time that those who are going to plant the Cape Hyacinth were setting about it when the weather is fine and the ground not too wet. I heard a discussion among some of my friends the other day about its hardiness, and I put the question to an amateur with a long experience of bulbs. I was informed that it was generally (though not invariably) hardy if planted 8 inches deep in well-drained soil. This information is worth passing on, as there are many who would care to try this noble plant if they were likely to establish it as a permanent inhabitant of their gardens.

ASTER THOMSONI.—I like this handsome Starwort, whose large, blue flowers on a plant about 1½ feet high give a border such a charm in summer. It is not troublesome to grow, but it wants to be watched in case the soil becomes too much washed away from the crowns and the plant suffers in winter. More than once I have known this happen.

AN AMATEUR OF HARDY FLOWERS.

VIOLETS.

MORE use should be made of these in the open air garden. We all know what handsome blossoms they produce under frame cultivation, but when they are used outdoors much of the labour necessary in frame cultivation is dispensed with, and I often wonder why such welcome early flowers are not more often seen in the open air. *Viola odorata* being abundant in our hedgerows it is not necessary to plant it, although I know of instances where it has established itself and become a dense carpet of blue, fragrant blossoms such as can be equalled by no alpine plant in January. Nestling at the foot of a sunny wall or at the base of large Lichen-covered tree-trunks, where it catches the morning sun, this little plant is very happy.

It is the stronger-growing varieties which provide us with such excellent material, and wherever a favourable position is at hand we should furnish it with some of the lovely single forms at our disposal. Usually we are recommended to plant Violets on north or shady borders, but this does not always apply; indeed, it is misleading to those who desire an outdoor display early in the year. For this purpose a rather sunny position should be chosen where the plants reap full advantage of what little sunshine there is at this early date. By the latter part of January a bountiful supply of flowers is available, and this can be said of very few plants at this early season.

I grow a nice collection of the best-known single varieties for this purpose, these being planted in various positions, such as a sunny bank or the ledge of low retaining walls, a practice I can strongly recommend, as in this way they flourish and are extremely beautiful. Admiral Avellan is grand for this purpose.

Violets are also used to carpet the ground below climbing Roses and other climbers, where they may remain for two or three years without disturbance; also at the base of pergolas, where they give colour when the things above them are bare. Some have also been planted among Azaleas, where not crowded, and promise well, the Azaleas providing a slight shade in summer and admitting full sun and light in winter. By growing them in this way the trouble of propagating is dispensed with, for they root so freely as to provide an abundant supply of healthy young plants which are available for further extension. If the plants are put out in April where intended to remain a

good supply of flowers will be forthcoming the following season. Leave the runners on the plants, as these will bloom at the leaf-joints. The mingled leaves and flowers of these long growths are very useful for draping vases, etc. One important point in growing these choice flowers is shelter from bleak north-east winds. A change of ground should be provided every few years.

A selection of good single varieties for this purpose would be Admiral Avellan (deep purple), Ascania (rich violet, large), La France (dark violet-blue), Princess of Wales (light blue), Kaiser Wilhelm II. (deep violet, similar to La France), Mrs. Schwartz (deep violet, glazed white), Souv. de J. Josse (reddish-violet, white eye), California (light violet-blue, extra long stems), and Middle. A. Pages (rosy-purple, sweet-scented). E. MARKHAM.

NOTES AND REPLIES.

Michaelmas Daisies.—The time has again arrived when, if good results are wished for, the lifting and division of the stools must be done. The stools first have their labels firmly fixed to them, and are then lifted and placed in a group near by and covered with mats while the border is manured and dug. The soil should not be made too rich for these Starworts, but, at the same time, it must be kept in good heart, otherwise there will be a lamentable failure in regard to the amount and quality of the flowers; likewise the duration of the blooming period, should the season be hot and dry. As the roots appreciate cool and moist surroundings cowshed manure or a mixture of the latter and stable manure is, when it can be had or spared, preferable to the latter alone. Nice young pieces taken from the outsides of the stools are used for replanting. As heretofore, varieties having flowers of different shades of pink and those of a pure white will be largely represented in the border, the best only of the various shades of blue, purple, lavender, and mauve being employed. The front line will be planted with the dwarf varieties alone. The clumps in the mixed borders will be lifted and replanted when the borders are pointed over.

Border Carnations the second year.—In my opinion one of the greatest mistakes made by many cultivators of border Carnations is doing away with the plants after one season's flowering. Perhaps individual flowers may not be quite so fine on second-year plants, but for general usefulness and effect really excellent material is possible. Three-year-old plants (and occasionally four-year-old plants) will yield good results. This I have proved on several occasions. Plants retained a second year will give three to five good spikes while the layer usually gives but one; the plants of three and four years' growth give up to thirty spikes if one cares to leave so many. Where it is intended they should be left, the position ought to be well prepared at the outset by deep digging and the incorporation of plenty of well-decayed manure. Another way of assisting old beds is to fork the surface over in the spring when growth is pushing, and lightly dress with well-decayed manure rubbed through a coarse sieve. Spent Mushroom-bed manure would answer the purpose admirably with the addition of lime or powdered mortar rubble. Where this practice of leaving the plants is followed, layering need be done only every second or third year—unless there be some special variety to increase. The autumn is undoubtedly the best time to plant Carnations, but where this is not possible planting must be attended to in the spring.—C. TURNER, *Highgate*.

INDOOR PLANTS.

SMILAX

(MYRSIPHILLUM ASPARAGOIDES).

THE last of the trails being now too far gone to be of further use, the plants will be cut down and the crowns given a partial rest by keeping them on the dry side and cooler for a few weeks. Before being restarted they will be shaken out and repotted. Although this was omitted last season the crowns pushed up an abundance of growth, but it is doubtful if such successful results would follow if it were again repeated. After being repotted the crowns require a nice genial warmth to give them a start, and if they can be stood on the surface of a plunging-bed matters are still further expedited. When new roots begin to appear round the sides of the balls, and growths are being pushed up, the plants can then be taken back to where the trails are usually trained. For the sake of convenience, when required for use, each growth or trail should have a separate string on which it can become entwined. When detached the trails are then easy to manipulate, and the twine, which should always be green in colour, can, if necessary, be withdrawn at a minimum of time and trouble. Some find it necessary to grow the plants in boxes and prepared borders to obtain successful results, but it is found that with pot culture an abundance of trails for decoration is always available for nine months out of the twelve. The present is a suitable time for raising fresh stock from seed, which should be sown in heat. Both the ordinary *Myrsiphyllum asparagoides* and the miniature-leaved form named *myrtifolium* should be grown, as the latter can often be used where the former is not admissible.—A. W.

NOTES AND REPLIES.

Poinsettia pulcherrima.—In the article on page 20 on this, most of the salient points as regards culture are dealt with, but I missed the reference to growing it in small pots. In the early eighties there was quite a rage for getting the largest heads of bloom in the smallest possible size of pot. To obtain plants that will develop floral bracts 20 inches across in 60-pots by late November, and that will retain their foliage in a healthy state, required great care at all times. The hit-and-miss methods practised in many private gardens at the present time will not produce 20-inch bracts and healthy leaves on plants not more than a foot high; indeed, the tendency of Poinsettias is to grow tall, and then they cannot be considered ornamental. Some growers twist and curl their stems around the surface of the pots, and in this way get dwarf plants with a foil of foliage, making a good setting for their bright bracts to rest upon. It, however, requires care to carry out this successfully. Grown naturally there is, to my mind, nothing that displays their decorative scarlet bracts to such advantage as a bank of Ferns, so arranged that the eye is brought directly in line. Stood on high stages, and having gaunt, thinly leaf-clothed stems, they have no interest. Old plants treated as suggested on page 20, and allowed to produce ten or more shoots, are much more ornamental than young single-stemmed plants.—W. S., *Wills*.

A cool house of flowers and foliage.—A very pretty and interesting arrangement can be made with comparatively hardy plants in quite a cold house. The cost of fuel is a serious matter both to the private gardener and the market man. A very

pretty effect can be had with bulbs, hardy British Ferns, and Grasses in 5-inch or 6-inch pots or boxes. Crocuses and Snowdrops are very bright in the cool house now. Hyacinths, Narcissi, Anemones, etc., are coming on, and the Christmas Rose in variety has been useful and beautiful for some time. A collection of hardy Ferns is as interesting as the tender species, and may include such kinds as *Scolopendrium crispum* and others of the Harts-tongues, *Polystichum angulare proliferum*, *Polypodium cambricum* (Welsh Polypody), *Osmunda regalis* (Royal Fern), *Asplenium Adiantum nigrum* (Black Maidenhair), *Asplenium Trichomanes* (Black Spleenwort), *Lastrea filix mas cristata*, and many others. Some of the Australian Dragon trees (*Dracenas*) and other things from Australia and New Zealand which only require a little shelter in severe weather may be included.—E. H.

Acacia Riceana.—For planting out in a conservatory or glass corridor *Acacia Riceana* deserves more notice than it receives at the present time. Its pendent growths, like those of a Weeping Willow,

wonderful colour, their profusion of flowering, and the ease with which they may be grown account for this. A good many who grow them do so for an early-summer display, and to this end it is well to sow seed presently in heat in a light, friable compost, potting each plant off separately. It is best to grow them on under temperate conditions if it is desired to have the plants in bloom for the longest possible period. For the final potting 5-inch or 6-inch pots should be used, and a mixture of loam and leaf-soil with either rotted cow-manure or bone-meal added.—LEAHURST.

Euphorbia jacquiniæflora.—Few of the winter-blooming stove plants are so showy as *E. jacquiniæflora*. It is naturally rather straggling in habit, and if an attempt is made to pinch the shoots the racemes are shorter and less imposing. I have found it best for cutting to strike half-a-dozen cuttings in each pot, and to grow these on naturally without division or stopping. Each of these will throw a long and handsome raceme, and, should they not be required for cutting, the effect of such potfuls is excellent.—KIRK.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SAXIFRAGA BURSERIANA GLORIA.

This is one of the gems of its race, invaluable, and certainly unsurpassed at



A group of *Saxifraga burseriana gloria* in the rock garden at Lilford Hall, Oundle.

and in May or earlier its long spikes of pleasing pale-yellow flowers, combine to make a charming feature in the lofty conservatory or corridor. For years there has been a fine specimen in the corridor of the large range of houses at the Edinburgh Royal Botanic Gardens. It comes from Tasmania, and is said by some authorities to be synonymous with *A. setigera*, but, according to the "Index Kewensis," this is not the case, *A. setigera* being referred in that work to *A. undulæfolia*.—Ess.

Rivina humilis.—This is a universal favourite, but, unfortunately, well-grown plants are the exception. This, I think, is attributable to the common practice of growing *R. humilis* in much too high a temperature and in too shaded positions. The result is that the berries fall off at the slightest touch, and the foliage drops prematurely, leaving a semi-bare and straggling plant. This untidy habit forms a great drawback to the plant, but if the conditions are changed success will follow. Let plants be grown in a warm greenhouse instead of the stove, give them as much air and light as possible, and both fruit and foliage will be so firmly attached to the plants that even a vigorous shake will fail to dislodge them.—KIRK.

Schizanthuses.—Few half-hardy annuals have received more attention than *Schizanthuses* during the last few years. Their

this early season of the year. It is the largest-flowered of the *Burseriana* group, and with me the earliest to bloom. Owing to the mild season it is exceptionally early this year, as it commenced to flower early in January. The accompanying illustration is from a photograph taken on January 26th. The plants have had no protection of any kind. To get the best results it should be given a light, gritty loam in full sun, and coolness maintained at the roots. This coolness at the roots is secured by mixing a good proportion of stone chips with the soil and giving a top-dressing of the same on the surface. Good drainage is, of course, essential. When this top-dressing is given, overhead watering is required at much less frequent intervals.

This *Saxifraga* can be easily propagated by division. If a plant is taken up and the soil carefully shaken out it is quite easy to cut it up into ten or twenty pieces, each with ample roots to support it. If these are potted up firmly in a light compost and kept moist and close for a week or so they rapidly make good plants.

F. W. G.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM FEBRUARY 3RD.—*Andromeda japonica*, *A. floribunda*, *Berberis* (in variety), *Ericas* (in variety), *Alders*, *Witch Hazels* (in variety), *Garrya elliptica*, *Parrotia persica*, *Yellow Jasmine*, *Winter Sweet*, the *Cornelian Cherry*, *Daphnes* (in variety), *Coronilla glauca*, *single Camellias*, *Forsythia suspensa*, *F. spectabilis*, *Edgeworthia chrysantha*, *Cydonia japonica*, *Rhododendron præcox*, *R. Nobleanum*, *Violet Cress*, *Snowdrops* (in variety), *Violets* (in variety), *Snowflakes*, *Tufted Pansies*, *Cyclamen Coum*, *Anemone coronaria*, *A. Hepatica* (various colours), *Anemone blanda*, *Primroses*, *Tritelecia uniflora*, *Saxifraga apiculata*, *S. sancta*, *Hellebores* (in variety), *Lithospermum rosmarinifolium*, *Ficaria grandiflora*, the *Lesser Celandine*, *Crocus speciosus* (in variety), *Narcissus pallidus præcox*, *N. Tazetta*, the *Bitter Vetch* (*Orobas vernus*), *Aconites*, *Blue-eyed Mary* (*Omphalodes verna*), the *Scarlet Windflower*, *Viola gracilis*, *Algerian Iris* (*I. unguicularis*), *Wood Anemone*, *Winter Heliotrope*, *Scilla sibirica*.

WORK OF THE WEEK.—The numerous catalogues which arrive at this season of the year are often so bulky that it is impossible to go carefully through them all, except for novelties, of which a good one only appears at rare intervals. They have been looked over and the usual seeds ordered, including some of the best and most distinct annuals. The removal of dead foliage from plants in the mixed border has been attended to, as many of these are on the move. *Spiræas* of the Meadow Sweet order which were too coarse for this part of the garden have been transferred to the waterside and a group of China Roses on their own roots has been planted in their place. China Roses in four varieties have been planted in a bed in the flower garden where they will be partially shaded and protected by a high wall, and where it is expected that the flowers will retain their beauty for a longer period than those exposed to sunshine the whole day. A suitable ground-work will be provided later. Some attention has been given to the clearing up and repairing of walks where these had shown signs of wear and tear. More tripods have been prepared and fixed to allow the work of pruning, tying, and forking over of the surface to be pushed along. Climbing plants are growing, in some cases, to an alarming extent, and, if not attended to at once, will be much damaged when getting them into position later. A quantity of *Erica vulgaris* Searlei, having become rather worn out, has been destroyed to make room for a group of *Berberis concinna* which had come to hand. A few plants already on the place were lifted, and helped to make up the group. *Clematis chrysocoma* has been planted at the base of a recently-erected post and rail fence. Herbaceous *Phloxes* in considerable variety which had been in position for three years have now been lifted and replanted on a prominent and sheltered piece of ground which had previously been well manured. Large plants were split in two by means of two forks placed back to back. This is a much better method than cutting through with a spade, scarcely a crown being damaged. *Erica mediterranea hybrida* has been planted as a groundwork to *Azaleas* where thinly disposed. The soil is heavy and sticky, and it will be interesting to note their progress in such. A large number of seedlings of *Clematis viticella* which were raised here has been put out at intervals

along a hedge of Japanese, Scotch, and other Roses; also on Holly hedges and a few in a neighbouring wood at the foot of Rhododendrons, Laurels, or any other likely support near the rides. E. M.

Succer.

SOUTHERN COUNTIES.

Early vinery.—As soon as the growths are sufficiently advanced for the finest bunches to be seen the surplus are best dispensed with. A rise of temperature from 55 degs. to 60 degs. by day, and from 50 degs. to 55 degs. by night, with a corresponding increase of moisture, will induce the bunches to lengthen out quickly and allow of the laterals being stopped at the second leaf beyond the bunch. Sub-laterals as they appear are rubbed out between the rods and bunches, but beyond the latter are stopped at the first leaf, and the same when they break and produce new growths. Tying down of the laterals to the trellis, as nearly as possible at right-angles to the rod, which has to be done by degrees, is generally attended to early in the morning. Very few accidents then occur in the way of the laterals snapping off at the base when the sun bursts out and increases the sap flow. Ventilation has to be done with care and judgment when the wind is in the north or east. The manipulation of the valves regulating the supply of artificial heat is another matter which, owing to the present cost of fuel, has to have very careful consideration. Until the Vines are approaching the flowering period the above-named temperatures will be strictly adhered to.

Pot Figs.—As soon as from five to six leaves have developed, the points of the shoots must be pinched to aid the more speedy swelling of the fruit. As the roots are now very active their requirements in regard to supplying them with liquid stimulants have to have close attention. A further top-dressing of the same kind of material as that last afforded is now required, employing the same device to hold it in place as before. Until the fruits begin to flower copious syringing of the foliage is a necessity twice a day, while the damping of floors has to have frequent attention.

Planted-out Figs.—These require the same treatment in regard to pinching of the shoots. Watering, until the trees become fully clothed with foliage and the fruits fast developing, does not yet call for frequent attention, but at the same time care is necessary, otherwise the first crop may be lost should the border be allowed to get dry. A free use of the syringe both in the morning and at closing time is admissible until the fruits come into flower, when, for the time being, direct syringing must cease. Until this stage is reached the temperatures both for these and pot trees should not exceed 65 degs. by day and 60 degs. by night. For the latter a bottom heat of 75 degs. to 80 degs. must be regularly maintained.

Half-hardy annuals.—The number of these has this year, with a view to saving labour later on in the way of pricking off into boxes, been much reduced. A few things, such as Alonsoa, dwarf Larkspurs, and Lobelia, which cannot be dispensed with, will now be sown and placed in warmth until the seedlings appear, when they will be moved to a cooler place.

Sweet Briar hedge.—This is now undergoing the usual pruning and tying into shape. Last season these Briars flowered freely and a quantity of hips, which proved very ornamental through the autumn and winter, resulted. As they are now much discoloured they must be cut off. After the hedge is put in order the

border will have the verges trimmed and the soil pointed over after dressing the surface with manure.

Shrub beds and borders.—These will now be cleaned, as the position of bulbs can now be seen. The leaves which have been blown among the shrubs will, where possible, be left to be dug in. Where the Dogwood is used for winter effect it will be cut close down to the ground. The annual growths resulting from this method always take on a vivid colour as winter approaches, and prove very effective when viewed from a distance. The staking of Brooms, Tree Lupins, etc., will be attended to beforehand.

Loganberries.—A new trellis, considerably higher than the old one, has been erected for these. This will enable a greater length of cane being left than formerly, consequently a larger yield of fruit can be confidently looked for. Last season the majority of the fruits were bottled whole, with very successful results. The experiment will be repeated this season on a large scale.

Summer Raspberries.—These will now be finally thinned, tied, and then tipped just above the level of the top wire of the trellis. The canes are robust and well ripened, and sufficiently abundant to allow for a good selection being made. String is used to secure them to the wires, as raffia is apt to decay before the season is over. Where the various insect pests to which Raspberries are liable have been troublesome, care should be taken to cut every piece of old wood on the stools level with the ground, gathering up the prunings and freeing the surface of pieces of decaying wood; also stones or anything likely to form a harbour for them at certain stages of their existence.

Autumn Raspberries.—These must now be cut down to within 1 inch or 2 inches of the ground, and the border afterwards mulched with decayed manure.

Parsnips.—When the surface is dry, seed will be sown on ground which has not been manured since last spring. After so much rain the soil will require pricking up to a couple of inches in depth with a digging fork. The seed will be sown in shallow drills drawn 1 foot apart. Where specimens for exhibition are required, and they cannot, owing to the staple being unsuitable, be produced under ordinary conditions, the seed should then be sown in stations previously prepared by boring with a bar holes at least 3 feet in depth and 9 inches apart, in rows 1½ feet asunder, and filling them with fine light compost. This should be made firm. A few seeds sown in each hole suffice, and when germination has taken place and the plants become sufficiently advanced for thinning to be done leave the strongest at each station.

Cauliflowers.—Seed of an early, also a summer, variety will be sown, raised, and subsequently treated in the same way as that mentioned for Brussels Sprouts. Plants in frames need all the air possible in mild weather and the soil stirred between them. When fine, the sashes may be drawn off altogether. The chief thing to be aimed at now is to get the plants hardened as much as possible, so that when transferred to handlights a little later they will experience little or no check.

Parsley.—Seeing that this has not wintered at all well provision has to be made for coping with a possible shortage later in the season by making a good sowing in boxes now and raising the plants in slight warmth. When properly hardened off the largest of the plants will

be ready for planting out in lines in a sheltered place early in April. The remainder will then be planted later more in the open. Plants grown by this method give far better returns than when sown in the usual way. If planted from 9 inches to 12 inches apart each then develops into a specimen and yields a quantity of leaves. The variety preferred here is the Giant Curled. Parsley makes an ornamental edging to fruit borders and similar places during the summer. For this purpose one of the finer-leaved and dwarf varieties answers best.

Lettuces.—The remainder of the plants of Hardy White Cos in the seed-drills, where they have stood all the winter, should now be transplanted in rows 1 foot apart and 9 inches from each other, in light, rich soil. Those set out at the foot of walls having warm aspects need the soil lightly stirred between them. The few losses sustained during the winter can be made good with plants drawn from the above-named seed-drills.

Brussels Sprouts.—As these require a long season of growth seed must now be sown in gentle warmth to furnish the plants which will be expected to yield an autumn and early winter supply of sprouts. The seed is best sown thinly in boxes, which prevents the plants becoming drawn previous to pricking them out into a frame stood on a bed of fermenting material consisting for the most part of leaves. A sowing in a sheltered nook outdoors will be made at the same time.

Celery.—A small sowing of an approved white variety must now be made. The plants in this case will be for an autumn supply. For main crop purposes sowing will be deferred till the first week in next month. Thin sowing is essential, and after germination takes place a light position must be accorded the plants to keep them sturdy until they are large enough for pricking out into a hot-bed frame.

A. W.

MIDLAND COUNTIES.

Strawberries.—The fruits on early plants will now be thinned, leaving four to six berries on each plant. The fruiting spray is supported by a small forked twig in order that it may be better exposed to sun and air. At this stage the plants may be afforded an atmospheric temperature of 65 degs. at night and 75 degs. by day, provided plenty of atmospheric moisture is given. Attend carefully to watering, giving liquid-manure or soot-water at every alternate application.

Early Vines have made sufficient growth to determine which shoots to leave and which to remove. On bright days, when the weather is mild, the Vines are syringed gently and the paths and surroundings damped ^{at} time. The admission of fresh air to the houses during the early part of the year requires to be done with great care, the foliage at this season being very tender and soon injured. A change of air is necessary at least once a day to ensure the proper development of fruit and foliage, but it must be admitted in such a manner that the temperature of the house will not be suddenly lowered or cold draughts created thereby. Ventilation must be gradual, and it is advisable on fine days to ventilate early rather than wait until the atmosphere becomes excessively hot in the house. Full advantage should be taken of the sun's heat by closing the house early in the afternoon. No harm will follow if the thermometer runs up 10 degs. or 15 degs. through this early closing.

Peach-trees which have been detached from the walls in order to retard the

blooming to as late a date as possible must now be pruned and trained, as the buds are swelling fast. In regard to the pruning, very little remains to be done, with the exception of the removal of a branch or shoot to avoid overcrowding. When the training of the trees is completed the means employed to protect the trees from frost will be got in readiness. I find two or three thicknesses of fish-netting placed on poles in front of the trees sufficient to ward off several degrees of frost. Spraying is now completed, and many trees show signs of bursting into growth. These will need protection should severe frost occur.

Herbaceous Phloxes.—There are now so many beautiful varieties of Phlox decus-

Cannas.—The tubers which have been stored during winter will now be cleaned and separated, selecting the most promising crowns, which are usually to be found on the outside of the clump. These are planted in boxes of leaf-mould and placed in a gentle heat. When growth has commenced they will be potted up into 5-inch and 6-inch pots. They do not require much water until growth is well on the move. When they have reached a suitable size they will be hardened off gradually. It is useless to expect success with Cannas unless the plants are of large size and in good condition at the time they are planted out.

Cuttings of Pelargoniums, and which

Pansies, etc., are already in flower. The various species and varieties of bulbs are equally early. Beds containing spring-flowering plants should have the surface stirred as frequently as necessary, taking care to avoid damaging any bulbs which are coming through the soil.

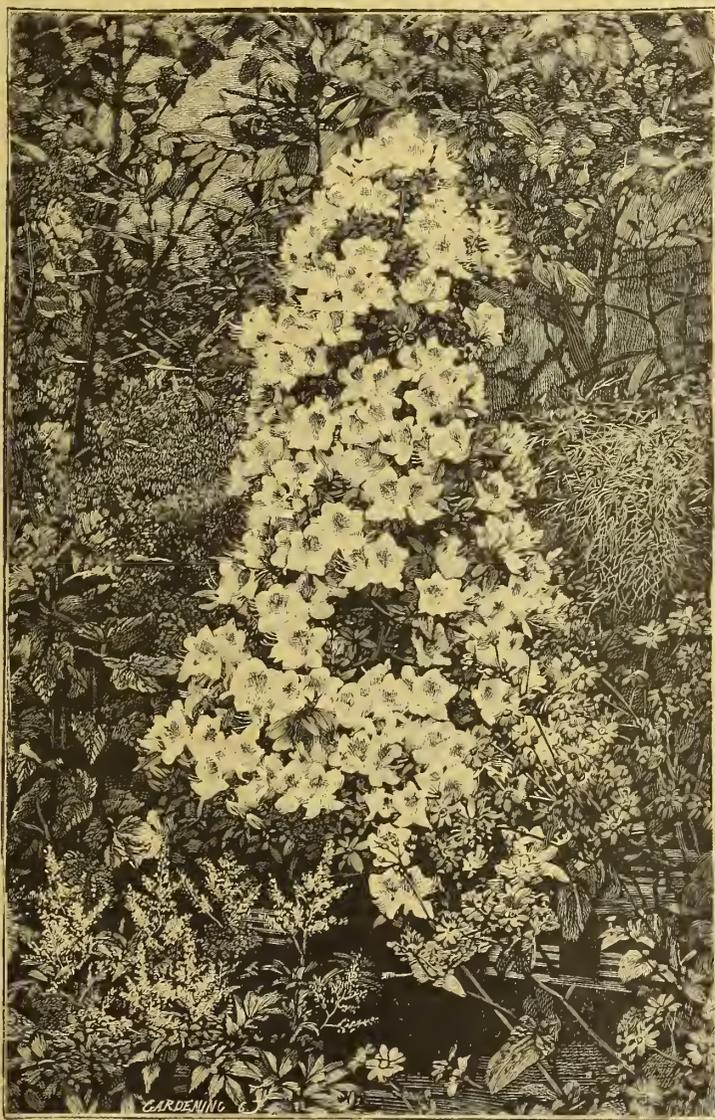
Onions require a long season of growth to ensure fine, well-ripened bulbs. I, therefore, place more importance on getting the main Onion crop sown earlier than any other. The ground intended for this crop having been trenched and manured in the autumn, the bed only requires a dressing of soot lightly forked in and making the surface as fine and level as possible. Should a storm of rain come on whilst this is being done it is better to leave it until the surface is dry than to tread the ground when wet. During unsettled weather it is sometimes necessary to fork the ground three or four times to get it into a good condition for sowing. Nothing is more detrimental to land intended for the sowing of small seeds than trampling on it while it is wet. When the surface has been made firm and raked until the soil is quite fine, drills may be drawn 15 inches apart and 1 inch deep. Sow the seeds thinly and cover them with care. The surface may then be lightly trodden, and levelled with a wooden rake, taking care not to disturb the seeds. If the seeds are sown thinly very little thinning will be necessary in the case of the main crop, as bulbs of a medium size are more serviceable and keep better than very large ones. A light dusting of soot should be frequently applied, choosing showery weather.

Leeks.—Another small sowing will be made in heat, and seedlings of earlier sowings pricked off into boxes as they become ready. F. W. GALLOP.

SCOTLAND.

Ferns from spores.—This is a suitable time for sowing the spores of Ferns. In some houses the commoner varieties reproduce themselves freely from self-sown spores, but it is just as well to make a sowing of the better sorts. A light, sandy compost, with, if possible, the addition of a little peat, is best for this purpose. Make the surface level, and after sowing do not cover the spores. If the pans are put into the propagating-case and the soil kept regularly moist and shaded germination soon follows. Seedling Ferns are always better than pieces obtained by division of old plants.

Autumn-sown annuals.—In the course of the week a look over was given to annuals sown during the month of September. These have done wonderfully well, and when the soil becomes a little drier the seedlings will be finally thinned. Some singling was done during October, but it is always considered advisable to leave the seedlings rather thickly until February, in order that possible damage by frosts or slugs during the winter may be allowed for. Some annuals are more suitable for autumn sowing than others. Among these the showy Papaver umbrosum is outstanding. The plants are much superior and bloom much more freely, and over a longer period, than when sowing is deferred until March. Other good things include Saponaria calabrica, Collinsia bicolor, Virginian Stock, Candytuft, and the useful Eschscholtzia californica. Mignonette does not, in these gardens, adapt itself to autumn sowing, the plants apparently perishing from winter rains, which are at times excessive. A light dusting of soot will be afforded when thinning is completed, this



Pyramidal-trained Azalea.

sata that in gardens where space will allow they are worthy of a border to themselves. The soil for Phloxes should be liberally dressed with well-decayed farmyard manure. The best plan in planting is to make groups of each variety, arranging the clumps in an irregular fashion, employing six or seven plants in each clump, and planting them firmly at a distance of 2 feet 6 inches apart. These Phloxes may be increased readily from cuttings or division. Quite small pieces if potted up into 3-inch pots, placed in a cold frame, and kept moderately close for a time, will soon grow into good plants.

Delphiniums may also be propagated now by detaching the side shoots and potting them up into 3-inch pots as advised for Phloxes.

are still in boxes, should be potted singly without delay and placed in a warm-house for a time.

Propagating.—All kinds of soft-wooded plants may now be propagated. Most of the subjects root readily, especially if bottom-heat is provided. Heliotrope and Ageratum we require in considerable quantities. Salvia splendens and its varieties may be propagated either from seed or cuttings. Scarlet Queen and Zurich are both fine varieties for planting out-of-doors in the summer. Strong, healthy plants, grown without a check, provide a display of flowers soon after they are planted, and continue until frost arrives. Owing to the exceptionally mild weather, all spring-flowering plants are very forward; many Aubrietias, Saxifrages,

not only checking slugs but stimulating the growth of the seedlings.

Pollarding.—An old avenue of Plane trees which divides the upper from the lower garden is in the course of being pollarded. This is done every third or fourth year, and the resulting growths make passable Pea-stalks, and the butts of the thicker growths are useful for Dahlia stakes or for hardy plants, while the thinner tips are of value as supports for Chrysanthemums. Of course, they are only useful for a single season, as the wood soon rots, but in the course of a year many of the stronger growths are again available.

Crinums and Vallotas.—These useful bulbous plants are again starting to grow, and a little attention was given to their needs in the course of the week. In the case of Crinums the surface soil among the thick and fleshy roots was removed with a pointed stick, a mixture of good loam enriched with a little chemical manure being afterwards worked carefully in. Similarly the soil was removed for an inch or two from the top of the pots of Vallotas and replaced by a rather more sandy mixture than that given to Crinums. Both will now be placed in slightly heated pits, where they will remain until the outside temperature becomes sufficiently mild to permit of their being removed to an unheated house. During the summer the Vallotas will be stood in cold frames until they show signs of coming into bloom.

Old plants of many things are gradually being got rid of as their period of effectiveness terminates. There are many plants which can quite easily be grown to a serviceable size in the course of a season, and such young pieces are always to be preferred to older plants. Cuttings of plants about to be discarded are taken in sufficient numbers to provide for possible requirements with a fairly good margin before the old pieces are destroyed.

Greenhouse plants.—The busy time in connection with the propagation, potting, and repotting of greenhouse plants has again arrived, and during the week a good deal of progress has been made. A good number of Zonal Pelargoniums was moved on for autumn blooming, from 5 inch to 7-inch pots, and a considerable quantity of autumn-struck cuttings was potted off from the cutting-boxes into 4-inch and 5-inch pots. The former batch was put into heated pits where they will remain for a time, while the latter are, for the present, accommodated on shelves in a moderately warm greenhouse. Although their value is undeniable, one sometimes gets rather tired of these plants, and other things are grown to some extent to give variety. Among these, double-flowering Petunias are valuable. The more moderately-sized varieties are again preferred, for it was found that exceptionally large-flowering sorts were not only less free, but their blooms were very liable to damp off before expanding fully. A sufficient number of cuttings has been put in, and should more be needed the tops of these will in their turn be used at a later date. Cuttings of the once generally grown *Diplacus glutinosus* were also put in. This last can be grown on to form good pieces in 8-inch pots in the course of six months. It is liable to be attacked by black aphid, for which a watch will be kept. A dozen or two of Hydrangeas, which last spring carried single blooms, were potted on into 8-inch pots. As these plants will occupy the same pots for a year or two the potting was done very firmly. Fuchsia cuttings were taken, and a quantity of cuttings of different kinds of

the various edging plants, including *Campanula isophylla* and *C. i. alba*, was put in at the same time. A small batch of eighteen special double-flowering Begonias was started in a box upon Cocoa-fibre. When some growth is made these will be transferred to 6-inch, and finally to 10-inch pots. A useful plant for cool greenhouse work is *Mimulus cardinalis*. *Abutilon Savitzi* strikes readily at this time, and cuttings of this and *Coprosma Baueriana* were put in in small quantities. All the available shoots of *Salvias*—chiefly *S. Pride of Zurich* and *S. Glory of Stuttgart*—were put in, these being intended for use in the open. A few plants of *Aloysia citriodora* were introduced into heat for the production of early cuttings.

Work outside has again been interfered with by rain during the week. Broad Beans for early planting were sown in boxes. These Beans transplant readily, and may go out as soon as the soil is sufficiently dry. After such a prolonged spell of wet one is a trifle impatient and apt to go upon the soil rather too soon. It always pays in the end to exercise restraint in this respect, for if the soil is "poached," as we term it, at the beginning, it is difficult to get it into good order later. W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

FEBRUARY 8TH, 1916.

At the annual meeting of the Society there is always a good gathering, and this year, notwithstanding the abnormal conditions prevailing, exhibitors came from far and near. Forced flowering shrubs were the outstanding feature. Alpines, too, were in strong force from many sources, and few plants appeal more forcibly at this early season. Among winter Crocuses were some of especial interest and giving touches of colour not seen elsewhere. The new *Primula malacoides* Rose Queen was the admiration of all, the larger flowers, distinct colouring, and more compactly-formed spikes placing it in the front rank of novelties. Orchids and other greenhouse plants were freely shown.

FLOWERING SHRUBS.

Messrs. R. and G. Cuthbert, Southgate, arranged a very fine group, for which a gold medal was awarded. Lilacs in both standard and bush form and white and coloured varieties were in abundance and of exceptional merit. *Azalea mollis* and its near allies were effective both in the margin and when associated with the white-flowered *Staphylea colchica* and bronze-leaved *Acers* in the groundwork. *Pyrus Scheideckeri* and *P. floribunda* *superba* gave warmth of colour not afforded by anything else, while *Wistaria sinensis* and the goblet-like cups of the *Magnolias* rendered the whole the more effective and imposing. *Forsythias* and *Laburnums* were freely employed, a background of Palms supplying greenery of a graceful and useful kind.

Mr. L. R. Russell, Richmond, had a showy table of Indian *Azaleas* in much variety, the 18-inch-high examples with well-proportioned heads a mass of flowers. For the greenhouse at this time no plant is more effective than these. A group of distinctly compact-growing plants of *Rhododendron præcox* was also remarked.

Messrs. J. Cheal and Sons, Crawley, had cut and other shrubs in variety, *Cydonia Simmonsii*, *Lonicera Standishi* (white, fragrant), *Rhododendron præcox*, *Daphne Mezereum* in variety, and *Forsythia intermedia densiflora* being some of the more attractive.

Messrs. Robert Veitch and Sons, Exeter, staged superb flowers of the richly-

coloured *Magnolia Campbellei*, together with a few blooms of *Camellia magnoliæ-flora* of delicate flesh-pink tone.

HARDY FLOWERS AND ALPINES.

Messrs. Waterer, Sons, and Crisp, The Arcade, Liverpool Street, E.C., had a most attractive and effective exhibit in this section. The alpines were in colonies, such important things as the "Satin Flower" (*Sisyrinchium grandiflorum*), *Saxifraga Cherry-trees* (true, a fine, distinct yellow), *S. Boydii alba*, *S. oppositifolia splendens*, and the yellow-flowered *S. Mrs. Leng* revealing both their worth and their garden utility—the only sensible way of exhibiting them. A dainty mauve-coloured *Viola*, most probably a *cornuta* variety named *Lady Crisp*, was also on view.

Messrs. William Cutbush and Sons, Highgate, N., had *Tulipa Kaufmanniana*, *Soldanella alpina*, *Iris alata*, *I. sindjarensis*, and *I. reticulata Krelagei*.

Messrs. Tucker and Sons, Oxford, had delightfully-flowered examples of *Saxifraga marginata*, *S. macedonica* (yellow), *S. dalmatica* (white, not unlike *S. scardica obtusa* in flower), *S. Paulinae*, *S. Kyrilli* (a pair of superb yellow-flowered sorts), together with *S. Striburyi* and *S. Bertoloni*, both reddish-flowered. Some good *Lenten Roses* were shown.

Mr. Amos Perry, Hardy Plant Farm, Enfield, brought a fine collection of the hardy evergreen *Polystichum ferns* in goodly specimens. Pans of *Shortia uniflora grandiflora* and some beautiful plants of *S. u. g. rosea* showed the value of these gems of the hardy world.

Messrs. T. S. Ware, Limited, Feltham, had an extensive table of hardy things, chiefly in pans, *Saxifrages* being largely in evidence. Of these *S. Faldonside*, the queen of the yellows, was well shown, *S. Boydii* (also yellow), *S. oppositifolia major* (a good red sort), with white and yellow *S. apiculata* being also freely displayed. *Morisia hypogæa* (yellow-flowered) was particularly well done. *Lenten Roses* in variety were noted.

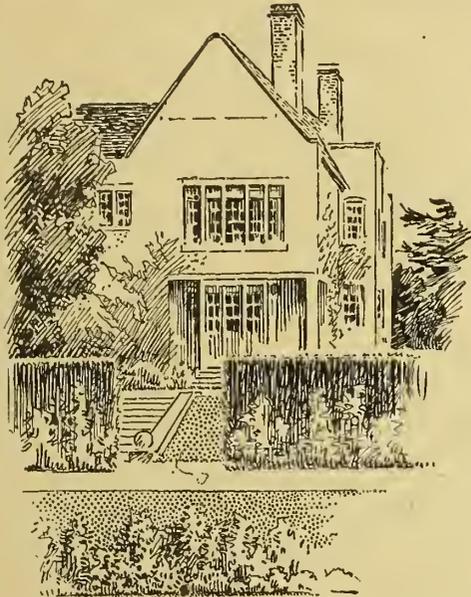
Mr. G. W. Miller, Wisbech, had *Christmas Roses*, *Polyanthus*, *Hepaticas*, *Saxifrages*, *Giant Daisies*, and the like.

Messrs. Barr and Sons, Covent Garden, W.C., showed many things, none more valuable, however, than a batch of *Iris unguicularis* in the cut state. Groups of *Saxifraga Mrs. Leng* and *Elizabethæ* (yellow), *S. Burseriana Gloria*, *S. B. magnifica* (white) were also telling. Choice Crocuses included *C. triflorus Lemon Queen* (a great beauty), *C. Tommasinianus*, and *C. suaveolens*, virtually a light-coloured replica of the last. *C. Imperati* and *C. aureus* were others of merit in a goodly lot. *Lenten Roses* and the diminutive *Narcissus minimus* were also on view.

Mr. G. Reuthe, Keston, also showed charmingly-flowered masses of *Crocus* species, *C. Imperati præcox*, *C. I. longifolius* (a showy form), *C. aureus*, and *C. aeriis* being among the number. *Saxifrages* included *S. latina* (red), *S. Kyrilli* (yellow), *S. Paulinae*, *S. Faldonside*, *S. marginata*, and *S. Griesbachii*.

Mr. Clarence Elliott, Stevenage, showed in good form and some quantity *Saxifraga Obristii*, *S. Burseriana Gloria*, *S. Boydii alba*, and *S. scardica obtusa* (all white-flowered) among the most valuable of the early sorts. The new pink *S. Irvingi* was also on view.

Messrs. Whitelegge and Page, Chislehurst, had the fine silvery *Saxifraga calabrica* in quantity. It is likely to prove one of the indispensables of the race. Cecil Davies is another silver novelty. *S. coriophylla* and *S. Elizabethæ* were excellent.



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- Collection B**—6 pints of Eckford's Culinary Peas in sealed packets for complete succession .. 5/6
- Collection C**—9 pints of Eckford's Culinary Peas in sealed packets for complete succession .. 8/6
- Eckford's Best of All Runner Beans**, a grand new variety, some pods measuring 12 inches or more in length, of excellent cooking qualities, and a very free bearer .. per quart 2/6
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- 2 packets Fine Ornamental Grasses, for mixing with cut flowers.
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- 1 packet of each Half-hardy Annuals as follows. The culture is given on each packet:—Eccremocarpus (fine climber for trellis or arch), Lobelia, Eckford's Prize Marigold, Nicotiana (Night-scented), Salpiglossis, and one Schizanthus Retusus.
- 1 packet of each Hardy Perennials as follows:—Anthrinum (Choicest New Art Shades), Aquilegia (Eckford's Long-Spurred), Canterbury Bells, Eckford's Choice Single Wallflower, and one packet of Eckford's Choice Fancy Pansy.

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Mr. J. J. Kettle, Corfe Mullen, Nr. Wimborne, surpassed himself by his exhibit of Sweet Violets, a rare and beautiful mass of colour fragrance, and variety. Frame and field grown examples of La France demonstrated both colour differences and size, the field-grown giving the finer colour, the other method the larger flowers. Jamie Higgins (mauve), Swanley White, Mrs. Kettle (silvery-mauve), and Coleroonan (deep Parma-violet blue) are all double sorts, though but a few from out of a sumptuous whole.

Mr. M. Prichard, Christchurch, again brought an extensive assortment of alpinas, such Saxifrages as Griesbachi, S. Burseriana Gloria, S. Elizabethæ, and S. Faldonside being noted among others. Erica carnea rosea was of a good and distinct colour. Lenten Roses were interesting—some beautiful. Soldanellas, too, were charming.

GREENHOUSE PLANTS.

Messrs. Jas. Carter and Co., Raynes Park, showed *Primula malacoides* Rose Queen, one of the outstanding attractions of the meeting. From a background of brownish drapery the myriads of rosy-lilac spires stood out clearly and well, the colour, assisted by the light above, showing to perfection. Obviously a much-to-be-desired novelty.

Messrs. H. B. May and Sons, Limited, Edmonton, showed an excellent strain of *Cyclamen latifolium* Giant White. *Cineraria* Feltham Blue is rich and of decided colour.

Messrs. H. Cannell and Sons, Eynsford, Kent, had a brilliant lot of winter-flowering Zonal Pelargoniums, Firefly being an uncommonly good novelty. Another of distinction and merit is the rich orange-scarlet Maxime Kovalesky. King Victor, too, was very fine.

Forced Narcissi in variety in bowls of fibre came from Messrs. R. H. Bath, Limited, Wisbech, the collection including Henry Irving, Bath's Flame (a fine incomparabilis), The Queen, Golden Spur, and *odorus rugulosus* fl.-pl. Cut specimens of Brilliance, a giant yellow incomparabilis 4 inches across with richly-coloured cup, formed, however, the greater attraction. It is superb; as a forcing sort, probably unique in its set.

Messrs. Blackmore and Langdon, Bath, showed some superbly-grown *Cyclamens*, including Salmon King, Salmon Pink, Brilliant, and Giant White. *Begonias* of the fibrous-rooted set were in several varieties. Pink Beauty and *Virginalis* were two of them.

The Marquis of Ripon, Coombe Court, Kingston Hill (gardener, Mr. T. Smith), sent Tulips and Lachenalias, together with forced shrubs.

Messrs. Sutton and Sons, Reading, had many well-flowered examples of their *Papilio* *Cyclamen* Superb White Fringed, the plants vigorous and freely-flowered.

Mr. R. Mond, Coombe Bank, Sevenoaks (gardener, Mr. W. Hall), contributed a big lot of *Freesia refracta* alba, the well-flowered bulbs quite an attraction.

CARNATIONS.

Messrs. William Cutbush and Sons, Highgate, N., showed their new perpetual-flowering *Malmaison* Sabina, a finely-proportioned variety of rich scarlet colour. Lady Ingestre, one of the best pinks, was well presented.

Messrs. Sturt Low and Co., Enfield, showed Pink Sensation, Gorgeous, Mephisto (perpetual *Malmaison*), and Philadelphia very finely. This firm also staged excellent *Cyclamens*.

Messrs. Allwood Brothers, Haywards Heath, again showed a general collection, giving prominence, however, to the new

perpetual border race of which Brilliant, Highland Lassic, and Rosalind are three of much promise. The garden, however, must be their test.

Mr. G. West, Datehet, had a small stand of his new pink Nora West. It is of a beautiful shade and free-flowering.

ORCHIDS.

Messrs. J. Cypher and Sons, Cheltenham, showed some particularly good *Cypripediums*, notably *C. Thompsoni* and *anreum virginalis*. *Cymbidium* *Gottianum* Albatross and *C. G. Butterfly*, with *Miltonia* St. Andre and *Cattleya* Octavie Doin, were also good. Among rarer kinds *Aerides* *Vandarum* (white) with nine racemes was worthy of remark.

Messrs. Low and Co., Jarvis Brook, Sussex, had a choice lot in which *Cattleya* *Percivaliana* Little Gem and *C. P. alba* were noted.

Messrs. Charlesworth and Co., Haywards Heath, had a group rich in *Odontoglossums* and *Odontiodas*, the former varied and beautiful, and including many finely-blotched varieties.

Messrs. J. and A. MacBean, Cooksbridge, had, among others, two fine novelties, *Odontoglossum* *amabile* (MacBean's variety) and *Cymbidium* *Alexanderi* aureum, both securing Awards of merit.

Messrs. Sander and Sons, St. Albans, showed the rich yellow *Odontoglossum* *Harvengtense*, *O. splendidum*, and *Odontioda* *Bradshawæ* among others.

Messrs. Armstrong and Brown, Tunbridge Wells, contributed *Cattleya* *Maggie Raphael* alba, *Lælia* *Gwenii* (yellow), together with a variety of richly-spotted *Odontoglossums* and some good *Odontiodas*.

FRUIT AND VEGETABLES.

Messrs. Sutton and Sons, Reading, had some six dozen heads of their Superb Early White Cauliflower, a self-protecting variety of much merit with white, finely-grained curd. Of model size, it is ideal at this season.

The Marquis of Ripon sent thirteen dishes of Apples, including Lane's, Bramley's, The Queen, and other well-known sorts.

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Plants under trees (Englewick).—You will never be able to get Grass to grow, as the drip destroys it. Your best plan will be to plant one of the strong-growing Ivies or one of the *Vincas*. In the coming autumn you could introduce bulbs, which would look well coming through the groundwork of Ivy or Vinca.

The Candle plant (G. J. W., Balcombe).—The botanical name of the Candle plant, of which you send a specimen, is *Kleinia articulata*. It is a native of South Africa, and has long been grown in this country. It is of easy culture, and will grow well in the greenhouse, while in some districts it is often met with in cottage windows.

Pruning Roses (Amateur).—The wisest plan will be to wait until the early part of April at least before pruning your Rose-trees. If cut back now, and the present mild weather continues for a time, the back or lower buds will be forced into growth, and should cold or unfavourable weather then set in (which, under the circumstances, is extremely probable), the growths will sustain a check, and the bloom will suffer in consequence. If left alone, only the upper buds will start, and when these are cut away the lower ones will begin to push later on.

Forced bulbs (W. R.).—These are of very little future use. Do not stand them outside too soon after blooming. It is this unnatural treatment of exposing them to cold weather that has so much influence upon future usefulness. Dry them off gradually in a frame, and plant early in the autumn. Tulips and Daffodils will then give a fair show the next season, and improve by the following spring. Still, with the extreme cheapness of bulbs

now, we think it hardly worth while to trouble over those that have done duty as forced subjects, when the result at the best can only be inferior.

Growing Begonia Gloire de Lorraine (A Reader).—You have kept your plants too cold, hence their unsatisfactory condition. The culture of *Begonia* *Gloire de Lorraine* is not at all difficult, the principal thing being to obtain good cuttings in the spring, as the plant, being so free blooming, continues to bloom instead of growing, and it is useless to propagate from cuttings of the flowering shoots. After flowering, the old plants should be cut back, and young shoots will push from the base. These shoots, when from 1½ inches to 2 inches long, make the best of cuttings. Put them into well-drained pots filled with sandy soil, and stand in a close propagating case, where they will soon root and should be potted on as required. The young plants do best in a gentle heat early in the year. Later on they may be grown in a greenhouse or frame, but in the autumn heat is again necessary. A mixture of loam and leaf-mould, with a sprinkling of sand, will suit this *Begonia*, and when the pots are well filled with roots an occasional dose of liquid-manure is very beneficial.

FRUIT.

Nut-tree suckers (Filbert).—When any Nut or Filbert trees become thick with sucker growths at their base it is evident that no good culture has been given them. Your best course is to fork away several inches of the soil round the trees and cut out the suckers as close down to the roots as you can, doing it neatly and well. Then fork up the soil fully 4 feet wide round each tree, and give a top-dressing of manure. That should help next season to throw stronger growth into the heads, where it is needed. But you must also moderately thin the heads so that the wood and leafage get plenty of light and air. Whether your trees are common Nuts or are good Cohs or Filberts, good culture always pays.

MISCELLANEOUS.

Grafting-wax (Walter Chapman).—The following is a good recipe for making grafting-wax: Melt in a basin 1 lb. of tallow, 2 lb. of bees' wax, and 4 lb. of resin, stir well together, and keep in a cool place in the dish it was melted in. Another very good recipe is to take common red or black sealing-wax one part, mutton fat one part, white wax one part, and honey one-eighth part. First melt the white wax and fat, then add the sealing-wax gradually in small pieces, the mixture being constantly stirred, and lastly add the honey just prior to lifting the mixture off the fire. It can be put into tins or moulds to be kept till wanted. Then as fast as the grafts are inserted and tied the union should be coated over with the wax in a warm, semi-liquid state.

SHORT REPLIES.

A. L. Wheeler.—Impossible to say what you can do to prevent the damage. Kindly send us some of the flowers and leaves, and then we may possibly be able to help you.—*W. Brown.*—Your best plan will be to procure a copy of "Vines and Vine Culture," A. F. Barton, from Mrs. Barron, 13, Sutton Court-road, Chiswick, London, W., price 5s. 6d., post free.—*J. M. D.*—We have not at hand an analysis of spent Hops, but their actual manurial value in the natural condition is very small. You will find Wakeley's Hop manure very good, and reasonable in price.

D. W. H.—The shape of your flowers is correct. They are globular and not slender.

James Laver.—Ginseng is the root of one or more species of *Panax*. That known as Ginseng is *Panax quinquefolium* (syn. *Aralia quinquefolia*).

NAMES OF PLANTS AND FRUITS.

Names of plants.—*H. F. W.*—Looks like *Chionodoxa sardensis*, but from such a poor specimen it is very hard to say.—*A. B. G. L.*—*Rhododendron præcox*.

Name of fruit.—*J. Kelly.*—Apple not recognised. Please send when in season.

CATALOGUES RECEIVED.

THOS. S. WARE ('02), LTD., Feltham.—*Catalogue of Seeds; List of Begonias, 1916.*

BEEB, LTD., Liverpool.—*Guaranteed Seeds, 1916.*

AMOS PERRY, Enfield, Middlesex.—*List of Alpine and Perennial Seeds; Special Offer of Japanese and Other Lilies for Immediate Planting.*

E. H. KRELAGE AND SON, Haarlem, Holland.—*Special Offer of Plants for Spring, 1916.*

FIDLER AND SONS, Reading.—*Catalogue of Vegetable and Flower Seeds, 1916.*

HUGH DICKSON, LTD., Belfast.—*Rose Catalogue, 1915-1916.*

R. WALLACE AND CO., Colchester.—*Gladioli, Lilies, etc., for Spring Planting.*

WM. E. SANDS, Hillsborough, Co. Down, Ireland.—*New Seedling Potatoes.*

J. J. THOLEN, Haarlem.—*List of Bulbs, Plants, and Flower Roots, 1916.*

SUTTON AND SONS, Reading.—*Farmers' Year Book, 1916.*

GARDENING ILLUSTRATED.

No. 1929.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

FEBRUARY 26, 1916.

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NOTES OF THE WEEK.

Prunus Davidiana.—The pink and white forms of *Prunus Davidiana*, which made quite a show in January, are over now. The white variety is the better in some ways, flowers larger and more numerous than on the pink variety, but both are invaluable.—BROADWAY.

Erica ciliaris alba is a lovely addition to the list of dwarf hardy Heaths. It is a soft French white in tint, and its elongated bells are the largest of all the family with the single exception of the so-called Connemara Heath. I have grown this white *E. ciliaris* for three years, but so far have failed to trace its origin. As I like to know the history of a plant I shall be glad if any of your readers can enlighten me.—J. STORMONTH, *The Nurseries, Kirkbride, Carlisle.*

Sweet Pea Margaret Atlee.—I tried this Pea last year, and while I think that we have already too many in which pink is the predominating colour, yet the particular shade in Margaret Atlee was, to me, new. The blooms, produced on long stems, number always three, often four, and are exceptionally large. An objectionable feature—to me, at all events—is the proportion of duplex blooms, of which I am no admirer, thrown by this otherwise first-class Sweet Pea.—W. MCG., *Balmac.*

The Spurge Laurel (*Daphne Laureola*) is now (January 20) in bloom, and although its flowers are not attractive, the delicious perfume from a group of plants fills the air towards evening. The green flowers are abundantly produced on short stalks from the axils of the rosette of leaves which clothe the extremities of the branches. So thickly are the flowers produced that quite a cushion is formed around the stem. As a dwarf evergreen it is very welcome, and although it is planted here in the poorest of soil and in a rather exposed position, it is doing well.—E. M., *Sussex.*

Ribes sanguineum.—Judging by present appearances the Flowering Currants will anticipate their usual date of blooming. On January 26th I noticed a plant just on the point of flowering, the colour being quite distinct. A curious point in connection with this particular plant is that it is growing in a most exposed situation in which it gets the full force of the east winds which prevail here at this time. In addition, the soil in which it is planted is by no means first-rate, but in spite of these

drawbacks the plant is quite healthy. In warm positions the plants of Flowering Currants are well forward, but that in the exposed place will be the first in bloom.—W. MCG., *Balmac.*

Grabbing coppers and wasting millions.—People may well be surprised that a penny is charged to go into Kew Gardens, which have been open free to the public for seventy years. One might perhaps as well expect a penny to be charged for admission to Hyde Park. This is one of the blessings of government by lawyers away from their briefs, which we have now enjoyed for some years. The abortive and harmful Land Act between public and private expenditure has cost the country about nine millions sterling, and is only one of the enormous expenses we have been put to by the Government, impoverishing the country by hasty and unwise legislation. Look at the many millions robbed from the arable fields of Great Britain and Ireland by the pretended Free Trade.—W.

Melville's Snowdrop.—*Galanthus nivalis* Melville has been finely in flower for some time with me. This variety, which has not increased very quickly, is a seedling of *G. nivalis*. It is probably the finest of all the pure seedlings of *G. nivalis*, apart from its South European form, *G. u. Imperati*, and was awarded a first-class certificate by the Royal Horticultural Society in 1879. As its raiser, Mr. Melville, of Dunrobin Castle, Sutherland, said, "It is larger in all its parts than *nivalis*, the bulbs being sometimes nearly double the size." It has, in addition, longer flower-stalks, the blooms of greater substance and more beautiful in form than those of the type. *Galanthus Melvillei*, sometimes called *G. Melvillei* major, is rare in gardens, and still rarer in the trade.—S. ARNOTT.

Begonia fuchsoides.—I was much interested in J. Comber's note on this plant (p. 54), together with the editorial comment. The variety which I have been growing for many years is, no doubt, *Begonia fuchsoides* *miniata*. Be that as it may, the variety deserves all the praise given to it in my previous note, and is, I think, to be preferred—judging from the description given—to the true *B. fuchsoides*. I have a recollection of what was probably the latter *Begonia* dating from my apprentice days, when a stronger and much more robust plant was grown in balloon shape for exhibition. I had quite forgotten this until J. Comber's note re-

called the fact to my memory. It is pleasing to see that there is yet some interest taken in the older race of greenhouse plants.—W. MCGUFFOG.

Iris reticulata in the north.—A little clump of this on the sunny slopes of the rock garden was in full flower here on January 30th. This is, I think, much earlier than I can recollect for a long time, my records generally giving it as flowering well into February—often about the end of the month. *I. histrioides* is a little earlier. *I. histrio* is not very satisfactory with me in the open. *I. reticulata*, *I. r. Krelagei*, and *I. r. major* are all so satisfactory that those who do not grow *I. histrio* need not trouble about it, unless they have an alpine house or frame under which to grow it. On January 29th I was in a garden which is usually a fortnight at least earlier than mine, and there *I. reticulata* was not in bloom.—S. ARNOTT, *Sunnymead, Maxwelltown, Dumfries.*

Prunus tomentosa.—This is one of the first of the *Prunus* family to flower, being usually at its best early in March. This year, however, it was nicely in flower by February 5th. A native of north and west China, it was introduced to this country about 1875, but was comparatively unknown until ten years ago. The flowers, white tinged with rose, are readily injured or destroyed by stormy weather, otherwise they are borne with such freedom from buds all along the previous year's shoots that a bush in full bloom is very effective, the branches almost hidden by flowers. It thrives in any good, well-drained soil, but should have a position sheltered from north and east. Exposure to sun is, however, necessary. Do not plant on cold, wet soil, for if that is done, growth will probably be unsatisfactory and flowering will suffer.—D.

Bacterised peat.—This is rather a complicated business, and remains at present in the hands of the scientist. If it is made too expensive for common use by the practical farmer or gardener it may remain in the bog or fen. I had some acquaintance with the bogs in Ireland many years ago, and since then I have lived twenty years close to what was formerly Whittlesea Mere, which, after being drained and brought under cultivation, is now generally known as the Golden Plain of England, by reason of its wide stretch of golden corn. There is no better corn and root land to be found anywhere, and it has been undergoing for many years a course of improvement.

Beneath the bog, which varies in depth, there lies a stratum of boulder clay, commonly termed Oxford clay, and the practical farmer has found that by mixing the clay with the bog he has immensely improved the whole for farm, fruit, and garden crops.—E. H.

The Swan River Daisy (*Brachycome ibridifolia*).—Among some of the less known half-hardy annuals we must place this, popularly known as the Swan River Daisy. It is one of the many neglected plants, and I should like to say a word or two about it. Grown in the same way as other half-hardy annuals and planted out in the beds or in the mixed border in the last week in May it looks a picture with its white, blue, and rose flowers, which somewhat resemble those of *Cinerarias*. Its flowers, though small, are very freely produced, and the plant blooms from the end of June onwards. It may also be sown out of doors in a well-prepared border, and in some localities better results are obtained in this way. In cold districts it is better to sow in February in heat and harden off in the usual way. Its height is 6 inches to 9 inches, and it should be much more often grown than it is.—E. T. ELLIS, *Westwood, Ecclesall, Sheffield*.

[The best little flower we owe so far to the vast land of Australia, and happy in our clime, too, as any native plant.—Ed.]

Corylopsis pauciflora.—There are several species, all early spring flowering, and all of Asiatic origin. From the specific name one might imagine that the species under notice had little flower beauty to commend it, but it is really a free-flowering shrub. A native of Japan, it has been in cultivation twenty years or more, but is not widely grown, owing, no doubt, to its early growth and its liability to injury from late spring frosts. Mature plants are 3 feet to 4 feet high, with numerous slender branches, from which the catkins of fragrant, pale yellow blossoms appear in advance of the leaves, sometimes as early as February, though usually in March or early April. In addition to the flowers, the young leaves are also effective, the central portion being pale green and the margin bright reddish-brown. Where it cannot be grown out-of-doors it may well be given a place in a cold greenhouse. It should be given well-drained, light, loamy soil, to which a little peat has been added.—D.

Carnation Bedford Belle.—Among modern Carnations, this fine salmon-pink sort, raised at Bedford by Messrs. Laxton Bros., ranks high. Only describable in general terms in the colour tone indicated above, and from which, so far as catalogue descriptions go, it may not differ from a dozen others, the variety unmistakably possesses a shade of its own—a glowing tone, as also a certain depth or intensity, which catches the eye at once—in fine, a “faking” colour. To such good attributes must be added fragrance—a chief recommendation after colour, seeing sweet-scented flowers are valued most in decoration—and freedom of flowering. It is not one of the biggest Carnations ever raised, a fact which accounts for its consistent, well-nigh perpetual, blooming. It is, however, large enough for all purposes, its bushy habit suggestive of the crop it is capable of producing. Bedford Belle has already secured an Award of merit.—E. H. JENKINS.

Outdoor Chrysanthemums.—“M. L. W.” (January 22nd, p. 42) will find the following varieties very satisfactory:—Brighton, J. Bannister, Leslie, and Perfection (light and deep yellows); Normandie, Provence, Nellie Hensley, Lillie, Goacher's Pink, and Dolly Reeves (light and deep pinks); Crimson Diana, Crimson Grunerwald, and

Beacon (crimson); White Beauty, Roi des Blancs, Mytchet White, Hermione, Emily, and Boule de Neige excellent whites. The above-named varieties flower from the second week in August to the middle of October, but are at their best in September. Of singles, Mary is very similar to Mary Richardson in colour and form of flower. The colour is salmon suffused with red; season of flowering, end of August and throughout September. It grows only 2 feet high. Surrey, Robin, Kate Carter, Dora, and Canada are also early-flowering singles, reddish-salmon in colour. None of them need staking in the open border. Lady Furrness is of the same colour as Mary Richardson, but much later. Rosalinde (soft pink), Nellie Riding (reddish-salmon), Peter Pan (fawn), Mrs. H. Hogben (orange-bronze), Grace Darling (white), Elsa (white), Ceddie White (chestnut on gold ground), and Catherine Hope (orange terra-cotta) are all good companions to the variety Ladysmith.—BOURNE VALE.

The Cornelian Cherry (*Cornus Mas*).—As the Witch Hazels decline in beauty the flowers of the Cornelian Cherry begin to expand, and a bush in full flower is as effective, if not quite as interesting, as a Witch Hazel, for the leafless branches are thickly studded with small clusters of yellow blossoms, which are often at their best between mid-February and early March. Although usually seen in bush form it sometimes grows into a small tree over 20 feet high. It is a native of Southern Europe and is naturalised in woods and plantations in some parts of the British Isles. The yellow flowers are very small, but what they lack in size is compensated for by their number. The common name refers to the yellow and red oval fruits, somewhat resembling a Cherry, which ripen in June. The *Cornus C. officinalis* is very similar in all respects to *C. Mas*, and is probably but an Asiatic form of the European plant. Both species may be best increased by seeds, although layers and cuttings may also be used.—D.

Camellia reticulata.—So far as individual flowers are concerned this is the most beautiful of the cultivated Camellias, but, unfortunately, it is not so hardy as *C. japonica*, and can only be grown out-of-doors in the mildest parts of the country, and even then it should be planted against a wall or in a very sheltered corner. It is a native of China and was originally introduced about 1820. The semi-double flowers are each upwards of 6 inches across, the large, irregular, rose or light red petals enclosing a central mass of golden stamens, each individual blossom bearing a striking resemblance to the flower of a semi-double *Pæony*. In districts where it cannot be grown outside it may well be given a place in a cool greenhouse or conservatory, where, during February, it may be expected to bloom freely. For indoor work the best results are obtained by planting it in a well-drained and well-prepared border of light, loamy soil containing a little peat. Propagation is effected by grafting it upon stocks of *C. japonica*.—D.

Iris reticulata and disease.—We are indebted to “Kirk” for his notes on this. While it is certainly “reasonable to infer that healthy bulbs planted in a favourable situation and with congenial soil would remain healthy,” it is possible that they would not. It must be admitted, also, that “if the spores are in the soil a good position and exposure would assist in maintaining such bulbs in vigorous health and less liable to be affected by disease.” All this granted, neither of these factors would give immunity. The great trouble is that the disease will appear

even under ideal conditions and cause serious losses. Sir Michael Foster told us—and his statements have been supported by the experience of many others—that “in any garden to which the fungus has gained access, bulbs left in the ground soon perish; what one year is a beautiful clump of bloom may next year be represented by one or two flowers only, or not even by that. . . . By this method” (*i.e.*, lifting and removing the coats which show signs of fungus) “I find that I largely diminish the disease, though I have not as yet wholly stamped it out.” He then refers to no variety being disease-proof, and says: “If I fancy one kind is disease-proof because it stands for several years, I am undeceived at last.” In my own garden I have had a clump for ten years and which has survived where others in similar positions have perished. It cannot be said that apparently healthy bulbs of *I. reticulata* will if planted under favourable conditions remain free from the disease. It may not be present to appearance, yet a few spores may be lurking somewhere, only awaiting certain conditions to attack the plants. “Kirk” is right in advocating giving *I. reticulata* every chance, but it is only fair to warn readers that these precautions will not avail to prevent the disease making its appearance when and where it will.—S. A.

Transplanting Christmas Roses.—In reply to Mr. Jenkins' criticism of my notes at page 62, I have had quite satisfactory results by dividing and replanting Christmas Roses at the end of January in the West Midlands, and I anticipate equal success by January planting in the South Midlands. Had Mr. Jenkins to deal with the clumps in question he would have found it impossible to divide them successfully without first washing out the soil. Moreover, unhealthy clumps of this plant always contain a lot of decayed roots, which should be carefully removed before replanting. This it is impossible to do effectually without first washing out the soil, and in dealing with clumps of this description I contend that it is the best and correct method. I admit that strong, healthy clumps can well be divided without resorting to the washing out process. A “single jet syringe” will be found expeditious (and not frivolous) in dislodging the clayey soil from the centres of the clumps, and although “tepid water” is by no means essential for what we all know to be perfectly hardy plants, it will be found quicker and more comfortable to work with than “very cold water,” and in no way detrimental to the plants.—F. W. GALLOP.

—Mr. Jenkins has done timely service in prescribing considerate treatment of these most charming plants, for it is seldom indeed that one sees them as they might and should be. But there is one omission in his advice—he does not take variety of climate into account. I do not know where his garden is situated, but it is evidently not on the west coast, where the atmosphere is charged with far more humidity than it is over midland districts. If we in the west were to disturb *Hellebores* in September we should run the risk of their being seriously injured by winter wet. Moreover, the finest of all, *H. niger altifolius*, begins flowering in October, and the display would be spoilt if the plants were broken up in September. We transplant in March into deeply-trenched ground, and the plants grow through the summer without the slightest check. But I can easily understand that in districts where the sun is stronger and the air drier newly-moved plants would receive a serious check from summer drought.—HERBERT MAXWELL, *Mourveth*.

FRUIT.

PEAR OLIVIER DES SERRES.

THIS Pear comes in during January, and in some seasons will last throughout February. It is, as may be seen by the illustration, of distinct form—almost Apple-shaped—and of a russetty colour when well grown. The flavour is excellent and as good as that of any Pear then in season. It is of moderate size. It was raised by M. Boisbunel, of Rouen, about 1859, and first fruited in 1864. It succeeds either on the Quince or the Pear.

PEACH TREES IN SPRING.

I HAVE just seen a span-roofed house, nearly 100 feet long, filled with healthy trees, but badly mismanaged. The training has been so faulty that there is four times the number of young shoots that there is room for. Instead of judicious disbudding having been the rule last year

Avoid having several of extra strength by rubbing off those young shoots that promise to be such before they are 4 inches long, and so secure a tree with the main branches of medium and even strength, and smaller ones that are very short-jointed and will mature well. A branch about 18 inches long should have, when finally disbudded, about three young shoots left on it, one at its base, one near the centre, and another near the point. One 12 inches long should be disbudded till two young shoots are left on.

G. G. B.

CORDON PEARS.

THE note at p. 2 on cordon Pears was very interesting, and "E. B. S." might with advantage have included other fruits grown as cordons, notably Plums. I have seen many failures with these, and should hesitate to advise anyone to grow the Plum as a cordon. I have had failures with most varieties and rarely seen what one could term good crops. I think

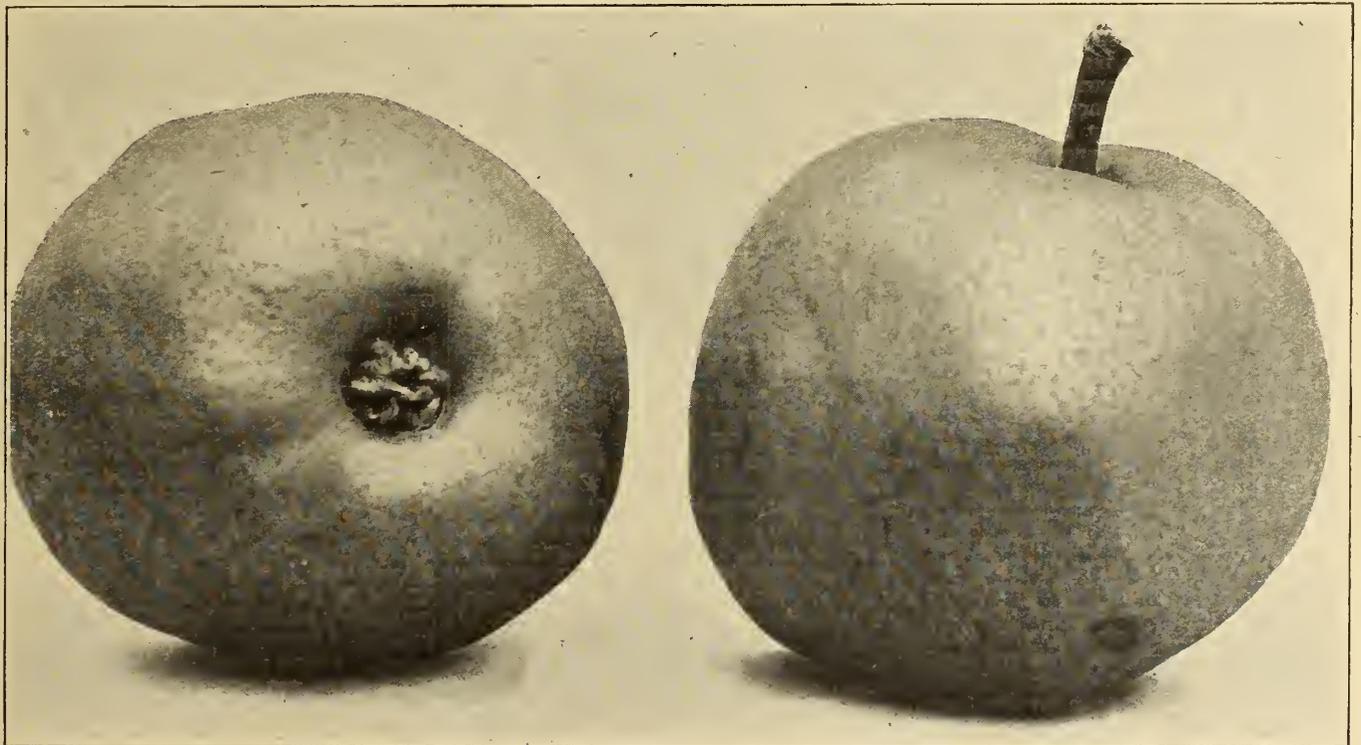
In my opinion it is, when at its best, little inferior to Doyenné du Comice. With me Doyenné du Comice is none too free, though given good soil and pinched at the right time. My cordons of this variety are not very old. Though the trees occupy the best place on a wall facing south-east, where other varieties succeed, I find bush trees in the open are far superior as regards cropping.

C. R.

THE NEWTOWN PIPPIN.

How many Apple-growers are acquainted with the romantic history of the Newtown Pippin? This variety gave rise to the establishment of our export trade to Great Britain, a business that has been developed within the last hundred years by such strides that we now mention it in terms of millions of barrels annually.

About two centuries ago a seedling Apple-tree sprang up on the edge of a swamp in the neighbourhood of the village of Newtown, Long Island. From what variety of Apple that seed came we cannot



Pear Olivier des Serres. From a photograph of fruits grown at Gravetye Manor, East Grinstead, Sussex.

nearly all the young shoots were allowed to grow.

NEWLY-PLANTED TREES.—When grown under glass the structure should be kept cool, then the growth of shoots and roots will be steady and of a healthy nature. The trees will have been cut back so that a good foundation of new branches will result. These branches will be from seven to fourteen in number—nine being a fair average. They should be so trained that the whole of the wall or trellis space is filled with short-jointed young shoots tied in at 4 inches to 6 inches apart. All the shoots growing out at right angles from the wall or trellis should be removed.

ESTABLISHED TREES.—When well managed, trees begin to fruit the second year after planting. I know of one case, however, where the trees did not bear till the end of seven years, notwithstanding root-pruning had been done and careful attention given by an expert grower. This is, of course, exceptional. When the trees did bear, the fruits were very fine. Young shoots of medium strength are the best.

"E. B. S." has touched upon the weak spot, viz., the summer pinching or pruning being done too early. I quite agree that such work results in a mass of worthless growth which is cut away time after time, the result being few fruits and often none at all. The advice given to prune when the new wood has hardened a little is well worth attention. A Pear that has never failed with me as a cordon and one that makes little gross wood—indeed, its free-fruited every year or nearly so prevents this—is the well-known Louise Bonne of Jersey, I think one of the best cordon Pears we have when crop and quality are considered. My worst cordon as regards bearing is Pitmaston Duchess, whose only merit is its size. Marguerite Marrilat, a very large early fruit, a very strong grower, but totally different from Duchess in having short jointed wood, makes a very fair cordon treated as advised by "E. B. S.," that is, not stopped too early. I also like Beurré Superfin as a cordon. It is not so reliable as Louise Bonne, but usually gives a fair crop every other year.

tell. This seedling was allowed to grow, unmolested, ignored, as such trees are, until one day a stranger passing by saw and tasted some of the fruit from this tree. He found the flavour better than anything he had ever tasted.

In 1758 a box of Newtown Pippins was sent to Benjamin Franklin, our representative in England. He gave some to his friend, the English botanist, Peter Collinson, who then brought scions into England. The trees had but meagre success in English orchards, but the fruits were popular in the markets of London. Though to Franklin must be given the honour of introducing American Apples to the English people, the export trade was really inaugurated through the efforts of Andrew Stevenson, of Albemarle County, Virginia, who was minister to the Court of St. James in the first year of Queen Victoria's reign. While in England he had Pippins sent from home for his own use, and he presented several barrels to the Queen, who was so much pleased with the excellent quality and flavour of the

Apples that she rewarded Stevenson's courtesy by having the small import duty on Apples removed. Robert Pell, of Ulster County, New York, owned in 1845 an orchard containing a large number of Newtown Pippin trees. They yielded that year a crop which sold in the London market for as high as twenty-one dollars a barrel!—SYDNEY F. BROWN in *American Country Gentleman*.

GRAPES WITHOUT HEAT.

Will you please let us have an article as soon as possible upon how to treat Vines without heat? So much coal and coke are now needed for ammunition work that we feel they ought not to be used where they can be done without.—L. A. BOSTON.

—I have a viney which I do not want to heat this season if I can possibly avoid doing so, on account of the high prices of coal and coke and not requiring the Grapes. I do not want to injure the Vines (Black Alicante) for future years, as above proposed measures are only temporary. What is the best procedure in your opinion? Shall I leave the Grapes on the Vine or cut them off, and what pruning is desirable? The Grapes without fire would become mildewed in the house where they are growing, as I know from experience.—J. N. P.

[That this can be accomplished has on more than one occasion been clearly proved. The results, as a matter of course, largely depend on the weather, for the finer and warmer the summer and autumn are, the more satisfactory the outcome. The greatest measure of success has been achieved with varieties which require a shorter period of growth and are so constituted that they do not require nearly the amount of heat to assist in the production and perfecting of the crop, as is the case with those for which artificial warmth is considered a necessity. Under the first heading should be placed Black Hambro, Foster's Seedling, Buckland Sweetwater, Royal Muscadine, Black Alicante, Gros Maroc, and Appley Towers. Under the second come the different varieties of Muscats, both black and white, Gros Colman, Lady Downe's, and other late-keeping varieties which require a long season in which to ripen. The whole of the latter may be left to start naturally in the end of March or early in April, and it may be possible, if climatic conditions are favourable, that the various stages, such as flowering, setting, and stoning, can, with the aid of solar heat, be reached and successfully passed. But the crucial test comes when the berries take on the final swelling and begin to colour. Sun-heat may, if the autumn is fine and dry, suffice for a time, but fire-heat is absolutely necessary to obtain a proper and perfect maturation of the fruit afterwards. With regard to the varieties first enumerated these, owing to their needing much less time in which to bring their crops to perfection, can, by a judicious use of sun-heat, be grown without the aid of artificial warmth, provided, of course, the season is favourable, but the flavour in respect to the last three-named sorts would not be so good, neither would their keeping properties be of the same high order as when the finish is attained with the aid of fire-heat.

As in the case of Muscats, and late-keeping varieties in general, starting of the Vines should be deferred as long as is permissible, and then the viney or vineries must be closed. The subsequent treatment would then be on somewhat similar lines to that accorded Vines grown in the usual way, with the exception that ventilation, syringing, and damping would have to have very careful attention until the month of May is passed, otherwise an attack of mildew might result, especially if the wind is in a cold quarter. On dull and cool days it would be best to omit the damping down and to keep the ventilators

closed. Until the stoning period is safely passed the top ventilators only should be used to admit air, as ventilation from the front is often the cause of an attack of mildew in a heated viney, let alone one in which Grapes are being grown without artificial heat. In sunny weather air should be shut off in time to secure a temperature of 80 degs. to 85 degs., which will assist in maintaining a comfortable atmosphere through the night. A dry, warm condition of the air is, of course, essential when the flowering stage is reached; also while the Grapes are setting, and if the weather is dull at the time, artificial aid in the setting would render it the more certain. Once warm summer weather sets in, the chief difficulties will have been surmounted, and from then and until the berries have finished colouring and are ripe the treatment is precisely the same as when the Vines are being grown under normal conditions. In many gardens it is the rule to let the fires go out when hot weather prevails, but it is false economy so far as Muscats and late varieties are concerned, as a heavier expenditure for fuel is incurred later in the season in order to get the Grapes thoroughly ripened. In the old Chiswick days the finest bunches of Madresfield Court were always obtained from a Vine which was grown in a cold house facing due south.]

APPLE TREES FOR PICTORIAL EFFECT.

MR. JAMES HUDSON concludes an interesting summary, "Concerning Apples," at page 73, with the remark, "I have for a long time thought that we might plant standard Apple-trees in our shrubberies for pictorial effect." It is surprising it is not more frequently done. Too often, however, the shrubbery is but a meaningless jungle of evergreens so hemmed in on all sides as to preclude the possibility of development of any plant, hence loss of form and all that is good. Crowding at the start is responsible for much, neglect of subsequent thinning and timely pruning for much more, hence the deplorable results too often seen. In these circumstances the shrubbery has little of beauty, and reformation should be the order of the day.

Fruit—home-grown fruit—everybody values, and by adopting Mr. Hudson's suggestion the usually unkempt shrubbery might be made productive of both the beautiful and the useful. A lady whom I had the privilege of knowing for many years at Hampton Hill, and who gardened for the love of it, went even further than Mr. Hudson's suggestion indicates, and, having turned the shrubbery borders to good account by planting the best cooking and dessert Apples there, presently encroached upon the lawn in positions where, as she used laughingly to tell her gardener, she could "see the pictures from the windows and have a few more fruits to give away in the autumn into the bargain." When I first saw the garden in question, twenty-five or so years ago, the Apple-tree on lawn and in the border was new to me, though its purport was obvious at a glance. There was no crowding of the trees, no attempt to get as many on the ground as possible, every tree held its own, as it were, and light and air reaching the trees on all sides very heavy crops resulted from those usually isolated examples. Much might be said in favour of an extension of the idea if it were necessary, though its merits will be obvious to all. What is necessary to-day, now that economies of all kinds are in the air, is that those having gardens in process of formation should discourage the lumber of the shrubbery and like places—Privet,

Portugal Laurel, etc., soil robbers in very truth—and in their stead plant discreetly of the finer fruits, more particularly such as the Apple, and so combine the useful and the beautiful. E. H. JENKINS.

OVER-RATED PEARS.

DESPITE recommendations oft repeated as to the best Pears, those of second rate quality, or even lower still, continue to be planted largely, and I suppose will be all the time they are catalogued and stocked in nurseries. This may be attributed to several causes, the two principal being their prolific cropping or their size. A notable case in point of the first cause is Marie Louise d'Uccle, which the late Mr. Blackmore rightly described as "not to be compared with the old Marie Louise, but tenfold the cropper." There are very few seasons when given spring protection this variety does not crop heavily, and, if thinned, the fruit is large and handsome. It is said to be satisfactory on most soils, but I cannot say this has been my experience. On the contrary, the fruit developed mealiness with the ripening stage and was very short-lived. Another very heavy cropping Pear that was formerly very popular, and is still planted, is Passe Colmar. It is said to occasionally prove melting and buttery, but in the majority of districts, although very juicy, is decidedly insipid. Another heavy cropping Pear as a cordon, popular, but decidedly second-rate, is Beurré Bachelier. The list could be largely increased of those which seem to be chosen, as above stated, because they are heavy and consistent croppers.

Turning to Pears that are chosen mainly for their size, the first name to strike one is undoubtedly Pitmaston Duchess, which has very little except its size to recommend it. There is considerable difference of opinion respecting the large, highly-perfumed Pears like William's in the early and Conseiller de la Cœur and Van Mons le Clerc in the later, those not objecting to the high flavour liking them very much, while others equally dislike them. The flavour in these is very pronounced. Where it is less so, and of a different character, as in Gansel's Bergamot and Vineuse, I have never heard any objection raised. I have never found the best Pears very heavy croppers, with the exception, perhaps, of Beurré Hardy—that is, if they were doing well, but a few are hardly satisfactory as cordons unless double grafted, three that are called to mind being Gansel's Bergamot, above mentioned, Josephine de Malines, and Marguerite Marillat. Although strong objections may be raised to planting too many varieties rather than a few of the best, exception might be made in the case of the latest. Varying as these do in different soils and situations, it is worth finding out the most suitable for the locality.

Hardwick.

E. B. S.

NOTES AND REPLIES.

Injury to Apple branch.—I should be much obliged if you would kindly say what insect has caused the damage to the trunk of Apple-tree herewith. Is there any way of protecting against such ravages?—A. A. LUCAS.

[The piece of Apple growth you send has been bored by the caterpillar of the Wood leopard moth (*Zeuzera aesculi*), a by no means uncommon insect. The presence of one of these caterpillars in a branch may be detected by finding small dust-like particles sticking to the tree where a little moisture is oozing from the bark. On closer examination a hole will be found from which these particles (which are composed of the small pieces of the wood gnawed off by the caterpillar) are exuding. The easiest way to destroy it is to pass a

sharp-pointed wire as far as possible into the hole, which will usually be found to proceed upwards, so as to stab the caterpillar. It can usually be seen by the appearance of the wire whether the insect has been reached or not. If by any turn in the channel it has not, the entrance to the tunnel should be slightly enlarged and some cotton wool or tow soaked in tar or paraffin pushed into it as far as possible so as to stifle the insect. The mouth of the hole should be closed tightly with a plug of clay so as to keep the smell in. If it is possible to cut off the branch without injury to the tree you can then, by splitting it open and killing the insect, make sure that it is destroyed.]

The Alexandra, autumn-fruiting Raspberry.—In a recent issue "E. K." gives his experience of Raspberry November Abundance, and advises the planting of strong canes every third year. I grow the Alexandra, which gives an abundance of delicious fruit from early in August till frost cuts it off in November. I find it

cropper, also produced smaller fruits, and eventually it was removed. Some people, I imagine, over-prune Bismarck, and for years I thinned only where this was necessary. So treated the trees were a picture when in fruit, particularly when, as September waned, the branches were traced to their tips with brilliantly-coloured fruits. The variety in question was valued for other good qualities apart from consistent cropping; more particularly the fineness of its pulp when cooked, smallness of core—hence little waste—and long keeping. In all probability this latter was, in great measure, due to well-matured fruits—I never gathered them before October 19th—and by storage in a cellar which was constantly as well as uniformly cool. Too early gathering and too dry a store will promptly ruin the finest Apples. —E. H. JENKINS.

Manuring fruit-trees.—The most useful roots are those within a foot of the surface, and to encourage their action they must be fed on the surface. The present

sists in cutting back all spur wood to one bud, or at the most two buds, at the base. The rods, whether trained vertically or horizontally, should have their fastenings examined and made good, if necessary, as nothing is more annoying than to have these give way later when the Vines are in fruit. Stout tarred twine should be used for this. When the border is turfed over, almost, if not quite, close up to the stems little or nothing can be done in the way of manuring, but if it is used for the growing of annuals or is lightly cropped, a dressing of Vine manure forked in now at the rate of 1 lb. per square yard will prove beneficial.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

IRIS HISTRIOIDES MAJOR.

THIS is one of the best of the early spring-flowering Irises, and is of easy culture.

The flowers are larger than those of any of the group, of a rich blue colour, with faint white veins and yellow ridge on the blade of the falls. It is also sweet-scented. Slugs are its greatest enemies, and the plants should be protected from these by placing a layer of ashes around them. The illustration shows it growing in the rock garden associated with *Galanthus Elwesi robustus*, but it is not easy to convey an idea of its beauty in this way.

F. W. G.

*Lilford Hall Gardens,
Oundle, Northants.*

NOTES AND REPLIES.

The Prostrate Rosemary.—This rock plant thoroughly deserves the appreciation given it by "E. M." in the issue for January 29. He is fortunate in finding it hardy, but it is not sufficiently so to stand the winter everywhere, and is not specially hardy with many, even in gardens in comparatively mild districts. It is always safer to keep a spare plant or two under glass in winter so as to be in a position to replace any which may be lost in the open. It certainly stands some winters here, but in others it has been lost. I have had considerable correspondence with friends concerning it, and except in the south of England and in Ireland they generally agree that the Prostrate Rosemary is not absolutely hardy.

—S. ARNOTT, *Sunnymead, Maxwelltown, Dumfries.*

Treatment of low wall.—I should like your advice respecting a low wall, facing south, in which a number of bricks are missed out at regular intervals. It seems to me that if the spaces were filled with soil a nice little wall garden could be arranged. I should be glad to hear what you would advise me to grow and how to plant them.—WILL MELLAND.

[There is, perhaps, hope of success in respect of the wall, though this may be subject to qualification. For example, if only brick spaces are missed and the roots of the plants cannot reach a soil bank or soil cavities elsewhere in the wall most plants would be starved. Then, again, is the wall generally rendered vertically and with good mortar? A vertical wall is bad for plants; with good mortar and clean-struck joints it is worse. If you will send us a few more definite particulars we will do our best to help you.]

Wahlenbergia Pumilio.—Forming attractive and neat tufts, this does well in the rock garden, more particularly when given a sunny and warm position. It is equally valuable in retaining walls. *W. Pumilio* can be raised from seed, but unless sown just when ripe it



Iris histrioides major and Galanthus Elwesi robustus in the rock garden at Lilford Hall, Oundle, Northants.

gives the heaviest crop, and finest fruit, if lifted annually and transplanted to fresh ground that has been given a good preparation. After cutting the old canes down to the ground the roots are divided, if too large, as I find about six new canes from each stool quite sufficient. When they have made, say, 9 inches of growth, six of the strongest shoots are selected, the weaker ones cut away, as too many canes give too much shade. The rows are 5 feet apart and 2 feet 6 inches from plant to plant. The bountiful supply of fruit obtained over a long period well repays for the trouble of transplanting annually. A few stakes and a strained wire, to give each cane one tie, is all the support they require. —WM. ALLAN, *Gunton Park Gardens.*

Apple Bismarck.—I notice that Mr. Hudson (February 5th, p. 72) has a good word to say for the consistent cropping of this fine Apple. I grew it for many years in my old home, and every tree, with one exception, fruited every year. That particular tree, while a less consistent

is a good time to apply a surface-dressing of manure, which may include ½ lb. or so to the square yard of basic slag. This may be used separately or mixed with any other suitable dressing and worked in with hoe and rake, or, if the trees are on Grass, brushed in with a stubby Birch-broom. Cesspools may be emptied—diluted if necessary—on the roots of fruit-trees in the orchard. Holes can be made with a crowbar at intervals of a foot or so, by which it can pass to the roots. A top-dressing of manure may be given to Gooseberries and other bush fruit and Raspberries. There is a double advantage in this top-dressing, as, besides feeding the roots, it helps to retain the moisture that would otherwise escape.—E. H.

Outdoor Vines.—Although the return from these is, taking the generality of seasons, but poor, what is lacking in the way of fruit is compensated for by the ornamental character of the foliage and the beautiful tints assumed by the leaves in autumn. To avoid bleeding, pruning should no longer be delayed. This con-

sometimes takes a long time to germinate. The flowers, of a good shade of pale-blue, and large in comparison to the size of the plant, are very freely produced.—KIRK.

ROSES.

ROSES FOR GROWING ON S.E. WALL. (REPLY TO AMATEUR.)

The list of Roses given by you might be divided into three groups as follows:—

(1) Those of upright, semi-climbing habit—Mrs. John Laing, Dr. O'Donel Browne, and Louis van Houtte.

(2) Those of fairly tall but more freely-branching habit—Mme. Jean Dupuy, Gustave Grunerwald, Marie van Houtte, Mme. Lambert, Alfred Colomb, and Mme. Abel Chatenay.

(3) Those of more spreading habit—Gen. McArthur, Lyons Rose, Grace Darling, and Mme. Ravary.

The nine varieties that we would select for growing upon a wall having a S.E. aspect would be Louis van Houtte, Mme. Jean Dupuy, Gustave Grunerwald, Marie van Houtte, Mme. Lambert, Mme. Abel Chatenay, Gen. McArthur, Lyons Rose, and Grace Darling. The majority of these being, strictly speaking, dwarf Roses, it would take three or four seasons before they would attain the height of 5 feet, especially as you describe the soil as being only medium, but once the plants had become established you would obtain far more flowers from them than if you used more vigorous varieties.

A wall with such a favourable aspect deserves to be clothed with a selection of the choicest Tea-scented Roses, only three of which are in your list, viz., Mme. Jean Dupuy, Marie van Houtte, and Mme. Lambert. Other beautiful varieties which you would find suitable would be Anna Ollivier, Lady Roberts, Mme. Constant Souper, Alexander Hill Gray, Souvenir de Pierre Notting, Lady Plymouth, Mrs. Hubert Taylor, Mrs. Myles Kennedy, Niphotos, and White Maman Cochet. To cover the wall fairly quickly such varieties should be planted about 1 yard apart, and it would be advisable to plant any dwarf Roses in front, at least 2 feet away, or even 3 feet if the border is fairly wide.

No harm would result from using fresh stable manure, provided it is, as you suggest, buried in the bottom spit of soil, where it would not come into close contact with the roots of the plants, but where it would be available for their future use. We would advise you also to add a sprinkling of basic slag to the lower spit of soil at the rate of 6 oz. to the square yard. Your soil, not being very rich, you would do well to give the plants a little immediate help, and this can be supplied most quickly and conveniently in the form of bone-flour, a perfectly safe and easily-assimilated Rose food. After planting the trees, form a small cavity around each one and throw in a handful of bone-flour, finally covering this up with soil. The subsequent rains will wash this food down to the newly-forming rootlets and the plants will be wonderfully benefited thereby. In March the newly-planted bushes should be cut down to within a few inches of the base, thus forcing the bottom eyes into growth, the result being a framework of sturdy young limbs.

NOTES AND REPLIES.

Orange-fungus on Roses (L. I. O.).—All the leaves lying under the bushes should be collected and burned. The plants that have been attacked should be thoroughly wetted with 2 oz. of sulphate of copper dissolved in 3 gallons of water in the spring before the buds open. If the disease still shows itself spray with weak Bordeaux mixture and pick off the affected leaves.

GARDEN FOOD.

NOTES AND REPLIES.

Celery crisp and good.—Seeing your question respecting crisp eating Celery, I have ventured to send you two or three heads of our Celery, which is, I think, crisp and not coarse. It was grown from seed supplied by Messrs. Fidler, and called Fidler's Prize-winner. I regret that your question did not come about a week ago before we had finished our early crop, which I think was the best Celery I have ever tasted—Sutton's White Gem. It has all the attributes you ask for, and has a good nutty flavour. We find here that it is better not to plant Celery too deep in our soil, so that the roots are in the water all the winter. I wish we could have sent you some heads of White Gem, but we have none left now.—E. W. H., *Lingfield.*

—“W.” asks for name of a good Celery. He would find that old variety Leicester Red of quite excellent quality and flavour. The flesh is quite white. I think decay in the centre is perhaps caused by insufficient care in preventing soil from being enclosed during the first earthing up.—C. B. ROBINSON.

Autumn-sown Onions.—As the winter store will be depleted all too soon this spring it is necessary to get the forwardest plants raised in autumn planted without further delay on a sheltered piece of well-manured ground. This will be made firm and then raked level. Sufficient ground only to allow of a dozen rows being planted will be so treated at a time, then if rain should fall the remainder of the plot will take no harm. A trowel is preferred to a dibber for planting, as the roots are spread out more widely, which gives the plants a much firmer root-hold, while they get away more quickly afterwards. Firm planting being so essential, the soil, after the roots are properly covered in, is trodden lightly round the plants. As the bulbs of the varieties grown attain a large size when mature the major portion of the plants will stand 9 inches apart in the rows, which will be 1 foot asunder. Those planted at 6 inches apart will be required for use before they become fully grown. The remainder or smallest of the plants will be utilised for setting out a few weeks hence on a more exposed plot of ground. These will form a successive supply and last till near or quite the end of the year.—G. P. K.

Vegetables over-boiled.—One of the mistakes commonly made is over-boiling green vegetables. In that way they lose their crispness and true flavour, and also the natural salts which make them wholesome. The Cauliflower over-boiled becomes so much pap and is useless as food. Experiments which have been made with animals show that over-boiling lessens digestibility. Our country is richer in the Brassica tribe than any other perhaps. In the right season some of these are very pleasant and wholesome food, as some of the Kales that bud in the spring. Pouring melted-butter or sauces over such things is a mistake, as in the case of Seakale and sometimes Brussels Sprouts. If sauces are required with such things a little fresh butter or gravy is usually at hand. Even vegetables like Spinach, which are reduced to a finely-cut state, may be spoilt by over-boiling.

Seakale and its use.—This is a product of our British gardens, and rarely in use in Continental Europe, a further reason, if needed, for our making good use of it. It is often over-cooked and messed over with melted butter. The best way is to serve it simply, and not over-boiled, as

that deprives us of the wholesome salts of the fresh shoots. If anything in the way of sauce is desired to go with the Kale fresh butter or gravy may be used. The wild plant on our coasts is well worth looking after by those who are near the sea; the rising shoots are quite good unblanched. It is of easy culture in the farmer's garden and is quite as good if brought on with leaves or loose litter as grown in the usual forced way. It is sweeter in taste. It may even be eaten without blanching as it bursts up.—W.

Potato Langworthy.—My Potatoes having failed this year, and even an appeal to Messrs. Judd and Malin, of Jermyn Street, having led to no good result, I gave Potatoes for baking up as hopeless. Then comes in from the garden the Langworthy, which, to my surprise and pleasure, is in fine condition, and, as I think, the best of all Potatoes to eat. If it is good this year we may count on it for any year, and all who care for good flavour more than appearance should try it. But looks are in its favour, too, because instead of being a bloated aristocrat of Potatoes it is of medium size and somewhat slender in shape. There are so many new varieties of Potatoes being sent out that it behoves all who care for flavour first to find out those Potatoes that have it.—W.

Apple Orleans Reinette.—Messrs. Bunyard send me from Maidstone fruits of this, which seems to me far above the ordinary Apple. It is good to look at, juicy, and of excellent flavour. I am now busy planting a group of it, and advise others to do the same. As to Cox's Pippin being the best Apple in the world, this is very far from being the truth. The Orleans Reinette is an old Apple and long known in our land, but lost among the number of varieties. The flavour is like that of a good Ribston and the flesh is as tender as that of D'Arcy Spice. I am glad Messrs. Bunyard have not rechristened this fine fruit after themselves. Giving new names to good old fruits is not an unknown practice and is no credit to our fruit-raisers.—W.

Corn salad.—To those who only have the green form of the above the new variety with a golden heart will come as a positive revelation. I do not think the quality of the salad is altered, but the appearance is most attractive, leading one to expect a blanched heart as in a Cos Lettuce, but caused by the golden colour of the inner leaves. It makes a very pretty garnish to any cold dish. I bought it under its French name of Mâche from a French firm last year. If I cannot get it this year I shall try to save seed if it is not all eaten first! I think it was called Mâche à Cœur dorée, or blond dorée.—A. MARTINEAU.

Apple Delicious from America.—I have been fortunate in obtaining in a local shop a sample of this Apple, and I consider it is very well named. It is an Apple of an unusual type of flavour, one more example of the possibilities inherent in the Apple. If it crops and thrives in this country it is an Apple that will please. I have found the flesh soft and Pear-like and very digestible. It reminds me in all but shape of a well-grown ripe James Grieve Apple.—W. J. FARMER.

Apple Blenheim Orange.—This Apple, grown under good conditions in the British Isles, is, I suppose, our best general-purpose Apple. For cooking it is delicious, requiring no sugar. For the dessert it is also most excellent, only put in the shade by Cox's Orange Pippin and a few similar Apples. Why do we grow rubbish when we have so many good old trusty Apples better worth the care of sensible people? I have not found overseas Blenheims at all equal to British Isles grown fruit, though they are also good in their way.—W. J. FARMER.

OUTDOOR PLANTS.

BUCKHURST PARK.

THE illustration gives a good idea of the climbing plants and Rose-beds which furnish one side of the bowling-green at Buckhurst Park, Sussex. Apart from its great value as a home for plants, the wall shown forms the support of a walk running parallel to the top of the wall itself, being also supported in its turn by wide buttresses, one of which, it will be seen, is used—by means of protruding steps let well into the wall—as a pathway to the higher level.

The whole plan is well conceived, each buttress being devoted to some choice subject, such as Vine, Escallonia, Clematis, etc., which it was pleasing to observe were allowed to hang in a free and elegant

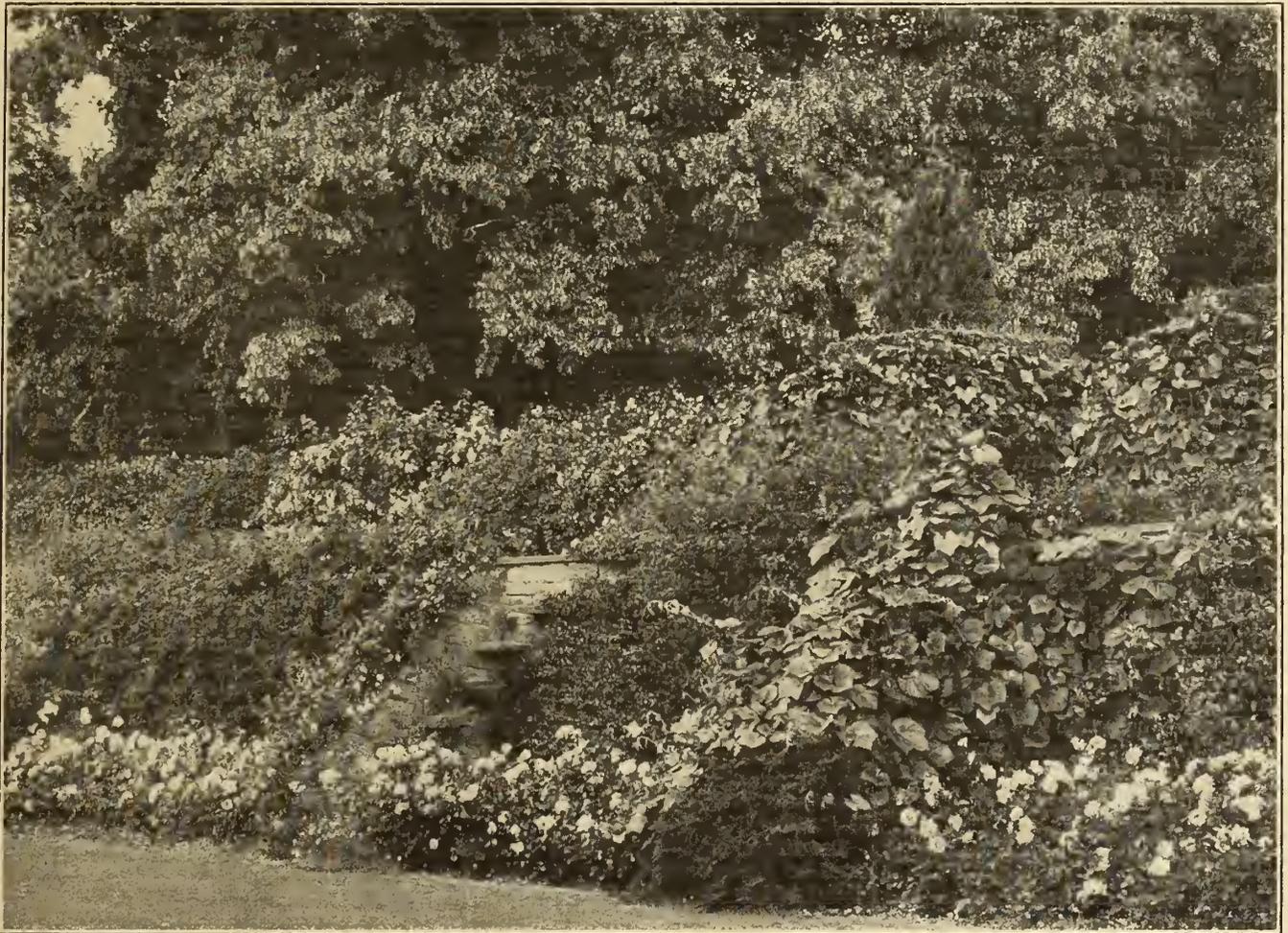
plants and are every whit as easy to grow as any of the others. *C. esculenta* is among the least effective, and I quite agree with Mr. Cornhill in his comparatively low estimate of this. It is, however, finer by the side of a stream or pond than in the mixed border.—S. ARNOTT.

HARDY FLOWER NOTES.

CROCUS IMPERATI.—What a pleasant little flower this is. I have it at the foot of a Douglas Fir, which has been trimmed up some 8 feet with a Holly hedge on the east side. There, in the mild January days, its pretty blossoms have expanded. A precious little hardy flower this, so easily accommodated, and within reach of the amateur of modest means, but so seldom seen in villa gardens.

HARDY CYCLAMENS.—In the same position *C. neapolitanum* is perfectly happy.

cutting, also plantations of *Anemone apemina*, *A. Robinsoni*, *A. ranunculoides*, and *A. nemorosa plena*, which I want to extend as much as possible. I began this work early in December, and it is curious to note how the worms have drawn the leaves under. In the case of a bed of *Anemone* and Tenby Daffodil they have almost disappeared. This seems to be the natural way by which plants retain their power. The foliage falls, the worms draw them in, utilize them in some way, and resurface the soil with their excrement. And so the work goes on from year to year when Nature has her course. It is only when man interferes with this natural process, and, worshipping at the shrine of tidiness, carries away this natural food, and has then to replace it with some form of manure. Many a beautiful hardy plant, shrub, and tree



A corner in the garden at Buckhurst Park, Sussex.

way. Rose-beds, each containing a distinct variety, fill the veritable "sun traps" which are thus formed between these imposing supports.

The Roses looked remarkably well, and in this position gave a bountiful and lasting display of choice flowers. E. M.

Camassias.—Mr. Cornhill's appreciation of *Camassia Cusicki*, at page 58, is well deserved. The *Camassias* known as *Leichtlini* hybrids are also much to be commended. Whatever their parentage may be they are superior to the typical *C. Leichtlini*, which has creamy-white, rather dull flowers. The hybrids are variable and give us plants with flowers which range in the respective individuals from pure white, through light and deep blue, to purple. They are excellent border

Some bulbs were planted there some twelve months ago, and they have such a nice appearance that I have filled up round the tree stem with several dozen good flowering bulbs, the last of some hundreds of seedlings raised some four years ago. Very few things which combine beauty of foliage with profusion of bloom will thrive in soil that is permeated with tree roots, especially those of the Fir, so that some of your readers may be pleased to know that this *Cyclamen* can be relied on to carpet the soil with handsome foliage and produce its flowers under such adverse conditions.

MULCHING WITH LEAVES.—Having collected a fair quantity of Oak-leaves it occurred to me to use them as a mulch instead of storing them. I covered some beds of Daffodils which I grow for

would flourish and show their true form if the fallen foliage were allowed to carpet the ground instead of being raked off.

GLADIOLUS SAUNDERSI.—I have this year been surprised to see how early in the year this species begins to push out new roots. I transplanted some bulbs in the middle of January, and white roots were already pushing out from them some weeks earlier than I should have thought possible. In my light soil this species will flourish for several years undisturbed; in fact I have had it now quite ten years in the same place. In some years there has been a score or more of flowering spikes, in others only two or three, and in one year not a single blade of foliage appeared. The ground was forked over and other things planted, when a numerous

colony of small plants appeared, which bloomed well the following year. I thought they were seedlings, but probably they came from bulbets formed at the base of the bulbs, which Gladioli growers call spawn. This spawn is eccentric in its formation, being numerous on some bulbs, whereas others will be quite bare. This year the spawn is unusually numerous, and I have simply sown it in the ground with the old bulbs. In this way this species renews itself from year to year, the bulbs that die, either from age or some other cause, being replaced by the young generation. I consider this *Gladiolus* a very valuable garden plant, for evidently it is only necessary to give a bulb or two good culture for a season in order to ensure the colonisation of that particular spot in a highly effective manner.

Blythe, Surrey.

J. CORNHILL.

HARDY FERNS AND FLOWERS IN WINTER.

READERS should be grateful to "Kirk" (page 16) for drawing attention to the injury inflicted on hardy Ferns in winter by the desire for tidiness and the consequent removal of old fronds. The question of the retention of old foliage is worth considering by those interested in hardy plants, and in those which just come under the suspicion of being a little tender. It is a subject to which I have given some thought and study. From what I have noticed I am satisfied that the loss of certain plants would be less frequent if the old foliage were allowed to remain on them during winter. Take, for example, some of the *Kniphofias*. In certain places these are liable to perish in some seasons, this being largely due to the removal of the leaves in winter to give the borders greater tidiness. As a matter of precaution it is not safe to remove those old leaves until all danger from severe spring frosts is past. One year I had a painful experience, caused by the removal of the old leaves being followed by an unusually severe late frost. As the result, some twenty clumps which had had the old foliage removed were killed. It was a grievous disappointment and taught me a lesson not likely to be forgotten. It is much safer for those who live in a district with a variable climate and danger from late frosts to retain the old foliage on many plants until spring has well entered upon its course. There is, certainly, a golden mean between too early and too late removal of the old foliage, especially where old, stiff stems are allowed to remain during winter. If the latter are left too long there is a danger lest the young shoots should be injured or broken off.

The general principle is, however, due to the conviction that in many cases utility is subordinated to winter tidiness, and plants sacrificed in consequence. In many instances, also, one of the means of natural manuring open to plants through the decay of their old growths is removed and additional supplies of fertilising material rendered necessary. I once followed a series of experiments made as to the effect of the removal of decaying leaves from the soil beneath deciduous trees. The results appeared to show that the trees which had their leaves removed for the sake of tidiness were in time less vigorous and healthy than those whose decaying foliage was allowed to remain. Apart, therefore, from the protection afforded to the plants by the old foliage, there is the question of manual supply to consider. Is it not the case that the premature removal of the old fronds of Ferns deprives them of a proportion of their natural nourishment?

A. S. M.

NOTES AND REPLIES.

Treating a slope.—At the end of my garden and sloping down towards the south I have a bank with a sandy subsoil and a fairly quick fall of 30 feet. The soil is very shallow, and as the slope is fairly sharp it is very dry in the summer. No doubt, a scheme of terraces would be the best thing to carry out, but this would cost too much money. I should be greatly obliged if you could let me know if there is anything I could grow on this bank which would spread quickly and thrive in spite of the conditions as described.—WILL MELLAND.

[The very shallow soil, the sharpness of the slope, and the southerly aspect are all against success unless special means be taken to improve the soil. By taking out soil to 3 feet deep and replacing it with good, sound loam, stations may be made for trailing (*Wichuraiana*) Roses, Clematises, *Cotoneaster*, and like subjects. The real question is what are you prepared to do to make it a success? As the matter now stands it is very much a question of ways and means, and so far as we understand your letter something only of a temporary nature is required. If this is so the position might be strewn with annuals if that would be in keeping with the environment, about which you say nothing.]

Elwes's Snowdrop.—*Galanthus Elwesi* is one of the most variable of Snowdrops, and those of us who have received it from different districts in the East have been surprised to observe the remarkable difference in its character. Certain forms are handsome, but others are exceedingly poor. Among the finest is the Cassaba form, the variety known as *G. Elwesi robustus* being also very fine. I do not care for the one named *G. Elwesi unguiculatus*, with claw-shaped segments, and some of the other collected forms are really poor. The Giant Snowdrop, as it is frequently called, often appears lumpy to me when compared with *Galanthus nivalis*. The flowers are frequently too large for the length of the stem, and hang less gracefully than those of *G. nivalis*, even under the same conditions, and I do not think it is so well adapted for naturalising. The late Mr. James Allen appears to have found it do best in very light soil. A point which deserves consideration is that of shelter, and this Mr. Allen laid some stress upon. He told us that it wanted the most sheltered spots in the garden, as otherwise the top-heavy flowers suffered from the wind and their beauty was soon destroyed. It is this top-heaviness which is the only defect of *Galanthus Elwesi*.—ESS.

Crocus stellaris.—When open this cannot well be distinguished from a number of other yellow Crocuses, but in the bud it is charmingly marked with a feathering of from three to five bronze lines. In the best varieties this feathering is very pronounced. As Maw remarks, *C. stellaris* "closely resembles some of the old garden forms of *Crocus aureus*, but differs from them in having a reticulated coriaceous tunic." It is an interesting Crocus in several ways, one of them being the fact that it has never been found wild. Another is that it never produces seeds. This year it was in flower with me before the end of January.—DUMFRIES.

Lenten Roses.—These are now in bloom (February 5th)—somewhat before their usual time. I have a fine plant at the foot of an Apple-tree, where it blooms freely every year. In one garden I know in Camberley Lenten Roses thrive well in large masses under deciduous trees. The only help they have is an annual dressing of leaf-mould. When cut the flowers last well.—JOHN CROOK.

Aquilegia cerulea Mrs. Nicholls.—I was impressed with this Columbine in a neighbouring garden last year. It was very free, and the flowers were not only longer spurred, but larger than I recollect to have seen in other instances. It is a great improvement on the old *A. cerulea*, and reminded me of an exceptionally vigorous *A. Stuarti*, which it much resembled.—KIRK

CHRYSANTHEMUMS.

SOME OF THE BETTER SINGLES OF THE PAST SEASON.

The Floral Committee of the National Chrysanthemum Society held several meetings during the autumn of 1915, and a large number of novelties was submitted to it. A Chrysanthemum to gain the first-class certificate of the National Chrysanthemum Society must obtain a majority of at least three-fourths of the members of the committee present, so readers will appreciate the value of any new sorts obtaining a first-class certificate or a commendation. The following in singles are some of the better novelties of the past season:—

YELLOW MERSTHAM JEWEL.—This is a beautiful golden-yellow sport from Merstham Jewel having medium florets, grooved, and a moderate disc. First-class certificate November 11th.

PICOTEE.—A distinct and refined single about $4\frac{1}{2}$ inches in diameter. The florets, of which there are several rows, are flat, stiff, and pointed, and their colour may be described as edged and suffused rose on a white ground. First-class certificate November 11th.

ARTHUR SEARLE.—A beautiful variety, the flowers quite $4\frac{1}{2}$ inches in diameter with three rows of medium to broad florets arranged in fairly even fashion round a nicely-proportioned disc; colour, wine-red shading to white at the base of the florets. First-class certificate November 11th.

MONICA MITCHELL.—A beautiful large-flowered single fully 5 inches in diameter. There are three rows of fairly broad, recurving florets and a moderate-sized disc. The colour is rosy-carmine—some say carmine-crimson—with a narrow yellow zone round the disc. First-class certificate November 21st.

ARISTOCRAT.—Each flower has about five rows of florets which are fairly broad and recurve in very even fashion. The disc is of moderate size, which is a great advantage; colour, bright yellow. First-class certificate November 21st.

RIFLEMAN F. KENT.—A free-flowering single about 3 inches in diameter, having three to four rows of medium florets fairly evenly arranged. It is excellent in spray form; colour, golden-fawn. Commended November 21st.

DECEMBER BEAUTY.—A fine single about $5\frac{1}{2}$ inches across. There are three or more rows of fairly broad florets neatly arranged around a small disc; colour, reddish-bronze, shaded yellow at the tips of the florets. First-class certificate December 8th.

YELLOW PERFECTION.—For so late in the season (Christmas) this is a truly beautiful large-flowered single. The florets are fairly broad, recurving, and drooping, and of charming form. The flowers are each fully $4\frac{1}{2}$ inches across, the disc small, and the colour a rich tone of bright yellow. First-class certificate December 8th.

SNOWSPRAY.—A beautiful single of attractive form and handsome as a spray variety. Each blossom is about $3\frac{1}{2}$ inches in diameter and pure white. Commended December 8th.

CRIMSON VELVET.—This is an ideal flower of the type. The florets are of good length, narrow, and slightly twisted, but arranged in the most even fashion. The flowers are each 5 inches in diameter and the colour is crimson with a broad yellow zone round the disc. First-class certificate December 8th.

NORMAN PEARSON.—Another attractive single about 4 inches across, having three or more rows of florets of medium breadth;

colour, chestnut-red overlaid with gold. First-class certificate October 25th.

TOM WREN.—This will be valued because of its comparative earliness. The florets are of good length, stiff and broad, and the colour is pure white. There are several rows of florets. Commended October 25th.

PHYLLIS COOPER.—A single having several rows of stout, evenly-arranged, fairly broad, pointed florets. The colour may be described as rich golden-yellow. First-class certificate October 25th.

MASTER A. EWEN.—This variety was first shown in 1914, but on the present occasion its quality and beauty were unquestioned. The florets are long, broad,

TREES AND SHRUBS.

VIBURNUM MACROCEPHALUM.

This Chinese plant is known by its sterile-flowered form, which has been grown in English gardens for sixty years, but is not very common on account of its semi-tender character. The heads of flowers, which are larger than those of any other kind, bear a striking resemblance to the heads of sterile-flowered Hydrangeas, and last in good condition for a considerable time, the colour being creamy-white. The leaves may be evergreen or deciduous, according to season, but they are usually retained in the warmer counties. About London and

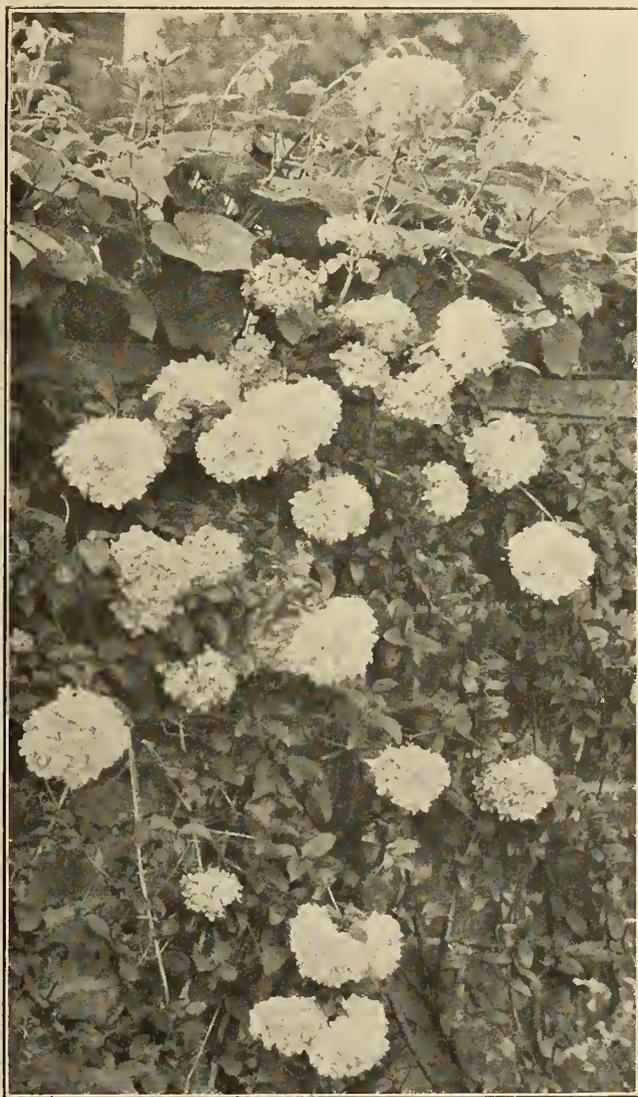
but in a series of examples there may be intermediate forms. The flowers are conspicuous, chiefly by the mass of yellowish stamens borne several together from the leaf-axils and are usually at their best during late autumn. E. Gunni is one of the hardiest of Australian trees and may be grown in many parts of the country, good examples being reported from the eastern counties, the south of England, and also from Scotland. It should be placed in a permanent position whilst quite small.—D.

THE GARDEN FLORA OF JAPAN.

It is well that garden-lovers of this country should treasure the name of Dr. G. R. Hall for the plants he introduced—*Lonicera Halleana*, *Magnolia stellata*, *Malus Halleana*, and others—are indispensable. It was in March, 1862, that Dr. Hall returned from Japan and handed over his rich collection to Samuel Parsons at Flushing, Long Island, for propagation and distribution. But previous to this Francis Parkman, of Jamaica Plain, Boston, had received a consignment of plants from Dr. Hall, through Mr. Gordon Dexter, and among others was the famous *Lilium auratum*, which flowered for the first time in America in July, 1862. In the early sixties Thomas Hogg visited Japan in the interest of Samuel Parsons and introduced in 1865 many plants including *Magnolia obovata*. Another American, Professor W. S. Clark, who went from Amherst College, and developed the Agricultural College at Sapporo in Hokkaido in the early seventies of the last century, sent, in 1876, seeds of many valuable plants, such as *Magnolia Kobus*, *Cercidiphyllum japonicum*, *Syringa japonica*, *Actinidia polygama*, etc., etc. In the Arnold Arboretum and elsewhere many fine specimens raised from his seeds are growing to-day. Three Englishmen, John Gould Veitch from early spring to autumn of 1860, Robert Fortune from the autumn of 1860 to the summer of 1861, Charles Maries from 1877 to 1880, collected extensively in Japan, and each added to gardens treasures beyond price. During the same period, and in the early eighties, various foreign amateurs in Japan sent to their friends in Europe such valuable plants as *Vitis Cointetiae*, *Prunus Sargentii*, *Rosa multiflora*, *Rosa Wichuriana*, etc.

The pioneer work was supplemented in a remarkable manner by Professor Sargent, director of Arnold Arboretum, who visited Japan in 1892. His predecessors in Japan had enjoyed a virgin field, but as an offset to this Sargent had the advantage which full knowledge of a subject gives. He knew not only the Japanese plants already in cultivation in the Occident, but was also fully acquainted with the forest flora of Japan, and the result was that a great number of beautiful and hardy trees and shrubs was added to our gardens. He introduced, among other plants, all the Japanese deciduous Oaks, certain Hornbeams, Birches, Alders, *Picea Glehnii*, *Abies sachalinensis*, *Malus zumi*, *M. Tschonoski*, *M. Sargentii*, *Kalopanax ricinifolium*, *Enkianthus campanulatus*, *Acer nikoense*, *A. Miyabei*, *Rhododendron Kaempferi*, one of the most beautiful of all shrubs hardy in New England, and many other valuable plants.

In Japan the Pine, the Bamboo, and the Plum-blossom (*Prunus Mume*) are emblematic of long life, strength, and happiness, and a love of flowers is a dominant characteristic of the people. This love is spontaneous and fundamental, and is one of the virtues of the race which appeals forcibly to the most casual visitor. The arrangement of flowers for house decora-



Flowering shoots of *Viburnum macrocephalum*. From a photograph in a Surrey garden.

and recurving; colour, golden-bronze. Commended October 25th.

MIRANDA.—A terra-cotta sport from the well-known Portia. All the fine characteristics of the parent are represented in this new sort. First-class certificate October 25th.

BERTHA FAIRS.—In this the florets are of good breadth and very evenly disposed round a disc of moderate proportions. It is an ideal flower, the colour a golden-fawn with a yellow zone round the disc. First-class certificate October 25th.

Mrs. HAROLD PHILLIPS.—This is valued for its lovely mauve-pink colour. There are two rows of medium-sized florets, and the flower is about 4 inches across. Commended October 25th.

E. G.

farther north it is well to give it a place against a wall.

The Cider-tree (Eucalyptus Gunni).

For the milder parts of the country there are several kinds of Eucalyptus that can be planted with advantage, one of the best being E. Gunni. Plants upwards of 60 feet in height have been recorded in the British Isles, the trunks being from 12 inches to 18 inches in diameter. It is a very variable tree, the leaves of the juvenile example differing very widely from those of the mature specimen. In the former case they are usually rounded, and in the latter instance Willow-like. Sometimes specimens taken from two trees may vary considerably in the size and shape of the leaves,

tion is one of the three essential parts of every lady's education, and, be it said, it is an accomplishment in which all the people excel in a most artistic manner.

Here and there throughout the land are places famous for their Plum-trees, Cherry-trees, Wistaria, Iris, Paeonies, Azaleas, Maples, Chrysanthemums, Pines, Cryptomerias, and so forth, and in season people flock from far and near to feast on their beauty.

The floral seasons of Japan commence with the Ume (Plum-blossom, *Prunus Mumo*) in January, and close with the Chrysanthemum in November and December. In March and in April, according to climate, the Cherry-trees blossom, and this is the season par excellence. The Japanese recognise a hundred and more varieties of Cherries with white, yellow, pure pink to deep rose blossoms; some small shrubs, others large trees, with wide-spreading crowns; some have pendent, others quite erect branches, and all are very beautiful. Cherry-trees are wild in the woods and thickets throughout the length and breadth of Japan, and are everywhere planted in vast numbers—in temple and castle grounds, in park and garden, in the streets of the cities and alongside the highways, and by pond and river side.

I never knew the full glory of the Wistaria until I saw it in Japan. There it is not only wild in profusion, but is abundantly planted by the sides of the ponds, ditches, and streams, and trained over arbours and trellises. There are numerous varieties and on one I measured racemes of flowers 6½ inches long. These were not mere individual examples, but there were thousands upon thousands of them equally long.—E. H. WILSON in *Gardeners' Chronicle of America*.

NOTES AND REPLIES.

Rhododendron Nobleanum.—Please tell me the name of the Rhododendron, flowers of which I send you. It is now in full bloom. It flowers always about this time, but is far better than usual. Please say best way to layer it.—C. A. S., *Curramore, Broadford, Charleville, Co. Cork*.

[The name of the enclosed specimen is *Rhododendron Nobleanum*, a hybrid raised in the first half of the last century between the Himalayan *R. arboreum* and *R. caucasicum*. As a rule the habit of the plant does not admit of the branches being readily bent down for layering, but as you suggest that method of increase perhaps some branches of your specimen may be available for treatment in this way. If such is the case the shoot must be brought down to the ground and pegged securely in position. Of course, a hole must be taken out in which a portion of the stem is to be buried. Previous to this that part of the branch which is to be covered must be slit lengthwise, after the manner practised in layering carnations, placing a small stone therein to keep the slit open. The free end of the shoot must then be tied upright to a stake in order to prevent it moving in any way. The buried portion should then be covered with sandy soil, as this will encourage the formation of roots. It is very essential that this soil be kept in a regular state of moisture, as the rooting will be greatly assisted thereby. It will take two, or even three, years before the layers are sufficiently rooted to be detached from the parent plant.]

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of *GARDENING ILLUSTRATED* is now ready (price 3d., post free 3½d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

ROOM AND WINDOW.

WINDOW GARDENING.

PRIMROSES.—Those who may have nice plants of these should put some into pots. They must not be put into a constantly-heated apartment, as they cannot bear artificial warmth, which causes the foliage to draw up, the blooms being weak and very deficient of size and colour. In a cool room they are at home and will produce blooms of pristine freshness at a time when cold winds, frosts, and stormy weather prevail in the open. Taken up now and potted in nice free soil they will suffer no check. After blooming they can be planted out in a shady place, and may be used again the following year.

SCILLA SIBIRICA.—The little Siberian Squill is charming in pots, being so distinct in colour from spring-flowering bulbs generally; and as it can now be purchased at a cheap rate the window gardener can obtain a nice effect for a few pence. A dozen bulbs in a 4½-inch pot will have a delightful appearance, forming a lovely blue carpet.

TRITELEIA UNIFLORA.—When this made its appearance a good many years ago I was not certain as regards its hardiness and fitness for the open ground, and therefore potted the bulbs. I was so pleased with their appearance that I continued to grow them in this way for several years. A dozen bulbs can be put into a 4½-inch pot, and, treated thus, well-grown specimens have a nice appearance.

SEED-SOWING.—It is a fact, but one not generally recognised by window gardeners, that many things can be raised from seeds early in the year in an ordinary living-room. I know of an instance which shows what may be done in this way. About 200 Tomato plants which are required for planting out in a cool house in May are raised in this way. The seeds are sown in small pots in the latter end of February, in this manner there is no necessity for potting off. The young plants go away without check until the time comes for them to be planted out. Several seeds are put into each pot in order to make sure, as sometimes seed is rather wanting in germinating power and some kinds do not come up so well as others. The pots are stood in boxes which are covered with a pane of glass, which is removed when the young plants appear. Later on they go into a cool house under a handlight. It is well to know that many seeds may be raised in this manner, for thousands of amateurs have not the convenience of a constantly-heated glasshouse in early spring. There are some things that the amateur sees in seed lists that he would like to try, but he knows that they are forbidden to him simply because he cannot raise them early enough to obtain a good long season of growth. In the manner above-mentioned many things may be forwarded, but I do not advise beginning before the first week in March. There is another way which I have practised, not only early, but during the summer season, and which I have found very convenient. It frequently happens that one wishes to sow a few seeds of some particular thing, and there is no frame empty, the only place being an airy greenhouse or the open air. The seeds are sown, say, in a 2-inch or 2½-inch pot in the usual manner, this being stood in one a size larger. A piece of paper is laid on and a pane of glass on this. In this way the pot containing the seeds is screened from the direct influence of sun and air, and uniform moisture can be much more easily secured with much less attention in the matter of watering. Fill the seed-pot with nice free soil

to within ½ inch of the rim, give a gentle watering, allow it to stand an hour, and then fill nearly to the rim with fine, well-sanded soil. Press the seeds into this, cover very thinly, and gently moisten it. In this way very little water will be needed and germination will be freer and more uniform.

BYFLEET.

NOTES AND REPLIES.

Cyclamen blooms flagging when cut.—I shall be glad if you can tell me the reason why my Cyclamen blooms droop as soon as cut for house decoration. They are grown in a temperature of from 50 degs. to 55 degs., and are potted in a compost of loam, leaf-soil, sand, and cow-manure, and are in very good health. Last year the blooms lasted a good week when cut for house decoration, and they had the same treatment, so I cannot understand why the blooms should die so soon this season.—B. WILDE, *Roundwood Lodge, Baidon*.

[Your cultivation appears to be right, with the exception of temperature, which for the day may well be from 3 degs. to 5 degs. higher, accompanied by a fair amount of ventilation. Draughts must be avoided, and for this reason air is best admitted either beneath the stage or in such a manner that before reaching the plants it becomes warmed. Flowers grown under these conditions will remain fresh for a week if pulled—not cut—from the plants as soon as they become fully expanded. After they have been open a few days they will, if placed in a room where the atmosphere is close and the temperature above the normal, particularly at night, then droop unless the precaution is taken to slit the lower end of the stem in an upward direction for about 2 inches. This remedy we have, under such circumstances, never known to fail, and, therefore, advise you to give it a trial, as we think it will help you out of your present difficulty.]

The Snake's Beard (Ophiopogon) as a window plant.—One of the most valuable of window plants of graceful growth is the Snake's Beard (*Ophiopogon Jaburan*), introduced from Japan in 1830. It is hardy, or nearly so, in many places, but in the north will not stand severe winters, and has to be grown under glass. It is worthy of this, because of its graceful, arching leaves, from among which rise the spikes of blue flowers. The variegated variety is even more valuable for the home, because of the brightness of its foliage.—ESS.

VEGETABLES.

NOTES ON ONIONS.

ONION SETS.—In places where the Onion maggot makes the culture of spring Onions almost impossible planting very small sets is one way out of the difficulty. I had never practised this method. It was quite new to me until last year. It happened that some seed of James's Long Keeping was sown quite late in April, if I remember rightly. The soil was poor, and, through press of work, the young plants were much neglected, got very weedy, and made but little growth; in fact, they were hardly worth harvesting, the biggest being about the size of a Cobnut, many being no larger than Peas. Planted out the following season several inches apart they made nice bulbs, which would have been much larger had the ground been richer. I may add that these bulbs are keeping remarkably well, which is a real boon, Onions being so dear—up to 14s. per cwt. wholesale—and the Tripoli not keeping at all well this season. There is no doubt that good Onions can be grown with certainty in this way, but what I am not sure about is the right time to sow for the production of sets, as, if sown too early, they will be too big, and, instead of bulbing, will run to seed. Perhaps some of your readers have experience of this form of Onion culture and will give us the benefit of it.

SCALLIONS.—I fancy that this gardening term is pretty well extinct; anyway, it is

a long time since I have seen or heard it mentioned. In former days the supply of fresh, juicy Onion-tops was furnished by bulbs put out early in March, and these were termed Scallions. Some of the smaller bulbs were used for this purpose. I suppose that in those days the sowing of Onions to stand the winter was not practised. Abercrombie, who was the great authority on vegetable culture, makes no mention of this practice. I do not know when the Tripoli and Rocca varieties were first grown, but I suppose that it was owing to them that the planting out of old bulbs was discontinued. Scallions gave a supply of green tops some time before spring-sown Onions were large enough to pull, but what are now called winter Onions, if sown in August, come in much earlier. A grower in this neighbourhood has every year an acre of Ailsa Craig, which he disposes of in small bunches. I have wondered why he used this variety, the seed being considerably more expensive than that of the Tripoli and Rocca, but probably he leaves a portion to grow on, and Ailsa Craig keeps so much better.

SOWING.—By the time these notes appear, ground intended for seed should be dug up in rough lumps, the bigger the better. I shall be getting mine ready now (February 1st). The influence of frost on the soil thus exposed is very great, and ground treated in this way is in much better order for the reception of the seed than when dug later in the ordinary manner. On light soils one can scarcely err on the side of early sowing. March is too late, as the young plants do not get enough hold of the ground by the time dry weather comes. BYFLEET.

MANURE FOR POTATOES.

I HAVE about 2 acres of land—good, deep soil—on which for many years Turnips and Mangolds have been grown with patent manures. Last year Potatoes were grown without manure or fertilisers. This year it is proposed to plant Potatoes again. Will you kindly advise a good cropping variety, and the best chemical manures, and the quantity to use? Would malt dust be suitable? It is not easy to get stable-manure. Perhaps you can suggest some other crop, not entailing a great deal of labour?—C. EDWARDS.

[Under existing conditions we think you cannot do better than grow Potatoes again this season. Their cultivation will entail less expenditure in regard to labour than anything else at the present juncture, and as to the disposal of the produce there need be no apprehension felt on this score, as the demand when next autumn and winter arrive will in all probability be a heavy one. A few reliable and heavy cropping varieties are as follows:—Abundance, Up-to-date, Langworthy, Scottish Triumph, and The Factor. Whichever of these five you select we advise you to obtain fresh seed, preferably that grown in the past year in the north. With respect to manure, malt-dust is considered by some to be a good stimulant for Potatoes, but it is recommended that before applying it to the soil it is best moistened with liquid manure, tank sewage, or the drainings from cattle-sheds, and allowed to lie for a few days and ferment. From 25 bushels to 30 bushels per acre may be applied and dug in. A suitable mixture of chemical manure consists of superphosphate of lime, sulphate of ammonia, and kainit. For an acre you would require 5 cwt. of the first-named, 2 cwt. of the second, and 3 cwt. of the third. All three should be intimately mixed together, then evenly distributed over the surface and dug in. If, as may be the case, you are unable to purchase the kainit—for potash is very scarce now—you had better abandon the suggestion we put forward and purchase a Potato manure ready compounded from a reliable

firm of manure manufacturers. If the nature of the soil and the area to be manured are stated when ordering, a suitable mixture and the requisite quantity will then be sent.]

Seakale.—Continue to introduce batches of Seakale to the forcing-house in sufficient quantities to meet the demand. Seakale of the best quality is secured from roots forced in their growing quarters, and although this method gives more trouble, the growths so obtained are usually much stronger and more succulent. Special pots with covers are usually employed, but boxes or barrels will answer the purpose quite well. A small quantity of long stable manure, with some good Oak, Beech, or Spanish Chestnut leaves, will be needed to create the necessary warmth. A temperature of 60 degs. will be ample for the roots. The roots which were taken off when the early batches of crowns were lifted for forcing, made into cuttings, and tied into small bundles will now be placed in boxes of sand and put into cold frames, in order that they may be induced to start slowly into growth.—F. W. GALLOP.

BOOKS.

THE PRAIRIE SPIRIT IN LANDSCAPE GARDENING.*

MR. MILLER is doing his best to arouse the attention of the Illinois people to the charms of their own trees and shrubs, and also to the need of some picturesque design in their surroundings, and as the land there is mostly level he tries to point out how it can be made beautiful. Certainly it can. Our own Lincolnshire, and other level counties, prove it, and I would as soon plant in Lincolnshire, in a good soil, as in a hilly country in a poor one. Right planting is the whole question, and this book is a well meant and a successful effort. Some of the terms Mr. Miller uses he does so in the wrong sense. What is called a "prairie soil landscape gardening" is simply our English landscape garden art. There is no need for the word prairie. Again, the word "formal" is applied to the garden where the word garden is the old and right word; and the ugly expression "gardenesque" is brought in. Such words as these are of no good use, but confuse with needless complexity.

Illinois, like so much prairie country, is rich in native plants, and it is only right that men's minds should be awakened to their charms. The American wild flowers were grown in English gardens long before they were thought of as garden flowers in their own country.

Domestic architecture in Illinois, like much of our own, is "jolly" bad, and if the architects who built such houses are let loose in the garden the result can easily be told. We hear from Professor Sargent and others that the landscape architect has run amok in America in attempts at making the sham Italian garden in a country entirely unsuited to it. There the marble statues which the American millionaire provides have to be carried indoors in winter.

The illustrations in the book are very good. At one time the people of Illinois cut down their native trees without mercy, and later on, when they were able to afford it, they called in a landscape planter, who proceeded at once to plant again very often the trees they had cut down!

W. R.

* "The Prairie Spirit in Landscape Gardening," by Wilhelm Miller, U.S. Dept. of Horticulture, Landscape Extension, University of Illinois Coll. of Agriculture, Urbana.

THE WEEK'S WORK.

OUTDOOR GARDENING.

IN BLOOM FEBRUARY 10TH.—*Porsythia suspensa*, *P. spectabilis*, *Edgeworthia chrysantha*, *Yellow Jessamine*, *Coronilla glauca*, *Cydonia japonica*, *Winter Sweet*, *Andromeda* (in variety), *Rhododendron praecox*, *R. Nobleanum*, *Berberis* (in variety), *Daphnes* (in variety), *the Cornelian Cherry* (*Cornus mas*), *Ericas* (in variety), *Laurustinus* (various), *Gemsta hirsuta*, *Witch Hazels* (in variety), *Parrotia persica*, *Camellias*, *Corsican Hellebore*, *Lenten Roses* (in various colours), *Blue-eyed Mary* (*Omphalodes verna*), *Narcissus pallidus praecox*, *N. Tazetta*, *N. minimus*, *Aconites*, *Primroses*, *Violets* (in great variety), *Crocus Susianus*, *C. Imperali*, *C. Sieberi*, *C. stellaris* and others, *Snowdrops* (in variety), *the Carpathian Snowflake*, *Cyclamen Coum*, *the Greek Anemone* (*A. blanda*) (in various colours), *Anemone coronaria* (in various colours), *the Scarlet Windflower* (*A. fulgens*), *the White Wood Anemone* (*A. nemorosa alba*), *A. Hepatica*, *Saxifraga* (in variety), *Algerian Iris* (*I. unguicularis*), *Trilecia uniflora*, *Hyacinthus azureus*, *Scilla sibirica*, *Grape Hyacinth* (*Muscari botryoides*), *Corydalis cheilanthisfolia*, *Iberis petraea*, *Lithospermum rosmarinifolium*, *Scilla taurica*.

WORK OF THE WEEK.—Sweet Peas have been sown during the week. Two seeds are placed in a 3-inch pot filled with good sandy loam and stood in a warm-house. I prefer this method to sowing a large number of seeds in a pot or box, as they may be planted without disturbance, whereas with thick sowing it is almost impossible to avoid damaging the roots and giving them a severe check when planting out. To provide a succession others will be sown in the same way later on. Clematises on tripods have been thinned and pruned and the supports renewed by using Larch poles. The pruning of climbing Roses and other subjects is still receiving daily attention. Tree Lupinus raised from seed last spring, having grown to such an extent as to obstruct the free use of a path near by, have been cut into shape. The plants in tubs and vases intended for the decoration of the flower garden have been restaked and top-dressed with some good loam. A few plants of *Haberlea rhodopensis* have been planted in a very wet place at the foot of a high retaining wall, and a new Marsh Marigold has been potted into 6-inch pots and partly submerged in the Lily tank. A number of *Acer colechicum rubrum* (a fine tree for autumn colour) has been grouped at the back of the Heath garden and a batch of hardy Fuchsias has been planted at the base. These Fuchsias had occupied the same position for a number of years, and their removal has given space for extending the collection of Pampas Grass, to which a number of the variety elegans has been added. A small group of Butcher's Broom has been planted in the Heath garden, and a large specimen of the Mop Acacia (*A. mimosifolia*) has been removed to make room for some handsome flowering kinds of Apples. A number of *Aesculus Briotti* having come to hand a place has been given them near the carriage-drive, while a few have been planted along the ridge of an old lane.

Sussex.

E. M.

SOUTHERN COUNTIES.

Protecting Apricots.—Owing to the mildness of the weather during last month the flower-buds on Apricot-trees are on the point of expanding. The buds are bold-looking—a sure proof that the wood

ripened well last autumn—and also very plentiful both on young wood and on spurs. The buds having therefore arrived at that stage when a few hours' sunshine will cause the forwardest to unfold, protection cannot with prudence be withheld any longer. Coping-boards must therefore be fixed in position, and poles for keeping the nets from damaging the blossoms fixed to the under-sides of the same and let into the ground 6 feet apart and 3 feet distant from the wall at the base. The nets used are of $\frac{1}{2}$ inch mesh, of which three thicknesses are suspended from the coping-board and allowed to almost touch the ground. These nets being so close in the mesh, afford much more protection from frost and cold winds than many imagine, while sufficient light penetrates to prevent the blossoms becoming at all injured. Further proof of the shelter afforded by the nets is always visible in the rapidity with which Lettuces planted at the foot of the wall start growing once they are suspended in front of the trees. Disease having killed off our own bees as well as those belonging to other people in the locality, the setting of the blossoms will have to be largely, if not wholly, left to chance, as exigencies of labour will not allow of this being performed by hand. So far the border is sufficiently moist right up to the base of the wall, but as the coping-boards and nets throw off a great deal of rain the portion so protected, *i.e.*, for a width of 3 feet, will soon begin to dry out and require water so soon as the fruit is set.

Outdoor Peaches.—These, fortunately, are not in nearly such a forward condition as Apricots, but as there will be more than enough to do as the season advances it will expedite matters to have everything ready for suspending the nets when such becomes necessary.

Ornamental Vines.—These, which are grown for effect only, should now be pruned and put in order for the season. As the engendering of a gross or unfruitful habit of growth has in this case not to be taken into consideration a little rotten manure may be forked into the border or near to the stems, especially in cases where a more vigorous production of wood is desired. Where this cannot be spared Vine manure or bone-meal can be substituted for it with good effect.

Wall creepers.—A commencement will now be made with the pruning and putting in order of these for the coming season. Jasmines, except the naked-flowered variety, which is yet full of bloom, *Ceanothuses*, *Tecoma capensis*, *Virginian Creeper*, and *Wistarias* will first have attention. As these oftentimes experience the full effects of south-westerly gales special care is bestowed on the tying of the stems and main branches to the wall.

Rose arches.—The final overhauling of the Roses on these will now take place, when a further thinning of the wood where it appears to be necessary or desirable will precede the fastening of the wood in a light and informal manner to the arches. All long, whip-like growths are merely tipped. This refers to the Rambler and *Wichuraiana* sections of Roses. A certain amount of spurring is also carried out in regard to climbing Hybrid Tea varieties. In course of time the roots exhaust the manurial constituents of the compost in which they were planted. The present is, therefore, a good opportunity to afford them assistance in the shape of a top-dressing of fresh soil enriched either with decayed manure or some suitable artificial fertiliser, or by forking in a proportionate quantity of the latter alone.

Strawberry planting.—Where this was not concluded last autumn the present

spell of open weather will afford a good opportunity for doing so. Although the plants will not bear this season there is the satisfaction of knowing they will carry a full crop another year, and, to make some amends for the loss of time involved, the ground in the meantime can be lightly cropped with anything that will turn in quickly. The Strawberry plants should be lifted with a good ball and planted with a trowel, finishing by treading the soil firmly round them.

Propagating.—As fast as cuttings can be had of *Lobelias*, *Chrysanthemums* (both for pots as well as of one or two varieties of which there is a shortage for outside borders), *Fuchsias*, etc., they are taken and put in to strike in heat.

Seed-sowing.—A pan of seed of *Cineraria stellata* Feltham Beauty sown now affords plants for flowering in December next. The same remark as regards sowing applies also to *Primula obconica* and *P. malacoides*, only in this case the plants will bloom in the autumn. *Torenia*s should also be sown now, and the same with respect to *Saintpaulia ionantha*. *Celosia pyramidalis*, when well grown, makes a good pot plant either for greenhouse or room decoration. It is best to raise two batches of plants, one now and another in a month or six weeks. The dwarf variety is preferred. *Clerodendron fallax* is a useful pot stove plant for autumn decoration. The seed should be sown now in a pan and the plants, when ready, potted into 60's. *Impatiens Sultan*, although anything but new, is valuable for room decoration. A stock is quickly raised either from seed or cuttings. Frequent pinching of the growths is necessary to secure nice bushy plants, and until this is attained the flowers must be suppressed. Seed for raising a new stock both of *Smilax* and *Asparagus Sprengeri* should, if it has not already been done, be sown at once.

Ferns.—The first batch of Maidenhair Ferns that were cut over a few weeks since and which are now pushing up new fronds is in just the right condition for potting. Clean pots and drainage are essential, and to the compost consisting of equal parts of loam, peat, and a liberal quantity of sand a sprinkling of old mortar-rubble broken fine is added. The remainder of the plants will be cut over and given a short rest in the course of a few weeks.

Leeks.—For these there has been a large demand throughout the winter, and provision for the growing of a large quantity of plants has to be made. For the earliest supply seed must be sown at once in a sunny corner.

Planting Seakale.—To obtain well-matured crowns for forcing early next winter cuttings should be planted at once in ground that has been thoroughly manured. The cuttings should be made from the stoutest of the pieces of roots saved when lifting took place last autumn. To distinguish the tops from the bottoms the former should be cut straight across and the latter in a sloping direction. A suitable length of cuttings is 6 inches. Cuttings to afford crowns for forcing later in the season will be planted next month. Planting is done with a trowel, the tops of the cuttings being left level with the surface of the ground. A handful or so of fine cinder-ashes placed over each to protect the young growths when they appear from slugs completes the operation.

Celery trenches.—Following the usual custom, these will be opened out the first opportunity. The trenches are 4 feet in width with an interval of 6 feet between them to receive the soil thrown out, which is formed into a flat-topped bank 4 feet

wide. On each of the latter, Peas are sown. The trenches, which take four rows of Celery, are taken out a full spit in depth. The bottom is then loosened with a fork, after which a good-layer of manure is placed thereon and covered with a couple of inches of the finer soil thrown out. Doing this now saves much valuable time later in the season. A. W.

MIDLAND COUNTIES.

Figs.—From trees on a south wall the materials used during the winter to protect from frost will be removed now and the necessary pruning carried out. Trees that are growing in unconfined borders require to be very carefully pruned or nothing but gross shoots, that will never ripen or bear fruit, will be produced. It is by far the better plan, in the case of Figs, to have the root-run restricted as to width and length. This may be done by digging a trench about 4 feet from the main stem, according to the size of the tree, severing all the strong roots and filling in with brick-bats or similar materials. By this means, and careful disbudding, well-ripened and short-jointed shoots will be ensured, and but little pruning at this season required. After the necessary pruning is completed the trees will be thoroughly washed with Gishurst compound, after which training may be done, arranging the shoots thinly and at equal distances over the wall space. If sharp frosts occur after the training is completed the growths will be protected by fastening Archangel mats securely over them. Trees growing in restricted borders should be afforded a top-dressing of loam and wood ashes, to which has been added a little bone-meal, mixing all together before use. This top-dressing should be made quite firm.

Birds.—A sharp look out has to be kept for bullfinches amongst the Gooseberry and Plum-trees at this season, for if left undisturbed even for a few days they will do much mischief. I have found that by spraying the trees at this date with Bentley's bird protector composition the mischief usually wrought by small birds has been lessened. The syringing should be repeated as often as necessary.

Caladiums that have been wintered under the stages of the stove are commencing to grow, and must be potted before the shoots grow too long. Shake the old soil from them, and if there is any sign of decay scrape the affected part and cover with powdered charcoal. Pot the plants in a compost of good loam, leaf-mould, a little peat, dried cow manure, silver sand, and charcoal. Do not pot too firmly as anything that promotes stagnant soil is very harmful. Place the pots in an atmospheric temperature of 70 degs. and give but little water until growth is well advanced. Any repotting must be undertaken before the plants have become in the least pot-bound.

Freesias which have passed out of flower should be afforded generous treatment. Manure-water may be applied to the roots up to the time when the leaves turn yellow. On the first appearance of the yellowing of the leaves the water supply should be lessened, continuing the decrease until water can be safely withheld. The plants should be exposed to full sunshine in order that the bulbs may thoroughly ripen.

Calceolaria alexicaulis.—Plants that were lifted from the cutting beds for providing standards will now be potted on into 7-inch pots. The same applies to *Heliotropes* and other standard plants intended for planting out in summer.

French Beans.—There is now little difficulty in getting a plentiful supply of this favourite vegetable. Plants which are fruiting are afforded copious supplies of liquid manure and occasional applications of Clay's Fertiliser. A moist atmosphere is maintained and the foliage thoroughly drenched twice daily with tepid water. From now onwards it will not be necessary to employ strong fire-heat; an atmospheric temperature ranging from 55 degs. to 65 degs. will be ample. To maintain a continuous supply seeds are sown at intervals of a fortnight. At this season I prefer to sow Canadian Wonder, its vigorous constitution ensuring success under forcing conditions.

Potatoes in pits.—The earliest plants now need earthing up. This is done by placing some old potting soil amongst the plants. Previous to earthing up, the bed is carefully watered with clear, tepid water. Air is admitted freely to this crop during mild weather. Further plantations will be made under glass to maintain a

training of the shoots, and over-cropping must be avoided whilst the plants are young. A surface dressing of good loam and spent Mushroom manure in equal parts, to which has been added a little fertiliser, will be applied frequently in small quantities. A brisk heat and moist atmosphere are maintained, damping the paths with manure-water early in the afternoon. Seed for a successional crop has been sown singly in small pots.

Vegetable Marrows.—Where portable frames are available for the purpose good crops of Vegetable Marrows may be obtained from the middle of April onwards. Seeds should be sown singly in 60-size pots and germinated in gentle warmth. Endeavour to forward the plants by planting them under portable frames on mild hot-beds. When safe to do so the frames can be removed and the plants top-dressed. They will then continue to furnish fruits until frost destroys them in the autumn. F. W. GALLOP.



Early-flowering Tulips in a pot.

supply until tubers can be obtained from the open air. Tubers for planting should not be allowed to remain longer together in large quantities, or they will make spindly shoots, and their value for planting will deteriorate. They should be laid out singly in a well-ventilated shed, where protection from frost can be given if necessary.

Carrots sown in frames in January are ready for thinning. The plants are thinned to 4 inches apart, and afterwards the soil is watered to settle it about the roots. Soot is an excellent fertiliser for Carrots, and this should be dusted about the plants occasionally. Plenty of fresh air should be admitted on all favourable occasions to prevent the plants becoming drawn. Another sowing will now be made in a cold frame to furnish roots for a succession.

Cucumbers.—Plants put out on well-prepared beds last month are now coming into bearing. They require constant attention as regards the stopping and

SCOTLAND.

Sweet Peas.—During the week a considerable quantity of Sweet Peas has been sown in pots. The practice followed is to put about a dozen seeds in a pot 5 inches in diameter, the seedlings when planted out making nice clumps. A rather holding loam is preferred for sowing, with only sufficient sand to make the whole porous. In order to prevent mishaps from vermin, the seeds, previous to sowing, were damped and rubbed over with red lead. The pots are placed in an unheated house and will be very sparingly watered until germination takes place. The pots used are made of cardboard. These answer the purpose very well, are very light, and if carefully dried and stored after use they remain serviceable for a number of seasons.

Stove plants.—Having, meantime, completed the work of putting in cuttings of greenhouse subjects a beginning has been made with the propagation of such stove plants as may be in demand during the season, and with the repotting of such

things as require attention in that respect. Many stove plants are more effective in a young state, so that as soon as sufficient cuttings are secured the old pieces are discarded. Such plants include *Pentas rosea*, *Justicia carnea*, *Panax Victoria*, *Ruellia Portella*, and similar things which can be grown to a good size in the course of a season. These young pieces, too, always produce blooms of a superior quality, and are much more useful for general purposes than older and larger specimens. A further batch of cuttings of *Lorraine Begonias* was got in—chiefly leaf-cuttings, although a few strong basal shoots were also made use of. A quantity of rooted cuttings of *Begonia Rex* was potted off into 3-inch pots. These showy things have been rather neglected for some years. Young plants of *Dieffenbachia Bausei* have gone into 4-inch pots. These are useful by way of variety. *Saintpaulia ionantha* is easily increased from leaf-cuttings. Either grouped or as dot plants its Violet-like blooms are attractive. Cuttings of *Acalypha musaica* and *A. hispida* are being put in as they become available. These are useful either as small plants or when grown on till they occupy 8-inch pots. Trailing plants for draping are readily increased, and, among others, cuttings of *Panicum variegatum*, the *Fittonias*, and *Tradescantias* were put in in quantity. A very useful plant is *Eulalia japonica variegata*, old plants of which were broken up and repotted. *Bryophyllums*, including *B. crenatum* and *B. calycinum*, were put into 3-inch pots. The former is rather straggling in habit and requires pinching at intervals to induce a neat plant, and, further to assist in this respect, two plants are grown in each pot.

Coleuses.—In the course of the week some more young plants of brightly-coloured Coleuses were moved from 4-inch to 7-inch pots. These will, by and bye, receive a final shift into 9-inch pots, although I think that Coleuses always colour better when rather restricted as to root-run and given plenty of heat, light, and water. Nevertheless, a few large plants are always handy, and if used for housework their loss is not great, and they are easily replaced. A further lot of cuttings was put in.

Myrsiphyllum asparagoides.—One of the most attractive plants in the greenhouse just at this time is this. It has run freely up wires and has reached the top of the structure. Apart from its attraction and glossy green leaves the trails are covered from top to bottom with the minute blooms, which have a further merit by reason of their delicate Lily-like perfume. This variety reproduces itself freely each year by means of self-sown seeds, large quantities of young plants being found under the stages in its immediate neighbourhood. This, I find, succeeds better when treated as an annual.

Eucalypti.—After having given up the culture of the *Eucalypti* for a number of years, seeds of *Eucalyptus globulus* and *E. citriodora* have been sown. Both of these varieties at one time succeeded fairly well out of doors, *E. globulus*, especially, lasting for a number of years until killed by a severe frost. *E. citriodora* is more delicate, and while it does fairly well in the open it is always safer to lift it on the approach of winter and remove it to a frost-proof house or pit. This variety, as its name indicates, is more delicately perfumed than the more usually grown *E. globulus*, its odour resembling to some extent that of the well-known *Aloysia*.

Gerbera Jamesoni.—Seeds of this have been sown in heat. The seedlings will be grown on rather quickly in order that they may be of some size when planted out. If

space can be afforded, a few plants may be grown in pots, as the flowers are much brighter under glass.

Primula obconica and **P. verticillata** were also sown during the week. The latter is not greatly, if at all, inferior to **P. Kewensis**, and is, or so I think, hardier and less liable to collapse so suddenly as **P. Kewensis** occasionally does. There is, in the case of **P. obconica**, always the prejudice against its employment to be contended with. The variety, however, is so valuable, and so greatly improved now, that it is worth taking a little risk. From long and close observation I feel certain that many people are quite immune from its irritating effects. I can handle it with impunity, and therefore always look after the plants, although, on the other hand, **Humea elegans** produces in me the same irritation which **P. obconica** does in others.

Hardy Chrysanthemums.—Cuttings of the best type are now available, and a quantity was got in during the week. These, dibbled in thickly into sandy soil and kept airtight, soon root. Further batches will be put in from time to time until the needful number is secured. Shading is necessary in the event of bright sunshine.

Horse Radish.—This is a very good time at which to make fresh plantations of Horse Radish. A deep, mellow part of the garden is advised for this crop. Select fairly strong and straight thongs, and make a deep hole with a crowbar. Drop in the thongs, and work in an allowance of sand round them. I have found sea-sand suitable for this.

Rhubarb.—Now that the crowns are beginning to show signs of renewed growth; should any replanting or division be needful, the work can safely be done. To plant Rhubarb when in a dormant state is to court failure, for it will be found that a large proportion of the roots will rot, more especially should wet weather ensue. The ground for new plantations ought to have been well, but not recently, manured. Many seem to think that Rhubarb ought to succeed in any out-of-the-way corner, but this is a mistake, for, like all other things, it must receive attention and have as good an exposure as possible.

Work and weather.—Work has again been interfered with by rain. The outlook begins to be a little serious, and conditions are sufficiently depressing. During the past week it has only been possible to go upon the soil for one full day, and while arrears are not, so far, very alarming, yet the season is advancing and work increases from week to week. It is better to defer operations until the soil is workable, although at times one gets impatient.

W. McGUFFOG.

Balmac Gardens, Kirkcudbright.

OBITUARY.

CANON ELLACOMBE.

THE dean of British amateur gardeners is no more. He died at ninety-four years of age, full of interest and active to the last. Tall, athletic, and healthy, he was as ready for a mountain in Britain or the Alps as for his garden, which was extremely interesting and full of delightful and often rare plants. He followed his father in the same pursuit, so that it cannot be said that he made the garden; but he added much to it, and the collection of plants was one of the best. For sixty-five years rector of Bitton, in Gloucestershire, he kept the lamp of true gardening alive in the early Victorian days, when men went crazy to make their gardens like carpets, and jolly bad carpets. His books were excellent, especially those on Shakespeare's flowers.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Camellia dropping its buds (D. T.).—The reason of your Camellias dropping their buds is probably owing to their having been kept too dry at the roots. This would also tend to cause the leaves to assume a yellow tint, but the latter is often brought about by over-watering, and as you give no hints as to the state of the soil, we are unable to say in which particular you have erred. At all events, the roots are not in a healthy condition, or the plants would not be in the unsatisfactory state they now are. The soil should be kept moist, but should never be allowed to become sodden. There was no sign of any insect or fungoid pest on the leaves you enclosed.

Fuchsias in greenhouse (F.).—We do not recommend Cocanut-fibre refuse for your slate staging, as the continual moisture from the plants causes it to become putrid quickly, and it is not beneficial to plants of the kind you mention. But if you require a moist bottom, we recommend you to use 2 inches or 3 inches of ashes, small coke, or shingle. Either of these will suffice and be more advantageous for your plants. Wood-lath staging is not beneficial to plants. We prefer slate staging, as it lasts longer, and can be used for both purposes with or without a covering of some material. You will do well to use one of the materials advised.

Indiarubber-plant failing (Miss Hulke).—It is quite impossible to determine the cause of the Indiarubber-plant falling into ill-health by the examination of a diseased leaf. From your note, however, we should say that the roots have fallen into a bad state, probably owing to dryness or having been over-watered. When an old plant such as yours is falls into ill-health, it is much more difficult to revive than in the case of a young one. The only thing you can do is to turn it out of the pot and ascertain the condition of the roots; then, if they are in a bad state, all decayed portions must be cut away, and the plant repotted. For this purpose it is very essential that the pot be quite clean, and effectually drained. A suitable compost may be formed of one part each of loam and leaf-mould, or peat, with nearly half a part of silver sand. After repotting, the plant should be put into a warm-house—that is to say, where the temperature ranges from 60 degs. to 70 degs., and, if possible, a little bottom-heat should be given it. Watering must be very carefully done till the roots resume their normal activity. If, on turning the plant out of its pot, you find the roots in good condition, we can only suggest that the plant may be suffering from exposure to cold draughts.

Thunbergia laurifolia (D. Stuart).—The specimen sent was so much shrivelled up and quite brown that it was impossible to even make out the colour of the flower. However, if it is of a rather light blue, we have no hesitation in saying that it is *Thunbergia laurifolia*, a common climbing plant in India, whence it was introduced in 1856. It is a very desirable climber for the roof of a stove, where it will grow and flower freely. Cuttings of the half-ripened shoots will root without difficulty if taken in the spring as soon as they are available and dibbled into pots filled with a mixture of loam, peat, and silver sand in equal parts. They must then be

put into a close propagating case in the stove, under which conditions roots will soon be produced. After this they should be hardened off to the ordinary atmosphere of the stove and then potted singly. For this a compost made up of equal parts of loam and peat or leaf-mould, with a good sprinkling of silver sand, will suit them well. In potting off the rooted cuttings the soil should not be sifted. If put into larger pots when necessary, the young plants will make rapid progress. Red-spider is sometimes liable to attack the leaves, especially if the atmosphere is dry, but it can be kept down by a liberal use of the syringe. Beside the specific name of *laurifolia*, this *Thunbergia* is sometimes known as *T. Harrisii*.

FRUIT.

Grafting Oranges (L. M. Urbridge).—Grafting is a difficult operation, and is usually done in the early spring by cutting seedlings down hard, then getting small pieces of firm wood and working them on to the stocks, sealing over the wounds with wax. The work should be done in heat and in a close frame.

The Loganberry (Miss Lee Norman).—The Loganberry should be treated in the same way as the Raspberry—that is, the old fruiting wood should be cut out each year to allow room for the new growths, which in the winter should be shortened back to the length of the stakes. These stakes should be not less than 8 feet high, and fixed on each side and in the centre of the plant, or the plants may be set out against a warm fence or wires stretched along the row in place of stakes. The best way to grow the Loganberry is on wires in a similar way to that employed for growing Raspberries, only more height must be allowed—say not less than 6 feet. A good mulch of manure and plenty of water, if the season is dry, must be given when the fruits are swelling.

VEGETABLES.

Parsley (Vegetable Grower).—The constant demand for this is liable at times to exceed the supply, and unless special means have been taken to bring some on under glass in readiness for February and March, a dearth is more liable to come in those months than any other time. Big sowings made during the previous year are not always to be depended on, for the autumn growth is liable in some seasons to go off wholesale and be unfit for garnishing. Plant a frame in autumn with thinnings from the main crop, which have by that time got rather large, but which transplant readily and grow into good plants by winter. Nothing is more satisfactory in a scarce time or when the ground outside is covered with a deep coating of snow than to have such plants from which to gather as required. If, however, this has not been done and there is any danger of a break in the supply, plants lifted now and put into boxes or pots will soon come into growth again if they are placed in a gentle growing temperature, but no attempt must be made to unduly force them into growth or the leaves will become flabby and useless.

SHORT REPLIES.

E. D. Daniel.—Bonne de Malines Pear is the same as Winter Nelis. The other Pears may be obtained from Mons. F. Jamin, Grande Rue, à Bourg la Reine (Seine), France.—**J. Subsciber.**—We do not know a book on the subject at the price you mention. "The English Flower Garden," price 15s. 6d., post free, from J. Murray, Albemarle-street, London, W., should, we think, be very helpful to you.—**W. F.** We have never heard of a double form of *Pyrethrum uliginosum*.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**E. Murphy.**—Ferns: 1, *Pteris serrulata*; 2, *Pteris serrulata cristata*; 3, *Pteris scaberula*, but specimen too poor to name with any certainty; 4, *Pteris cretica*.—**C. S.**—*Rhododendron Nobleanum*. See note on page 114.—**M. C. Sturge.**—*Garrya elliptica*.—**J.**—1, *Berberis Aquifolium*; 2, *Cotoneaster microphylla*; 3, *Cydonia japonica*; 4, *Daphne Laureola*.—**R. P.**—1, *Garrya elliptica*; 2, *Cornus mas*; 3, *Forsythia suspensa*; 4, *Lonicera aruco-reticulata*.—**Y. R.**—1, *Phlebodium aureum*; 2, A form of *Helleborus orientalis*.—**X. Z.**—1, *Clivia miniata*; 2, *Acacia dealbata*; 3, *Begonia metallica*; 4, *Habrothamnus elegans*.—**C. S. M.**—1, *Pteris tremula*; 2, *Pteris serrulata*; 3, *Pteris cretica albo-lineata*.
Names of fruits.—**Snapper.**—Apple: Fearn's Pippin. It may be that the tree is too vigorous. If so, root-pruning would do good.—**J. R.**—Apples: 1, Annie Elizabeth; 2, Bramley's; 3, Northern Greening; 4, French Crab.—**H. H.**—Apples: 1, Rymer; 2, Norfolk Beaufin.—**E. C.**—Pears: 1, Winter Nelis; 2, Nouvelle Fulvie; 3, Verulam (stewing only); 4, Josephine de Malines.

CATALOGUES RECEIVED.

JAMES PEACE. The Flower Grounds, Thornhill Edge, Dewsbury, Yorks.—*Catalogue of Chrysanthemums.*
DOBIE AND MASON, 22, Oak-street, Manchester.—*Vegetable and Flower Seeds, 1916.*
H. N. ELLISON, 5 and 7, Bull-street, West Bromwich.—*List of Pedigree Seeds and Bulbs.*

GARDENING ILLUSTRATED.

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Founded by W. Robinson, Author of "The English Flower Garden."

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NOTES OF THE WEEK.

The Shamrock Pea (*Parochetus communis*) which was placed in a box in cold frame last October is now (middle of February) flowering freely. As far as I remember, even in a warm greenhouse *Parochetus* seldom flowers really well till March or April.—E. CHARLES BUXTON.

Andromeda japonica.—A rich bunch of this, one of the best flowering evergreens from Japan, comes from Knaphill. It is well known now, but not always well grown. The Knaphill soil suits it well. I grow it in quite different soil—cold loam on sandstone rock, with some additions of leaves and sand—and it puts up with the treatment. Being one of the shrubs one cannot do without, each must do the best he can with his soil.—W.

Fasciation in Snowdrops.—The present season has been remarkable for examples of fasciation among the Snowdrops. While picking some of these flowers recently, in a short time no fewer than eight of these freaks were observed. This is something new in my experience of Snowdrops, for in previous years, although occasional fasciated stems have been noticed, yet they were not so common as is the case in the present spring.—W. McG.

Winter Heliotrope.—"W. McG." must be hard up if he has not a bank of ashes, sand, or gravel to put his Winter Heliotrope on. I had the plant for years alongside a grove in ordinary soil not too rich, but it rarely flowered. Then, piled round a reservoir, there was a bank of sand on which nothing would grow, and I took the Winter Heliotrope there. It grows there very well and flowers in quantity, and is very welcome in winter.—W.

Gardening in the parks.—We see in the papers that much of the "floral display" in the London parks is to be reduced this year. This is a good thing, too, as it is so often over-done, and too thickly set on the ground for any relief or artistic effect. Perhaps the most outrageous example of it is that in front of Buckingham Palace, which is every year a nursery garden of scarlet Pelargoniums. It was a bad idea to put a garden there at all. Stately trees and simple Grass were all that was wanted there.

Raoulia australis.—This is one of the neatest and dwarfest of the silvery carpets which can be considered hardy in this country. It is a close-growing plant,

barely rising above the soil, and hard to the touch. It looks as if it could be deepened upon as both frost and rain proof when in a dry place with plenty of drainage. I grow it in a sunny moraine, and it stands well without protection, although this winter has not been an ideal one for plants of its character. It comes from New Zealand and bears small white flowers.—S. ARNOTT.

Blue-eyed Mary (*Omphalodes verna*).—I know no plant flowering at the present time which produces such handsome deep blue flowers as this. No prettier or more satisfactory plant exists for naturalising than this, which with me has formed little colonies in all sorts of positions.—E. M.

Wallflower Harpur Crewe.—Mr. Clarence Elliott sends us flowers of this uncommon little double Wallflower. In some districts near the sea in England and Ireland one may see very pretty examples of double Wallflowers, but the plant is not really hardy, and, therefore, it dies in valleys in inland districts; and in the Home counties it is unusual to see it at all. This kind forms neat little bushes.

Big trees down and no hearths for wood fires.—People tell us of an immense destruction of trees in some places, and no one has a proper hearth for burning the wood, although little else can be done with the branches. A big mistake in country places was getting rid of the old hall fireplace. It is the cheapness and facility of coal that led to the use of this dirtiest of fuels. Every country house where there is wood should have a good wide down hearth in the hall, and also in the workmen's mess-room.—W.

Gardens and water-colours.—I went to see a neighbour's garden the other day. The owner is a student of water-colour painting, and he bases his ideas of gardening on things that would look well in a drawing. Presently we came to the end of a walk where there was a ring of variegated Lawson Cypress, and he said it put a pretty touch of colour. We passed next a lumpy Thuja in shape like a fallen-down pudding, and seeing that I looked rather doubtfully at this he asked what I thought of it. I said that if it were mine it would be put on the fire-heap the next morning. Next we came to a Cypress, one of those folded umbrella-like forms of it, which, when old, falls to pieces and is always ugly, and I ventured to air my views of such malformations. But he said it gave a charming effect, and used some term in water-colour work to

justify his taste. All his Conifers were spread about in the usual stupid crinoline fashion, and showed little sign of the stem, the chief glory of the Pine. Gardening in a picturesque country such as this was may be a much bigger thing than may be learnt from water-colours.—W.

Iris reticulata.—The first bloom of this handsome Iris was noticed on February 12th, fully expanded and clean. Formerly *I. reticulata* was grown in a hardy-plant border, but more success seems to follow when the bulbs are planted at the foot of a south wall, protected by a coping of glass about 2 feet wide. In a similar position *I. stylosa* is blooming very freely. I notice that some writers prefer the more unwieldy name of *I. unguicularis* in referring to this Iris.—KIRK.

Ficaria grandiflora (The Great Pilewort).—I like this Buttercup-like flower, which, coming with the Snowdrops and Violets, should be grown by all who can give up a corner to a few plants. In some respects it reminds one of the Kingcups, with its large shining leaves each 3½ inches across and yellow flowers each 2 inches across and borne on erect, stout stems 10 inches or more in length. These stems usually carry a leaf about half-way down like the Kingcup. I have it in a wet, sticky soil, and it seems quite at home.—M.

Early-flowering rock plants.—Your readers may be interested to know that the following alpine and rock garden shrubs are now in bloom in this district:—*Saxifraga Burseriana* Gloria, *S. B. multiflora*, *S. Haagi*, *S. Apple Blossom*, *S. Cherry Trees*, *S. Boryi*, *S. Frederici Augusti*, *S. apiculata*, *S. Elizabetha*, *S. Salomoni*, *S. sancta speciosa*, *Primula amœna*, *P. denticulata*, *P. Lilac Queen*, *Anemone Hepatica rubra*, *Arabis alba*, *Tufted Pansies*, *Erica carnea alba*, and *Rhododendron præcox*. Usually these do not come into bloom for many weeks yet, owing to the exposed nature of their sites, their earliness this season no doubt being due to the extreme mildness of the winter.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

The Cornelian Cherry (*Cornus mas*).—This is now (February 14th) blooming freely, the leafless branches almost hidden by the clusters of bright yellow flowers. With the advent of the Japanese Witch Hazels this fine old *Cornus* seems to have been neglected. It will thrive almost anywhere and in any soil, and flowers in quite a small state. The specimens referred to as in bloom are nearly 20 feet in height

and with a good spread. The flowering sprays are very welcome in the house, where they last a long time, especially if cut in the bud. Like all trees and shrubs which bloom in a leafless state, this should be planted in front of larger evergreens and where the sunshine can play freely among its branches. The flavour of the fruit, which resembles a small Plum, is sharp, but not unpleasant. The Turks still use it in the manufacture of sherbet, and the bark furnishes the red dye for their fez.—E. MARKHAM.

The common Polypody (*Polypodium vulgare*).—It is a pity this fine Fern is not more grown, for there are few dwarf evergreen plants capable of producing such a deep green carpet during the winter. Perhaps, like many other of our good native plants, it has been pushed aside to make room for some less valuable kinds. Although a charming plant in summer, it is in the dead of winter that it is seen at its best. With me it is growing on a border 3 feet wide and 5 yards long at the base of a high wall, the whole shaded by the large boughs of a Yew-tree, which limit its water supply to a considerable extent. In this position it seems perfectly happy, and has become one dense carpet of fronds, through which Daffodils will shortly appear. This Fern is a splendid plant for the wild garden. Grouping on the shady side of the rock garden, intermixed with Fritillary or the Summer Snowflake, is a charming way of using it, while as a foreground and carpet to slender-growing shrubs it would answer. A slight shade it apparently enjoys, as in its native haunts it is usually found beneath some tree or low-growing bush.—E. M.

Hamamelis arborea.—In reply to "W. T." (page 81) *re* the above, he will find in "Flora and Sylva," Vol. 2, page 89, this charming Witch Hazel described as the earliest to flower, the largest and best of the group, etc. If "W. T.," who says that this variety is, in a general way, later than *H. mollis*, which is sometimes in flower by Christmas, will refer to the list of plants in bloom (December 30th) he will find *H. arborea* is included. What is "W. T.'s" opinion as to the dimensions of *H. mollis* as compared to those of *H. arborea* when the two attain age? In a young state the difference between them is not so great as many are led to believe, the chief distinction being that *H. mollis* has larger leaves and brighter flowers than those of *H. arborea*. The fact that *H. mollis* in the Coombe Wood Nursery was for twenty years merely looked upon as a rather larger form of *H. japonica* speaks for itself. In support of his criticism of my note "W. T." quotes a well-known author, but mistakes are at times made by the best of authorities, and with at least one member of this genus I find myself at variance with the author referred to, who describes *H. virginiana* as follows:—"The effectiveness of this Witch Hazel is spoilt by its being in full leaf at flowering time, so that the blossoms, closely tucked to the twigs, have little chance to show themselves, etc." In early October of the past year there was no more beautiful object than this Witch Hazel, large specimens from 10 feet to 12 feet high and as far through were bedecked with blossoms, the leaves turning from green to rich golden-yellow. The flowers were easily distinguished. Their value in a cut state when placed where the sun can reach them in the room is considerable. It may be that such beauty is only met with on specimens of considerable age, but I think it worthy of notice, as it may encourage the further planting of this old American species.—E. M. *Sussex.*

FRUIT.

SOME DELUSIONS ABOUT PRUNING.

THE other day I went to see a neighbour's garden, and there found some promising young Pear-trees, pyramids mostly, with all the main shoots cut off, as one might cut sticks in a copse for hedge stakes. The pruner told me his object was to make the tree form spurs. I ventured to tell him that that was the best way to prevent them forming spurs, and that the great thick shoots cut would start up again in the form of watery shoots. I told him that the main function of those branches was to bring the sap up to the young buds. What teaching had led to the trees being mutilated in that way I do not know, but a more fatuous plan could hardly be followed. He told me he was sorry he had only time to root-prune a few of the trees, and I told him he was a lucky fellow on that account. His soil is like mine—a cool, poor loam on a sandstone bottom. I said if he had been to see my trees in the autumn he would find them not cut back, but the shoots bearing a good crop of handsome fruit.

This fashion of over-pruning has gone on for years in gardens and has done infinite harm. It begins with young trees fresh from the nurseries, which some books teach should be cut back. That practice I believe to be wrong. Healthy fruit-buds are not produced on that system.

Nothing is to be said against wise pruning. Without it we cannot hope for good fruit, but hacking all the main uprising shoots of a tree back to induce fruit-spurs is a very different thing. W.

GARDEN SOURCES OF POTASH.

EVERY garden contains sources of potash of its own. For the past ten years I have grown crops in abundance by simply utilising the home garden supplies of potash. This element may be derived from many waste products of the orchard and garden in sufficient quantities to supply the requirements of growing crops. There are natural supplies of mineral salts in all arable soils. Some of these soils contain more potash salts than others. Muck, peat, gravelly and sandy soils are very deficient of potash, but clay loams usually contain sufficient unused potash salts for good gardening. These mineral substances are the natural supplies of potash in soils. Where cultivation has been carried on for years, the potash in surface soils has been largely consumed by growing crops. Unless potash in some form is annually supplied to meet the drain made by crops, soils decrease in fertility and crop production becomes more and more difficult. But subsoils of clay loams and other soils rich in mineral salts contain large quantities of potash, though not in readily available form. All organic matter contains a certain quantity of potash. Beet and Mangold leaves contain a high percentage of potash. When these waste products are turned under, their decay not only liberates their contained potash as food for subsequent crops, but they also increase the solubility of potash minerals in soils. Deep cultivation and organic manures will supply our gardens with a supply of potash that might otherwise be useless.

The chief sources of potash supply around orchards and gardens are many substances usually allowed to go to waste entirely, such as dried weeds, hedge trimmings, prunings from fruit trees and bushes, shade-tree cuttings, Corn-cobs, and other waste materials found around every garden. The best way to secure the con-

tained potash in these materials is by burning. The resulting ashes contain large quantities of potash in readily available form. The amount of potash varies with the material burned. Commercial kainit contains only 12 per cent. of potash in the form of potassium oxide. This is not nearly so available to plants as the potash in ashes of garden waste products. These different forms of organic ashes contain potassium carbonate, one of the most readily soluble potash salts.

For this reason care must be used in handling the ashes of garden wastes. If rain or dew falls on them they may lose half their fertilising value in a single night. This would not make so much difference if the materials are burned in places where the fertiliser is desired, as the rain would carry the dissolved potash into the soil, where it becomes fixed either by soil micro-organisms or by organic substances. But if these ashes are required on some other part of the garden, or at some other season of the year than when produced, they should be gathered as soon as cool enough and kept dry. They may be preserved for a considerable time without loss of fertilising value if they are thoroughly mixed with superphosphate and kept in a dry place. A small quantity of this mixture placed around flowers and vegetables will result in increased growth and vigour.

As previously stated, easily soluble potash salts like potassium carbonate do not readily wash out from the soil, because they become fixed by micro-organisms and decaying organic matter. Wherever good gardening is practised by using sufficient organic ashes and manures, and by deep tillage to bring up the subsoil occasionally, the quantity of potash in garden soils may be increased rather than diminished by cropping, because more potash is supplied by these means than is removed by the crops. This is one of the best ways to conserve soil fertility. Both are good garden practices.—J. B. MORMAN, *Kensington, Md., in Garden Magazine.*

PLANTING STRAWBERRIES IN SPRING.

EXPERIENCED growers plant, when practicable, in autumn, so that the plants get well hold of the ground by winter and are established when the growing time returns. Those who have not been able to do this may, however, plant in spring with every prospect of success. Growing Strawberries in frames for the London markets I require every year several thousands of good young plants which are lifted and planted in late autumn. I try to get the runners put out on ground that has been cropped with Potatoes and which requires no preparation, being sweet and clean. It frequently happens, however, that I cannot get them all planted at that time, and some have to be done in spring. This, of course, involves extra labour, as the ground has to be dug up rough in February or early in March and allowed to sweeten. I certainly prefer autumn planting, but frequently something occurs that prevents my getting them all out at that time, in which case I plant in March and find that they do nearly, if not quite, as well; in fact, it has occurred, after a very inclement, changeable winter, when there was much frost, that the spring-planted ones turned out best. Several times I have planted early in April and have had good results. When this has been the case and the weather has been dry I have made a practice of "puddling" them in, that is, treading the soil firmly round the crowns to form a basin, filling up

with water, and when this soaks away levelling with loose soil, which, when dry, acts as a mulch. It is a great help to the plants if manure-water is used, as this gives them an early and more vigorous start. A strong growth will be assured if, before the lumps are broken and the ground levelled, a moderate dressing of rotten manure, which in the process of breaking down the ground becomes thoroughly incorporated with the soil, is given. If puddled in there will be no need for watering for a month, even should the weather keep dry. Later on in a time of heat and drought an occasional moistening may be necessary. A great thing with new Strawberry plantations is to get the hoe well at work early in the season, not waiting for weeds to come, but well stirring the surface so that it becomes fine to a depth of 2 inches, which acts as a mulch, thus checking evaporation and allowing the free admission of rain and the heavy dews which we frequently get in the months of July and August. I am behind this year. I could not do any planting last autumn and have, therefore, all to do in March and early in April. I do not trouble, however, if I can

TREES AND SHRUBS.

RIBES LAURIFOLIUM.

This is an interesting but not very showy species of Ribes, native of Western China, whence it was introduced in 1908. It is an evergreen, growing 4 feet or more in height. The flowers are borne as early as February, male and female blossoms being produced on separate plants. They are in racemes each 2 inches to 3 inches long, and greenish-yellow in colour. As a rule, the clusters of female flowers are longer than those of male plants. It should be given a sheltered position, and, except in the warmer counties, may require wall protection. Any good garden soil suits it, and it can be increased by seeds or layers. The accompanying illustration is of a shoot of the male-flowered form. D.

EARLY FORSYTHIAS.

THE mild weather throughout January has resulted in many plants commencing to grow and flower well in advance of their normal time, the Forsythias being a case in point. During the last week in January

will be cut away. Quite different in habit from *F. suspensa* is

F. VIRIDISSIMA, another Chinese shrub introduced about 1841. It is often met with from 5 feet to 6 feet high, whilst the other species exceeds 12 feet in height. It is of stiff habit with erect, green branches clothed with deep green leaves, and blooms freely, the flowers normally being borne about a fortnight later than those of *F. suspensa*. For planting in groups in the open or in the shrubbery it is very useful. Between these two species there is a very useful hybrid,

F. INTERMEDIA, which is very well named, for it is distinctly intermediate in habit. It is a very vigorous shrub growing 10 feet or 12 feet high with a wide spread, its golden bell-like flowers being borne freely a little later than those of *F. suspensa*. Two exceptionally free-flowering forms have been given varietal names. They are *densiflora* and *spectabilis*, and people would do well to plant them in preference to the type. Another variety, *vitellina*, is also distinct by reason of its darker-coloured flowers. A third species of Forsythia is the Albanian

F. EUROPEA, an erect, sparsely-branched shrub with the familiar golden bell-like flowers of the other Forsythias, but much less effective and not worth growing except in gardens where full collections are desired. It was introduced in 1899, but is not widely known.

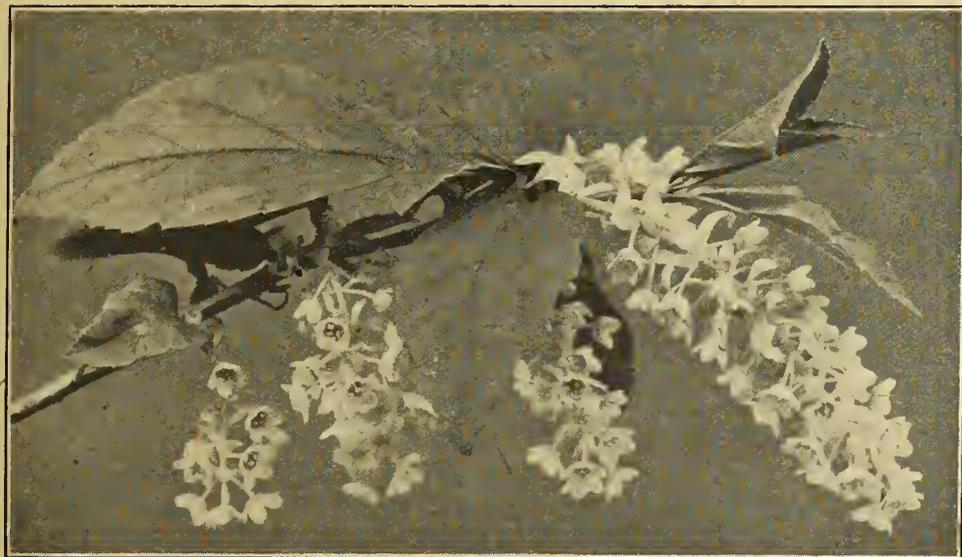
The Forsythias are easily increased by cuttings of the soft shoots in June, cuttings at that time rooting more quickly and forming better plants than cuttings of partly or fully ripened wood at later dates. They thrive in any good garden soil. All may be used for forcing, but *F. suspensa* is superior to the others. The shoots are also very useful for cutting for indoor decoration. D.

APRICOTS, CHERRIES, AND PEACHES IN CHINA AND JAPAN.

IN China and Japan, except the colder parts, the first flowers to open on deciduous trees are those of the Ume (*Prunus Mume*), generally known as the Japanese Apricot, and those familiar with the porcelains of the Far East will appreciate it as the Plum-blossom so often employed in design. This plant is wild

in central and western China, but it has been cultivated in all but the colder parts of that land from time immemorial and was from China introduced to Japan by Buddhist priests more than one thousand years ago. In both China and Japan it is much grown in pots as a dwarfed bush, and in this condition flowers profusely. Cut branches with flowers are abundantly used for house decoration—so much so, in fact, that it is safe to say that in season where it is grown in China and Japan no temple, shrine, or dwelling, be it castle, palace, or peasant's hut, is without its sprig of Ume.

THE COMMON PEACH (*Prunus persica*).—Cultivated in the gardens of China and Japan is a number of varieties with large and double flowers, in white, pink, rose-red, and bizarre, and strikingly handsome. In addition to the common Peach two other species grow wild in China. One of these, *P. Davidiana*, is confined to the northern parts of that country, and in the Arnold Arboretum it is the first of its class to blossom. Often the flowers get damaged by frosts in the changeable climate of New England. The tree is of slender growth with thin ascending-spreading branches, and there are two forms, one with white and



A flowering shoot of Ribes laurifolium, showing the male blooms.

get the ground dug up roughly early in March. It quickly dries and sweetens at that time. An important point is not to allow the roots to dry in transplanting, as this will cause a check, which at that late season it is necessary to avoid.

J. CORNHILL.

Nuts.—As the female blossoms are now plainly discernible a commencement with the pruning of the bushes has been made. The female blossoms are not very abundant, neither have male catkins been very plentiful either on Cobnuts, Filberts, or the common Wood Nut. Still, as is often the case with the Nut crop, it may eventually prove to be a much better one than present signs lead one to anticipate. —A. W.

American blight.—A correspondent lately called attention to the necessity of adopting drastic measures in connection with American blight, and it is a question if anyone allowing trees to get into a bad state should not be compelled to remove them. I remember in the late seventies a market garden with a lot of young standard Apples that were literally smothered with the pest. This garden adjoined a fruit-tree nursery, with the result that for several years nearly every Apple-tree, and also some of the Pears, were more or less affected, a state of things very bad for the purchaser, especially if this happened to be unnoticed at planting-time and the insect had the opportunity of making headway.—E. B. S.

numerous flowers were open on *F. suspensa*, and now (early February) some plants are as forward as is often the case in mid-March.

F. SUSPensa is a very accommodating shrub, for it thrives under a great variety of conditions and is equally beautiful whether against a fence or trellis, as a bush in the shrubbery, as a group in the wilder parts of the garden, or on the lawn. Moreover, it may be left unpruned year after year, or the branches may be cut back annually as soon as the flowers fade. Plants grown against fences, trellises, or walls are improved by an annual pruning, for they are thereby kept within bounds and continually furnished with young wood on which the best flowers are borne. In plants grown in the open, if pruned once a year, the habit is considerably altered, for, instead of long, slender branchlets being formed, they often produce strong, erect shoots $3\frac{1}{2}$ feet to $4\frac{1}{2}$ feet long which bloom from end to end. Certain plants are more pendent than others, and those exhibiting the stiffest habit are best as specimens. Pruning must, however, be done as soon as the flowers fade, for if it is done after young wood has been formed the flowers for the following year

another with pink blossoms. The other species (*P. mira*) is a new discovery which I made in 1910, in the Chino-Thibetan borderland. The flowers are unknown to me, but probably resemble those of the common Peach. This new species is remarkable in having a very small, flattened-oval, and perfectly smooth stone; its value, if any, as a new fruit-tree has yet to be made known, but for the hybridist it certainly has attractions.

THE COMMON APRICOT (*Prunus Armeniaca*), its specific name notwithstanding, is also native of northern China and, like its allies, is not only a valuable fruit-tree, but is likewise a handsome and ornamental flowering plant. This, too, has been long cultivated in the Far East, and in Japan varieties differing in habit and colour of flowers have originated.

In Mandschuria a third species of Apricot (*P. mandshurica*) grows wild. This tree is distinct, with its light grey rather scaly bark, wide-spreading crown, and spiny inner branches. The flowers are large, white or nearly so.—E. H. WILSON in *Garden Magazine*.

NOTES AND REPLIES.

Rooting Daphne Mezereum, etc.—Please let me know whether I am likely to be successful at the present time in rooting cuttings of *Daphne Mezereum*, *D. M. alba*, and *Ceanothus Gloire de Versailles*, which have just been given me. I have them in pots of sandy soil in a box with glass lid, standing on stage of cold greenhouse.—MARGARET.

[We do not think that you are likely to meet with any success in striking the cuttings under the conditions named. The usual mode of increasing *Daphne Mezereum* is from seeds, which, as a rule, are very freely produced. If sown when ripe and placed in a frame the seedlings will make their appearance during the following season. The varieties are usually grafted on to seedlings of the type, as they cannot be depended upon to come true from seeds. A limited number of the *Ceanothus* may form roots, but the best way to increase this by means of cuttings is to take the half-ripened shoots in August and dibble them into pots of sandy soil. A length of 4 inches to 5 inches is very suitable for cuttings, which should be cut off at a joint and the bottom leaves removed for the purpose of insertion. When this is done a good watering must be given through a fine rose in order to settle everything in its place. Then the pots should be stood in a cold frame kept close and shaded from the sun. Of course, it must be opened occasionally in order to examine the condition of the cuttings and to remove any decayed leaves. A great many shrubs can be increased in this way.]

Among the shrubs the spring display has begun. *Garrya elliptica* has seldom been in finer form, the catkins not only being more numerous than usual but longer than is generally the case. As regards this useful shrub little in the way of annual pruning is required, but any straggling or unnecessary branches or shoots may with advantage be removed. The best time to do this is immediately after the flowering is over. *Hamamelis arborea* is very attractive just at present. Suited by the rather peaty and moist soil in which the plants are growing, this Witch Hazel is making useful bushes and increasing in size annually. Any little trimming needful may be undertaken at the end of February. *Andromeda floribunda* is coming into flower and the display will be general in a few days. *Ribes sanguineum* will be earlier than has been the case for some years. What pruning or thinning is needed should, as in the case of the *Garrya*, be completed immediately after flowering. *Cotoneaster frigida*, *C.*

Simmonsii, and a stray Holly or two yet retain a good display of berries. This is uncommon in these gardens, for, as a rule, the fruits are eaten by birds long before this time. Azaleas, Rhododendrons, Kalmias, indeed, shrubs generally, are quite satisfactory. The one subject which refuses to grow here is the *Daphne*—usually an easily-grown and accommodating shrub, but which here struggles for a season or two and dies. The same thing happens in other gardens in the neighbourhood, and it is difficult to find a reason why this should be so. Soil and climate would appear to be quite suited to the needs of the *Daphnes*, so that there must be something in the soil which is fatal to success.—W. MCG.

Garrya elliptica, moving.—I agree with "E. M." as to this being impatient of removal. I once lifted some large plants, and, although they were planted at once, and very carefully, they never regained their former vigour. Some smaller plants lifted at the same time soon started into growth, and looked none the worse. Nurserymen generally send the plants out in pots, but I have found that these when rooted through suffered from the check.—DORSET.

PLANTS AND FLOWERS.

INDOOR PLANTS.

THREE BLUE WINTER-FLOWERING PLANTS.

It will be readily admitted that we do not possess any too many shrubby plants with flowers of this colour and that bloom in the dull season of the year. True, blue is not the best of colours under artificial light, but, none the less, these are all valuable by daylight for the flowering-house or semi-warm conservatory. A temperature somewhat above that of the ordinary greenhouse is needed—say 50 degs. as a minimum.

ERANTHEMUM PULCHELLUM.—I name this first as it has been grown much longer than either of those that will afterwards be treated upon. This is a plant of easy culture, really a subject for the cool stove. It is readily increased by cuttings every spring, and should be propagated in the early summer months, May being a suitable time. If inserted in Cocoa-fibre refuse and sand, with bottom-heat, the cuttings will soon root. Pot them off in good time, using good turfy loam, leaf-soil, and sand. Keep the shoots pinched during the summer months, growing the plants in nearly full sunshine. Cease to stop the shoots during early August. If one shift has been given after the first potting that will be ample, but do not repot after stopping has ceased. A second batch of cuttings will make most serviceable plants to flower during January and February. These may be allowed to flower in 3-inch or 4-inch pots, nothing larger. These plants will be very suitable as marginal lines in association with such as *Aphelandra aurantiaca* Roelzii. If these plants be grown on during the following spring a very useful stock will be the result. For cut flowers, too, they prove very useful.

COLEUS THYRSOIDEUS.—The colour of this *Coleus* is some tints lighter than that of the *Eranthemum*. It is a pleasing shade of pale, but bright blue. It will succeed well in a temperature somewhat cooler also. In order to obtain the long spikes of flowers a generous treatment is advisable, for when these are fully developed the plant is highly ornamental. Cuttings should be struck quite a month earlier than for the *Eranthemum*, as plants somewhat larger and more vigorous are essential. One more shift also is recommended; in other respects the treat-

ment may be the same. The plants will, naturally, be taller, more often 3 feet or so in height when the flower-spikes are developed. It is rather subject to both mealy bug and red spider, but these pests can both be kept in abeyance by a free use of the syringe. Water freely in this case whilst the growth is active, otherwise the oldest of the leaves will turn yellow and possibly fall.

PYCNOSTACHYS DAWELI.—This is a subtropical labiate from Africa. The flowers are very striking in their bright shade of blue. These are produced mostly in terminal fashion. The laterals do not appear to flower quite so freely, hence the plants are rather tall and straggling. The colour, however, makes up for all deficiencies in habit. If this plant were to be pinched rather more freely I think it would be advantageous. It should be also grown freely from its propagation onwards. For some time past it has been a striking feature in the flowering-house at Kew Gardens. When I saw it there lately I did not note any small plants, hence I am under the impression that it is not so suitable in that stage of growth. Both the *Coleus* and the *Eranthemum* were also noted there. H.

GREENHOUSE CLIMBERS.

A JUDICIOUS selection of climbing plants, provided they get reasonable attention, is a valuable addition to the greenhouse. That climbers are frequently not so satisfactory as they might be can be traced to various causes. The accommodation for the roots is often at fault. Climbing plants are often grown in pots or tubs, and when this is the case it should be borne in mind that a plant which covers a considerable amount of roof-space requires a corresponding supply of nourishment for the roots. This may be made up either by increasing the size of the receptacles or by giving an occasional stimulant during the growing season.

Another point that often leads to unsatisfactory results, particularly in small structures, is that strong-growing climbers are chosen for the purpose, so that, owing to the cutting away necessary to keep the vigorous shoots within bounds, the plants do not flower so freely as they would if more rationally treated. Such climbers as *Cobæa scandens* and some of the Passion Flowers are quite out of place in a small house, though for a large structure they would be very desirable. Attention may well be directed to another point, and that is that in the winter the plants in the greenhouse will require as much light as possible. It is, therefore, a good plan late in the autumn to prune the summer-flowering subjects—that have passed out of bloom. Of course, those that are still in flower or may be depended upon to bloom in the winter must not be treated in this way. Most climbers grow very rapidly during the season, at which time care should be taken to prevent them becoming a tangled mass, which is likely to happen unless they are attended to.

When climbing plants are trained to the roof they are particularly liable to be attacked by insect pests, owing in the first place to the dry atmosphere which prevails close to the glass, and next that being—at least in some cases—difficult to reach the pests may make a deal of headway before it is considered necessary to take them in hand. A liberal use of the syringe will greatly benefit climbers in general, that is, where it can be carried out without damaging the plants underneath.

Among the plants suitable for furnishing the roof or rafters of a greenhouse the best are, *Abutilons* of sorts, *Acacia*

Riceana, Clematis indivisa, Cliathus puniceus, Cobaea scandens, Fuchsias of sorts, Habrothamnus of sorts, Hibbertia dentata, Jasminum grandiflorum, Kennedyas of sorts, Lapagerias, Lonicera sempervirens minor, Mandevilla suaveolens, Passifloras of sorts, Pelargoniums (Ivy-leaved), Plumbago capensis and its white variety, Rhynchospermum jasminoides, Solanum jasminoides, Solanum Wendlandi, Sollya heterophylla, Streptosolen Jamesoni, Swainsonas of sorts, Tacsonias of sorts, Tecoma capensis, Tecoma jasminoides, and Tropaeolums of sorts. Of the above the Lapagerias succeed best in a cool, moist structure and a shaded position. Those that may be readily kept within bounds in

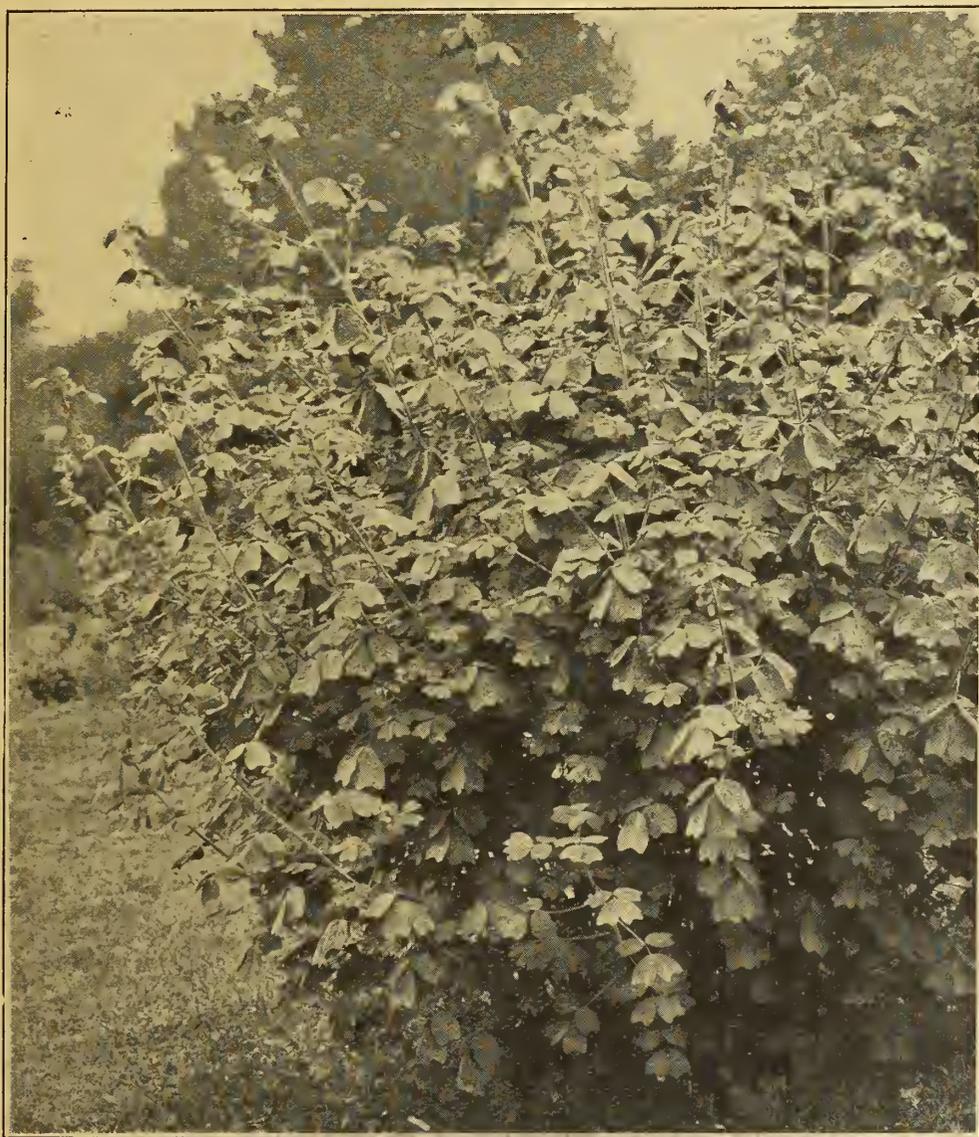
value of these plants during the dull months, it is pleasing to find that they can be grown in a temperature which does not exceed 60 degs.—KIRK.

AMICIA ZYGOMERIS.

THIS member of the Pea family, though a native of Mexico, has proved quite hardy in the south of Ireland, the more so as it is perennial and dies down in the winter. The effects of severe frost might be, therefore, mitigated by planting it deeply. It is worthy of cultivation, as it flowers in the autumn up to the time of frost. It grows some 9 feet in height and possesses an interesting peculiarity of growth, in that its stalks, with leaves and flowers, rise out of a pair of purple kidney-shaped

growth is unaffected. The result is that the lower parts of the plants are bare, and any young growth that starts there soon withers away.—W. H. S.

[The growths sent are exceedingly thin and weak, and bear evidence of a lack of good cultivation generally. We note, however, that the plants are two years old and have been grown in quite a cool house, hence the age of the examples and the treatment meted out to them may, combined, be responsible for the failing. The fact that the stems are bare and leafless is but the evidence of maturity, and two-year-old plants no more incline to leafy stems than do a Chrysanthemum or a Poplar when these become woody. Growers of the Carnation have frequently to clean



Part of a plant of *Amicia zygomeris* at Ashbourne, Glounthaune, Co. Cork.

a small structure would include Abutilons, Clematis indivisa, Fuchsias, Hibbertia dentata, Jasminum grandiflorum, Kennedyas, Lonicera sempervirens minor, Pelargoniums (Ivy-leaved), Plumbago capensis, Rhynchospermum jasminoides, Solanum jasminoides, Sollya heterophylla, and Tropaeolums. W. T.

Begonia Gloire de Lorraine.—I have, like many others, been accustomed to look upon this fine family of winter-flowering plants as requiring almost the heat of the stove. My opinion has been modified, for, having a spare batch, the plants were put into a greenhouse among a mixed collection of other winter-blooming subjects. These Begonias have bloomed freely, and at this date (February 20th) are yet quite good—long after those grown in stove heat are past. Considering the

bracts, which afterwards form collars round the stems. The flowers, which cover the shrub, are large, Pea-shaped, and golden-yellow in colour. It thrives in rich, light, well-drained soil, and delights in full sun. R. H. B.

NOTES AND REPLIES.

Perpetual and Malmaison Carnations.—Enclosed are samples of leaves taken from my plants, and I should be glad to know what is affecting them and the best means of arresting the spread of the disease. The plants (two years old) are grown in a cool lean-to greenhouse, facing south-east, and from which frost is kept out. Plenty of ventilation is provided. The house is dry and watertight, and the plants are not over-watered. As you will see, it is the older leaves that go off first, the attack commencing at the points, while the top

over their plants and remove dead or decaying material, and this appears to be necessary in your case. More necessary still, perhaps, is getting rid of the stock, since two-year-old plants, if they have done anything at all, are practically worn out. You had better purchase a fresh stock of vigorous young plants at once, as there is little hope of the old examples being of much further service.]

Pelargonium Paul Crampel.—When flowerbeds were being cleared in the autumn, a number of this Pelargonium was lifted and potted up, chiefly for the purpose of obtaining cuttings in spring. Having been cut back, these plants broke very freely, and in a warm pit they have bloomed very well almost throughout the winter. The colour is a telling one, and the flowers thus produced have been very useful for cutting.—KIRK.

VEGETABLES.

POTATOES: CHANGE OF SEED.

Most Potato growers have found that by getting at least a portion of their seed tubers from a distance they secure a proportionately higher rate of increase. Large growers in Lincolnshire and Scotland have for some years catered for this interchange of seed. I have looked upon this interchange as a means of increasing the yield by about a third compared with that obtained from home-saved stocks. In some soils deterioration is more rapid than in others, but I am inclined to the opinion that in most gardens, be they large or small, there is greater satisfaction derived by purchasing at least a portion of one's stock. Many claim to have derived the greatest advantages from Scotch-grown seed; others again will have found the climatic changes too severe and the yield less than was anticipated. After repeated trials I have come to the conclusion that Lincolnshire seed affords a greater range of profit than do purchases from further north. Lincoln growers, I believe, obtain their seed from Scotland, and thus find the same advantages that we derive from their county. It would seem that only within recent years has it been found what an influence there is in climate as affecting Potato growth and crop. Ireland has sent her quota, and it is found by some that results compare favourably with those from Scotch and English seed. Cambridge and Hunts, too, have now for some time been in the field. In this time of war, when everyone is urged to provide the maximum of food stuffs from the land, the question of the most suitable seed-stock should be taken into consideration. I hold no brief for any county. I have satisfied myself that in this county seed tubers from Lincoln give me a maximum of Potato yield. These remarks apply not only to the early-maturing stocks but equally to maincrop varieties. W. S.

Wills.

RAISING EARLY CAULIFLOWERS UNDER GLASS.

THE winter up to the present has been exceptionally favourable for the Broccoli crop. When Broccolis are plentiful it is a waste of effort and space to forward Cauliflowers that will come in at a time when Broccoli is plentiful. Given good culture and care in the selection of the varieties, Broccoli will keep up a supply of good heads through the month of May and often well into June. That being so one need not sow the early Cauliflowers until February is well advanced, when a slight hot-bed and frame can be provided for them. The hot-bed may be dispensed with if there is no urgency in the maturity of the crop, a small frame in a sunny position answering the purpose. When forced under glass Cauliflower plants are made somewhat tender, and I have known them badly crippled when overtaken by spring frost. Inverted flower-pots placed over the plants at night have been a means of saving them when unprotected plants have been hopelessly crippled. When hot-beds are impossible the seed can be sown in boxes, standing in a warm greenhouse and bringing on gradually until the plants can be trusted outside. The small-growing early forms of Snowball, of which there are many selected stocks now on the market, are those I would choose. I find it a good rule to sow at the same time some of the Autumn Giant, both of the extra early selected stocks, and the normal types. These need a longer season of growth and are much more dependable

than are the others if overtaken by stress of weather. These extra early stocks may be depended on to furnish successional supplies from the end of July onward if given an early start and good culture. In some households Cauliflowers hold a very high place, and when this is so then every available means of securing a supply is justified. W. STRUGNELL.

GARDEN FOOD.

THE USES OF ORANGES.

It is not generally recognised that Oranges possess valuable qualities, such as citric acid, and an abundant supply of potash salts, as well as lime and magnesia. This fruit is well adapted to salad-making, and the following are some suggested combinations which are unusual but very delicious:—Orange and Celery with French dressing served with game; Orange, Chestnut, Raisin, and Celery, and French dressing with either game or chicken; Orange and Grape-fruit dressed with French dressing and served with fish or roast pork. As a sweet the following are excellent:—

ORANGE AND BANANA SALAD.—Ingredients: Three Oranges, three Bananas, two tablespoonfuls of desiccated Cocoanut, one teaspoonful of loaf sugar, one teaspoonful of water. Method: Remove the peel and all the white pith from the Oranges, and cut them into thin slices with a sharp knife. Skin and slice the Bananas, and arrange the fruit in layers in a salad-bowl, sprinkling each layer with a little of the Cocoanut. Put the sugar and water into a saucepan and let them boil for ten minutes. Allow the syrup to cool and then pour it over the fruit, and place in a cool place until wanted. This is much better if made some hours before being served, as thus the fruit has time to absorb the flavour of the Cocoanut.

ORANGE TART.—The same combination of fruits is used for this recipe, resulting in an excellent dish, the acid of the Oranges supplying what is needed in this respect in the Bananas. Peel and slice six Bananas and three oranges, and arrange them in a pie-dish, sprinkling them with chopped Nuts and brown sugar. Cover with pastry and bake in a moderate oven for about three-quarters of an hour. This will be sufficient for four or five persons.

GELÉE D'ORANGE.—Ingredients: $\frac{1}{2}$ pint of Orange-juice (this will take four or five Oranges), the rind of two of the Oranges, 4 oz. of loaf sugar, 1 oz. of sheet gelatine, $\frac{1}{2}$ pint of water, the rind and juice of one Lemon. Method: Wipe the Oranges and Lemon with a damp cloth, and then peel—very thinly—the rind required. Put this into a saucepan with the gelatine, sugar, and water, stir over the fire until the gelatine is dissolved, and then simmer for ten minutes. Strain this mixture into a basin and to it add the strained Orange and Lemon juice; stir until it begins to thicken, then pour into a wetted mould, and set aside to cool.

ORANGE MARMALADE.—Ingredients: $3\frac{1}{2}$ lb. Oranges, three Seville Oranges, $15\frac{1}{2}$ pints of cold water, sugar, $\frac{1}{2}$ pint of boiling water. Method: Wipe the Oranges with a damp cloth and cut them in halves. Squeeze the juice out on a Lemon squeezer, and then strau it into a basin. Put the pips into a small basin, add the boiling water, and let them stand to extract the flavour. Cut the skins of the Oranges into strips, not too thin, and put them into a large basin with the cold water; let them soak for twenty-four hours. Now put into a preserving-pan, and boil until the peel is tender; boil the pips for fifteen minutes, and then strain the water from them into the preserving pan. When finished cooking pour all into a large basin, add the Orange juice, and let it stand for at least twelve hours. Next day measure the liquid, and to every pint allow 1 lb. of preserving sugar. Boil again for about twenty or thirty minutes, then pour into pots and cover while hot.—*Guardian.*

NOTES AND REPLIES.

D'Arcy Apple.—"Now that Cox's Orange Pippin is out of season, by far the best dessert Apple that I have ever tasted is D'Arcy Spice Pippin, which was improperly re-named Baddow Pippin, and is known by the latter designation to many people. By the way, it seems to me that no encouragement, or even tolerance, should be accorded to men who re-name an old variety. The Apple mentioned is quite as spicy as Cox's Orange Pippin, but less sugary. It is vastly superior in flavour to

Claygate Pearmain, Duke of Devonshire, or Mannington's Pearmain—all three late keepers."

[The above is from the *Gardeners' Chronicle*. For years I have done my best to help on the cultivation of this Apple. The nurserymen tell me it is a bad grower. I do not believe it. Slow it may be, and not like some of their stocks. The best name for it is the D'Arcy Apple—"Pippin" and "Spice" are alike unnecessary.—W.]

The Chinese way with Tea.—The winter-feeding of cattle is often of a kind that imparts a disagreeable taste to milk and cream. This is so unpleasant to me that I gave up milk and cream and began to look into the Chinese way of taking Tea. It is very much more pleasant than the common way, by which Tea-drinking is degraded to a totally different thing from what it was originally. The Chinese use boiling water and a pinch of a good Tea, and add nothing more except a slice of Lemon. This means that the pure water enters the blood at once with a little flavouring of tea. I had a choice of three Teas, namely, Nynghow, Caravan, and Formosa Oolong. I chose the last, and like it very much. It is a little dearer than ordinary Tea, but one uses very little of it, so that it is really more economical. I get mine from Ridgway's, 182, Oxford Street, London. The addition of milk, cream, and sugar to Tea is a call on the digestion. The over-drawn and inferior Tea with plenty of sugar and milk is a cause of dyspepsia, and many would do well to turn back to the Chinese way. A saltspoonful of Tea is enough for each person. The Tea should be drawn not more than a minute or two. If any sugar be desired use a very little.—W.

Cape Broccoli.—I have sent you a sample of the real Cape Broccoli. It is distinct from the Purple Sprouting Broccoli, which never comes to a large head, but in small shoots. The seed may be obtained from Messrs. Watkins and Simpson, Tavistock-street, Covent Garden, who supplied the seed for the enclosed sample to Mr. Lob-jolt, who is one of our largest market gardeners. It is known in Covent Garden simply as Cape Broccoli.—H. A. CHANTER.

[A distinct vegetable, and like the Purple Broccoli. We have too many Cauliflowers of poor flavour, but this has a delicate and good flavour and not a trace of the unpleasant bitterness of many Cauliflowers.—Ed.]

Salad-dressing.—Some object to the use of oil and, with better reason, the ordinary British salad-dressing. They may take courage when we say that a well-chosen salad, winter or summer, is best without any dressing. One gets the true flavour of things and avoids doubtful mixtures.

Carrot French Forcing or Parisian.—At page 72 "J. S." asks for information as to growing this. To get Carrots at the earliest date at the close of the year I made up in a brick pit a bed consisting of manure and Oak leaves. When settled, about 6 inches of good, light, sifted soil were placed over this. On this the seed, with a few early Radishes, was sown, and when the seedlings came up abundance of air in favourable weather was given, with ample moisture. About mid-April I began to pull nice tender roots. At the same time a sowing was made, in the same kind of soil, in the open to keep up a supply through the season.—DORSET.

Celery crisp and good.—Has "W." ever tried Major Clarke's Solid Red or Standard Bearer Celery for use after the New Year? The former is the earlier of the two, not large, and very crisp. Standard Bearer is of medium size, and, like Major Clarke's Red, of superior flavour. Regarding White Celery, Wright's Grove White is a good sort; but I find the red varieties preferable, as white Celery is apt to rot in the early part of the year. This season has not been particularly favourable for Celery, but the two red sorts above mentioned have done well.—KIRK.

OUTDOOR PLANTS.

A LANDSCAPE AT KEW.

The most interesting part of Kew to the student of landscape gardening or planting is away from the flower garden and all that geometrical arrangement about the big houses. The Rhododendron dell at Kew, here figured, is an example of good planting and good gardening, and is a lesson as to what can be done in our climate.

The accompanying illustration directs attention to one of the most popular features of our national Botanic Garden, for in addition to its containing a representative collection of the best of

cluded. Here and there groups of Box and Holly with an occasional Yew were planted about the margins of the woods and on the banks of the valley. In course of time, when Rhododendrons became popular, this valley was considered to be an ideal place for them, and probably plants were placed in position three-quarters of a century ago. Twenty-five years ago, however, the Dell was by no means so beautiful as it is to-day. At that time it had become overgrown, and a considerable number of the finest specimens were the common *R. ponticum*. It was, however, taken in hand, badly-placed trees were cleared, common Rhododendrons were removed to the surrounding woods, good kinds were given more room, and

Pine, which originally stood on the right-hand side of the section shown in the picture, was a severe blow to artists, for they had been included in many pictures, but they became dangerous, and duty to the general public necessitated their removal, their places being now taken by Rhododendrons. From near this point, entrance is gained to the Bamboo garden, another interesting feature.

One of the finest bushes in the picture is *R. Broughtoni*, a vigorous variety with large foliage and very fine heads of rosy-crimson flowers. *R. Nobleanum* is also represented here by a fine bush, and elsewhere in the Dell by two large groups. The uncommon *R. Luscombei*, an early kind with large, fragrant, rose-coloured



The Rhododendron dell in the Royal Gardens, Kew.

the garden Rhododendrons, it has been tastefully designed and planted so that the various specimens are shown in a natural manner without the slightest formality. It serves as an object lesson as to what may be accomplished with a perfectly level field, for what is now a valley was at one time level ground. The change was brought about during the reign of George III., the design being the work of "Capability" Brown, the actual work, together with the connecting paths, being, it is said, the work of the Staffordshire Militia. The ground on either side of the Dell was planted with common timber trees, the most prominent being Beech, Sweet Chestnut, Oak, and Elm, with a few Lebanon Cedars and Weymouth Pines, odd large-growing trees of other sorts being in-

up-to-date kinds were procured, so that in the course of time the present condition was reached.

In addition, the planting has been extended by opening out a side valley at the south end and by planting the ground about the top of the slopes at either end with Rhododendrons. When removing superfluous trees care was taken to retain the Cedars and the various groups of Box and Holly, together with a number of fine specimen trees, and the usefulness of these is well illustrated at the northern end of the valley, where large Hollies and Rhododendrons are charmingly intermingled and where a magnificent specimen of the London Plane tops the bank and spreads its shade over a very wide area. The death of several old examples of Weymouth

flowers, also enters into the picture; other large plants being *R. campanulatum*, *R. purpureum elegans*, *R. Fortunei*, and *R. Cunninghami*. At the south end of the Dell is a group of the fragrant Kew hybrid *R. kewense*, and a few of the many varieties found elsewhere are Pink Pearl, Gomer Waterer, Michael Waterer, Sappho, Queen, Sigismund Rucker, Doncaster, Lord Palmerston, Mrs. John Waterer, Manglesi, Mrs. Holford, Lady Grey Egerton, and catawbiense.

As a rule, Azaleas or deciduous Rhododendrons are confined to the Azalea garden, which stands some 200 yards to the east of the Dell, but a mass of the yellow-flowered *R. flavum* has been included with the idea of introducing a colour which was only present in the pale yellow *R. campy-*

locarpum. A group of Camellias about half way along the valley is an interesting feature, for the plants are thoroughly hardy, and they usually blossom freely. On all sides the plants are surrounded by Grass, except, of course, where they have encroached upon the central gravel path.

Although the Rhododendron Dell contains a fair number of species, it is chiefly planted with garden hybrids and varieties, a large collection of species finding a congenial home in the vicinity of King William's Temple, near the north end of the Temperate House. D.

NOTES AND REPLIES.

The Jalap plant.—I am anxious to grow the Jalap plant, which I have seen described in GARDENING ILLUSTRATED, also in "The English Flower Garden." I understand it is sufficiently hardy to grow out-of-doors in this county, and I, therefore, presume it does not object to lime in the soil. I thought of putting it in, in a well-drained border against a 7 feet wall facing south, where it would get all the sun possible. Would this be a suitable position? When ought the tubers to be planted, and how deep? Will they require protection in the winter? How much head room would the plant require? Would the soil require much enriching before planting the tubers? Do they want any stimulant in the summer, or water?—G. STRICKLAND, Poulton, Fairford, Gloucester.

[You have a good idea what to do to begin with. Plant at the foot of your warmest wall, if near a wall shrub all the better. We have never given any protection. Give all the head room you may. Give good, free soil, no need for much enriching. Judging by the fine way the plant does at Hillbrook Place, a chalky soil suits it, but it is not essential. We got our plants from Barr's nursery at Taplow, and much depends on getting good roots. The plant comes rather late into flower, and wants all the sun that comes to us.—Ed.]

Iris Danfordiæ.—This came to me a good many years ago from the late Herr Max Leichtlin, when he distributed it under the name of *I. Bornmuelleri*. It is now generally recognised that *I. Bornmuelleri* and *I. Danfordiæ* are the same, and that the latter name should have the preference. It is a remarkably neat little Iris of the reticulata group, and the only one which has yellow flowers. It has a marked peculiarity in the small, almost suppressed standards. It is only about 3 inches high, and when in bloom, which is generally in February, is quite bright with its golden-yellow, brown-spotted flowers. Unfortunately, *I. Danfordiæ* does not take very kindly to our climate, and I have lost it several times. I cannot remember retaining it for more than two years in the open, although covered with a hand-light during the flowering period and for some time afterwards. I grew it on sunny rockwork in loam, peat, or leaf-soil and sand, planted about 2 inches deep. It is a beautiful Iris for pots.—S. ARNOTT.

Double-flowered Godetias.—Many who object to double flowers might modify their opinion were they to give the double-flowered forms of *Godetia* a trial. The flowers are by no means heavy; on the contrary, they are almost as elegant in character as those of *Clarkias*. These *Godetias* are perfectly hardy, and, as the spikes of bloom run from 2 feet to 2½ feet in height, they are very useful for cutting. The double rose, double lilac, and double crimson are all worthy of attention, producing quantities of flowers for indoor decoration during the late summer and autumn from sowings made in April.—Kirk.

The Persian Tulip.—In this we have a charming little Tulip species which might be more largely utilised for the front of the border or the rock garden. It is well suited for either position, especially as it is one of the species which does not call for frequent lifting and resting, as is the manner of some. I have had it for years in the same position, increasing in numbers, if slowly, and blooming freely. The flowers, which open out almost flat to the sun, are large for the size of the plant, which is only some 6 inches or 9 inches high. The flowers are bright yellow, marked on the outside with a ruddy bronze.—S. ARNOTT.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM FEBRUARY 17TH.—*Arbutus canariensis*, *Oso Berry* (*Nuttallia cerasiformis*), *Berberis* (in variety), *Daphnes* (in variety), *Periwinkles* (various), *Forsythia suspensa*, *F. spectabilis*, *Andromedas*, *Rhododendron Nobleanum*, *R. praecox*, the *Purple Plum* (*Prunus Pissardi*), *Cydonias* (in various colours), *Edgeworthia chrysantha*, *Yellow Jasmine*, *Coronilla glauca*, the *Cornelian Cherry*, *Ericas* (in great variety), *Ribes sanguineum*, the *Goat Willow* (*Salix caprea*), *Alnus*, *Hazels* (in variety), *Azara microphylla*, *Saxifragas* (in variety), *Snowdrops*, *Violets*, *Primroses*, the *Greek Anemone* (in many shades), *Anemone Hepatica* (in variety), *Anemone nemorosa*, *Narcissus pallidus praecox*, *N. minimus*, *N. Tozzetta*, *N. Grand Monarch*, *Tenby*, *Crocus* (several species and varieties), *Cyclamen Coum*, *Iris unguicularis*, *I. reticulata*, *Snowflakes*, *Lenten Roses* (in many shades), the *Corsican Hellebore*, *Aubrietias*, *Puschkinia scilloides*, the *Bitter Vetch* (*Orobus vernus*), *Iberis* (in variety), *Scilla sibirica*, *S. taurica*, *S. campanulata*, *Muscari botryoides*, *Dog's-tooth Violets*, *Violet Cress*, *Aconites*, the *Scarlet Windflower*, *Corydalis cheilanthifolia*, *Blue-eyed Mary* (*Omphalodes verna*), *Triteleia uniflora*, *Anemone coronaria* (in various colours), *Chionodoxas*, *Hyacinthus azureus*, *Viola gracilis*.

WORK OF THE WEEK.—The forking over of shrubberies is still being pushed on, as where large vacant plots are left for the sowing of annuals it is advisable to get the soil well exposed to the weather before sowing. A small stream which runs through beds of Red Willows—with a few clumps of Japanese Iris studding its banks—has been cleared of all decaying foliage in order that its course may be clearly seen. Groups of the large Water Forget-me-not appear at intervals in summer, and a few seeds of Watercress are scattered along its banks when the winter rush recedes. A small group of the Red Dogwood has been planted, the soil being stiff clay. A group of Pampas Grasses growing near the waterside has been thoroughly cleaned. The foliage was first of all set on fire in order to clear out the accumulations of several years, and afterwards cut over close. This is a very good plan when Grasses of this description have become overcrowded with old foliage, as the burning does not injure them. The cutting and preparing of Willows for tying have been carried on during bad weather. A start has been made with the pricking over of Azalea beds. This requires care, and should only be done where the shrubs are not crowded. Crocuses are very pretty among Azaleas, and increase rapidly on warm soils. Some spare plants of *Epimedium sulphureum* have been planted in a long line as an edging, replacing a Grass verge, which had to be cut by hand, thus saving time. A large group of *Vaccinium pennsylvanicum* which had become very old has been grubbed up and in its place a group of *Andromeda japonica* has been planted, linking up with other established shrubs of the same kind. Having about fifty plants of *Rhododendron maximum*—an American species—it was decided to plant them in one of the home woods. A favourable position has been cleared, and the plants put out 6 feet apart near a ride which will shortly be gay with Daffodils. A further plantation of the *Nootka Cypress* has been made on a poor clayey ridge, and a hedge has been made of two-year-old Quicks. Two large specimen

Pomegranates which have been growing in tubs, but rarely produced flowers, have been planted out in a favourable position at the foot of the fruit wall. E. M.

Sussex.

SOUTHERN COUNTIES.

Peas.—A further sowing of Peas in the open has been made, the rows standing 6 feet apart, which allows of two rows of early Potatoes being planted between them. To ensure a good succession of Peas two varieties of a second early and one of a maincrop sort were selected. The drills are drawn 6 inches in width and about 3 inches in depth, in which the seeds are scattered with a less liberal hand than was the case at the previous sowing. The soil is now in capital condition, there being not the slightest difficulty in obtaining an ample quantity of the finer particles with which to cover the seed.

Turnips.—Winter Turnips are holding out well, but they will be over before the earliest crop raised this season is fit for use. To render the interval as short as possible seed of Early Milan will be sown at once on a south border and protected with Pea-guards, for the twofold purpose of preventing birds destroying the plants as they appear and that, in case of emergency, they may be shielded from severe frost either with mats or litter. Another sowing of the same variety, and a good one of Early Snowball, will take place, weather permitting, in a fortnight.

Short-horn Carrots.—A first sowing outdoors of this will now be made. The plot selected is not only sheltered, but owing to its position enjoys a maximum of sunshine. The seed will be sown in drills, one half of the plot with Inimitable Forcing and the other half with Early Gem.

Potatoes.—Contrary to anticipation, late Potatoes have kept well, and the quality leaves little to be desired. They now require turning over and the shoots rubbed off from those which have started to grow. To prevent them making more growth than can be avoided the store will be kept as cool as possible. The seed tubers of these late varieties will be laid out in another place, which, to prevent premature growth being made, will be thoroughly ventilated.

Strawberry-beds.—The plants will now be relieved of dead leaves and a suitable fertiliser strewn on the soil between the rows and hoed in. Should any gaps in the rows have been over-looked at planting time they will be made good with pot-plants intended for late forcing.

Pinks.—These were replanted last season, the method pursued being the rough-and-ready one of selecting tufts of young growths from the outside of the old plants and planting them with a trowel 9 inches apart each way, in a long border 3 feet to 4 feet wide. Out of the hundreds of tufts so planted scarcely a dozen have failed to grow. The remainder look remarkably well and have had the vacant spaces between them lightly stirred to get rid of weeds and aerate the soil. In the course of a few weeks a light dressing of Carnation manure will be applied and hoed in.

Border Chrysanthemums.—The majority of the plants having made a good start will now be placed in a cold pit and gradually hardened off, with a view to getting them planted out as early as circumstances permit. Those not quite ready, or of which stock is still scarce, will be kept in slight warmth a short time longer.

Tomatoes.—The plants required both for main crop under glass and for growing outdoors will now be raised in gentle

heat. Seven-inch pots, well drained, and filled with light, loamy compost, will be employed for the purpose, and the seed, in order to avoid drawn and weak plants resulting, will be thinly distributed on the surface and lightly covered with fine sandy soil. Well-tried varieties which in the past have yielded satisfactory results are chiefly relied on.

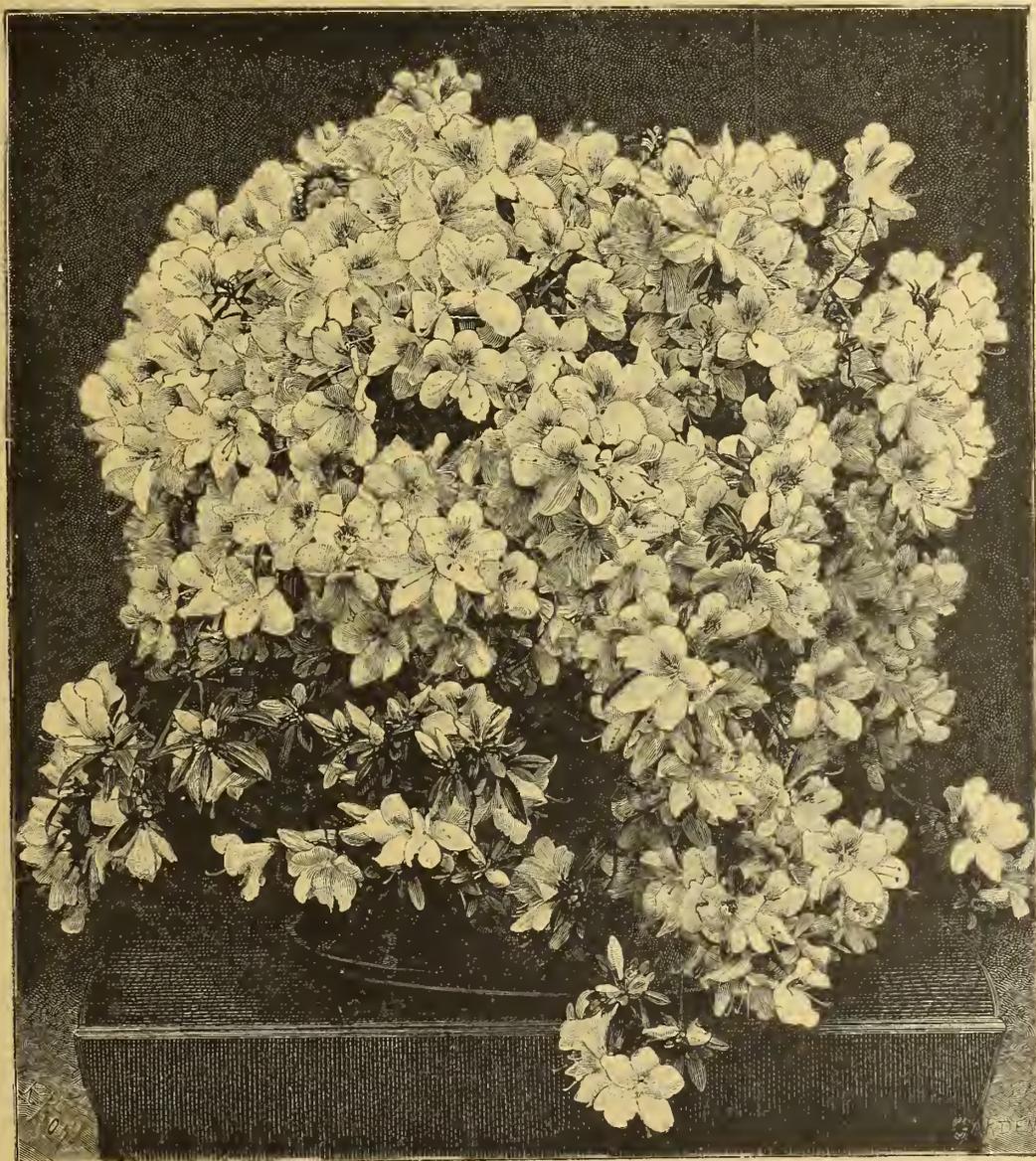
Muscat Grapes.—These will now be started. The Vines have had a longer rest than usual. When the house is closed, the border, after having been dressed with a fertiliser, will be well moistened with tepid water, and a humid atmosphere, with the aid of daily syringings and

comes necessary both by day and night. The starting of this house places more shelves at disposal for the forwarding of Strawberries in the initial stage of forcing, but care has to be taken not to leave them too long in the house in case red-spider should put in an appearance and lead to the foliage of the Vines becoming infested.

Cucumbers.—Plants raised from seed sown early last month should be planted without further delay. With an increase of daylight, combined with a good sharp heat both top and bottom, the plants will make rapid progress once the roots get to work in the compost made up in the form of mounds near to the front wall of the

Market, Every Day, and a good strain of Telegraph, are best.

Early Melons.—These should now be planted out, keeping the balls somewhat higher than the surrounding soil in the pots, so that water will drain away from the stems and so avert risk of canker. Planting needs to be carefully done, and not only should breaking of the balls when knocked out of the pots be avoided, but the holes should be opened large enough to receive them, so that soil can be worked in round them and made firm with a potting-stick. A soaking of tepid water then settles them into place, after which sticks to tie the plants to until they



A naturally-grown Azalea.

damping footpaths and dry surfaces, maintained. The temperature for starting will be 50 degs. at night, 55 degs. by day, with a further rise of 15 degs. with sun-heat before admitting air by the top ventilators. To economise fuel the valves will be shut off early in the morning whenever the day promises to be bright, and closing for the day done sufficiently early to command a temperature of 80 degs. to 85 degs. Artificial heat will then not need to be turned on until the thermometer indicates a near approach to the night temperature, and then only sufficient to keep it at the figures stated. As soon as the buds begin to swell, and are on the point of breaking, a further rise of 5 degs. be-

house. Tepid water, both for watering and syringing, being necessary, a bucket should be placed on the pipes and kept filled for the purpose when there is no other means of obtaining it. Compost for top-dressing should also be kept in readiness and be placed somewhere for a day or two before it is required for use to get the chill off. Strict attention to these simple details makes all the difference in the progress the plants will make and the time they commence bearing. Seed should be sown now to provide plants for growing in frames or hot-beds, or in pits into which a good bed of fermenting materials can be introduced. For general purposes free-fruited varieties, such as Pride of the

reach the trellis are placed one behind each plant. A top heat of 70 degs. to 75 degs. by day is necessary, and from 65 degs. to 70 degs. by night. The bottom-heat should not fall below 80 degs. nor exceed 85 degs. A. W.

MIDLAND COUNTIES.

Early Peaches under glass.—The fruits in the earliest house are now swelling freely, and the temperature at night may be increased to 60 degs. unless the weather is very cold, when 5 degs. less are sufficient. Disbudding should be done gradually—at intervals of a few days—eventually leaving one shoot at the base and one at the point of the fruiting wood, ex-

cept where it is desirable to encourage young wood so as to allow of the subsequent removal of bare and old branches. Care must be taken that the trees do not suffer from want of water, and in the case of old trees carrying good crops plenty of stimulants may be given. The trees must be thoroughly syringed on fine days or red spider will be troublesome. If the trees are attacked with this pest syringe with a solution of Quassia extract and sulphur on two or three successive days. The trees in late houses which it is desirable to retard as long as possible must not be allowed to get dry at the roots or bud-dropping will result. They should also be syringed on fine days. Fumigate the house before the trees come into flower.

Begonia Gloire de Lorraine.—Plants that have been cut back are now making young shoots. These will be taken off when $1\frac{1}{2}$ inches to 2 inches in length and inserted in pots to provide a batch of plants for early flowering. These strike readily if inserted in pots of sandy soil and placed in the propagating-pit or under a hand-light in the stove. If the Begonia mite has attacked the stock plants dip the cuttings in weak Tobacco-water before inserting them, and make every effort to keep the pest under. Cuttings for successional batches will be inserted later as required.

Chrysanthemums which are well rooted in small pots will shortly be transferred to 48's or 32's, according to the strength of the plants. The soil for this potting should not be too rich, good fibrous loam, leaf-soil, and sand being a suitable compost. If the loam be heavy or stiff add plenty of coarse grit. After potting, place the plants in a cold pit or frame and shade lightly for a few days if signs of flagging should appear. Water carefully and air freely by tilting the lights, and when the plants are established in the pots remove the lights during the day upon every favourable opportunity.

Forced shrubs.—As these pass out of flower they are placed in a house with a temperature of about 55 degs. to 60 degs. to make their growth. Many require cutting back, but not so hard as when growing in the open. Pick off all old flowers and seed-vessels, taking care not to injure the young growing shoots. Repot any that require it, taking care not to over-pot. Syringe the plants morning and afternoon, and afford liquid manure-water to those not repotted.

Globe Artichokes are often allowed to remain too long without division and in one spot. It is important to maintain a supply of this vegetable for as long a time as possible, and the cultural details that should be adopted to extend the season may well be considered at this season. It is a good plan to take up a part of the plot (say a third of the total number of plants) each year, divide them carefully into pieces having two strong crowns, and replant these, three in a clump 4 feet apart each way. The ground intended for this crop should, without delay, be prepared by trenching and working in plenty of farmyard manure. Transplanting may be done at the end of the month, choosing a mild, dull day for the purpose, as, if sunny or windy, the roots soon become dry, and harm will result. The work should be done as quickly as possible, and when completed give a good soaking of water to settle the soil about them.

Broad Beans.—The main crop of these will now be sown on an open break, 3 feet from row to row and from 4 inches to 6 inches between the seeds. Favourite varieties are Improved Green Windsor and Mammoth Longpod.

Peas.—As soon as the ground and weather permit, seed will be sown in quantity on ground that has been deeply trenched and well manured. Drills should be drawn out in the early part of the day and the Peas sown in the afternoon, sowing rather more thinly than was the case with the earliest lot. Leave ample room between the rows. At least three different varieties of Peas should be sown at this date. As soon as the early sowings show above ground it is a good plan to dust frequently with soot to ward off slugs, etc., earthing up and staking the plants as soon as they are a few inches high. Keep a sharp outlook for sparrows, which pick off the tops. Peas raised under glass are kept cool, and will be well hardened off before they are planted on a warm border. When planted they will be staked forthwith and protection afforded on the more exposed side of each row.

Herbs.—The herb border should be given attention at this season. Perennial herbs require lifting and transplanting every three or four years. Mint, especially, should be attended to in this respect or the stems will become wiry and the leaves very small. If not transplanted a good top-dressing of rich soil should be afforded without delay. Transplant Tarragon, Thyme, and Pot Marjoram. Sorrel can be either transplanted or raised from seed. If transplanted, all the flower-stems should be broken out as they appear, or small leaves will result. Sage is easily raised from seed or increased from cuttings struck in the autumn. Chervil may be sown now, choosing a warm corner for the first sowing.

Annuals.—Seeds of various kinds of annuals will be sown now. There are many which may be sown out of doors in their flowering quarters as soon as the soil is in a suitable condition, but many are better raised under glass and pricked out into frames. Antirrhinums sown in pans in January have been pricked off into boxes of light soil and are making good progress. Of these the Intermediate varieties are the best. Planted in masses some of the varieties are splendid and make a gorgeous display throughout the summer. In the present month there is much to be done in the way of

Propagating summer-flowering plants, both by seeds and cuttings. *Salvia patens* gives us one of our finest blues and is indispensable. It can be raised from seed sown in heat, or from cuttings obtained from tubers which have been placed in heat.

Begonia tubers which have been resting during the winter may now be placed in heat. Keep them in a moist, warm atmosphere till they have made considerable growth, when they can be planted in a frame.

F. W. GALLOP.

SCOTLAND.

Ferns under glass.—Ferns are now growing freely, and the present is a good time to undertake any needful repotting. *Adiantums* of all kinds, with the possible exception of *A. Farleyense*, appear to relish a little finely-sifted lime-rubbish in the compost, and where this is given less sand may be used. Peat is sometimes recommended for Ferns, but if some well-decayed leaf-mould and a few nodules of charcoal, together with well-rotted fibrous loam are used, peat can quite well be dispensed with. Such a mixture will be found suitable for Ferns generally, but *A. Farleyense* thrives best in pure loam without even the addition of sand. When repotting, the older fronds may, with advantage, be cut cleanly out, a pair of Grape-scissors being very useful for this purpose. In the case of large specimens

in 10-inch pots there is no necessity for the usual annual repotting, but in such cases free supplies of weak soot-water or of well-diluted liquid manure must be given from now onward. In the case of all Ferns, after repotting has been completed, watering ought to be in careful hands, and the plants must be shaded from the direct rays of the sun for a time.

Selaginellas and Lycopodiums, like Ferns, are also showing new growths, and the plants may be broken up and repotted. These useful subjects, I think, are much more valuable when grown in good-sized shallow pans than in pots. The general cultural details applicable to Ferns will be found suitable in the case of *Selaginellas* and *Lycopodiums*.

Bulbs.—Dutch Hyacinths are useful at this time, and by bringing them into heat a few at a time the season is prolonged. Of course, with the advancing spring, these bulbs are, naturally, making progress, and very little artificial heat suffices to bring them into bloom. Other useful bulbs at this time include some of the larger *Narcissi*—*Sir Watkin*, *Golden Spur*, *Monarch*, and *Emperor*, among others. When in bloom if given cool greenhouse treatment the flowers have more substance and the stems are not unduly long and spindly. Apart from their use for greenhouse decoration the blooms of such *Narcissi* are of much service when cut, and when so used nothing harmonises so well with them as their own foliage. The bulbs will be given cooler treatment after flowering, but watering will continue till the foliage ripens off, when they will be planted out in the bulb quarter to recover.

Swainsonia galegifolia.—Some cuttings of this plant having been procured, these were put into the propagating pit. This is a greenhouse plant of some merit, and was formerly met with much more frequently than is now the case. While it succeeds well enough in pots, perhaps it is seen to more advantage when grown up a pillar or rafter, its lilac-blue Pea-shaped blooms being freely produced over an extended period.

Sweet Peas.—A further lot of Sweet Peas has been sown in the course of the week. These consist entirely of the old *grandiflora* varieties, which, after all, are quite as handsome as, and, I think, more sweetly perfumed than, the Spencer types of Sweet Peas. A good quantity of the ever useful white, *Dorothy Eckford*, was included. This is still one of the best, if not quite the best, of the white forms. *Jeannie Gordon*, *Lovely*, *Prima Donna*, *Lady G. Hamilton*, *Helen Pierce*, *Miss Willmott*, *Zarina*, and *Black Knight* are also among the old favourites sown at this time. While the Spencer varieties previously sown will be used in clumps and on wire pillars, the *grandiflora* varieties will be grown in lines, and for cutting they are quite as useful as the *Spencers*, and much less liable to be affected either by weather or by disease.

Hardy flower borders.—Owing to a decided improvement in the weather much progress has been made with the delayed work among the hardy plant borders. Forking and digging, together with a little re-arranging, have been well forwarded during the week, and it is hoped to finish the work in the course of the ensuing week. Among other things planted was a good number of *Lupinus polyphyllus*. These plants were grown in beds during last year from seed. Stray seedlings bloomed, in late autumn, and now they have been planted in good colonies through the borders, and may be expected to give a good account of themselves. An effort was made to thin out the roots of *Physalis Bunyardi*—an ex-

tremely fine Winter Cherry, but a trifle inclined to take possession of more than its allotted space. In the course of the work it was noticed with regret that a fine piece of *Phygelius campensis* has succumbed, owing, most probably, to the prolonged wet. I have always been rather suspicious of the entire hardness of this splendid plant, but as it has endured without injury some rather severe winters it appears that damp is more to be dreaded than frost. A comparatively large area, in which many different kinds of *Narcissi* and of *Tulips* are grown, was also during the week forked lightly over. Previous to forking a good dressing of soot, sufficient to make the surface uniformly black, was sown over the quarter.

Dahlias.—In the course of the week the tubers of Dahlias in store were looked over. Many of them give indications of growth, and in a short time a beginning will be made with propagation. This, however, will only be carried out to a limited extent during the present season, as many of the tubers will be planted out in late April just as they are.

Hardy fruit.—Owing to the comparatively mild winter the buds of Gooseberries are on the move. Where these are permanently wired in no danger is to be anticipated from the ravages of birds, but, on the other hand, owing to their being enclosed, there may be danger from sawfly. In the latter case let the bushes, as soon as they are uniformly green, be liberally dusted with soot. This will prevent the fly depositing its eggs in the tissues of the tender foliage, and if this treatment is renewed a time or two no danger from the caterpillar need be apprehended. Soot, in this case, is quite as good a preventive as is Hellebore powder, and if a little more messy it is decidedly safer. In unenclosed breaks the same practice, if followed, will prevent bud-eating birds doing damage. A damp, but not a wet, morning is best for this purpose, and care must be taken that the under sides of the leaves, as well as the surfaces, are well attended to. In these gardens, among Black Currants, "big-bud" is, fortunately, absent; but where it is known, or suspected, a sharp lookout for deformed buds is advisable. Much can be done by promptly picking off these buds, to keep the disease in check. Strawberry-beds have been lightly hoed over, in order to aerate the somewhat sodden soil, while in the course of the week some little spraying of wall trees, chiefly Pears, was attended to on suitable days.

Herbs.—If there is any necessity for sowing seeds of herbs now is the time to do so. Most of these things are easily obtained from cuttings, but from time to time it is wise to raise a few plants from seed. Seedlings, if not so quickly available, ultimately grow into strong and vigorous plants, and a change of stock is sometimes advisable. Seeds of Thyme, Sage, Marjoram, Basil, Tarragon, and so forth, if sown now will make useful plants for putting out during May.

Under glass.—The weather having been suitable for outside work, that under glass has been, during the week, limited to the ordinary routine of watering, ventilating, and firing. Seeds sown some short time ago are germinating freely, and many of them will require immediate handling. This will be undertaken during the ensuing week, and, meantime, a quantity of suitable materials has been sifted and got under cover in order that there may be no delay when a beginning is made with the pricking off, etc., which are necessary.

W. MCGUFFEOG.

Balmac Gardens, Kirkeudbright.

ROYAL HORTICULTURAL SOCIETY.

FEBRUARY 22ND, 1916.

THE meeting held on this date was without doubt the most attractive of the present season, and, withal, the best attended. Forced bulbs were strongly in evidence, one group entirely of *Tulips* from Southgate, the other of many bulbous plants from Lady Tate, Streatham Common. Another collection of bulbous flowers from Messrs. R. H. Bath, grown in bowls in fibre, was of the educational order, and rarely, if ever, has this phase of gardening been better done. Alpines, well grown and attractively displayed, were frequent. *Primulas* of an excellent strain from Reading evidenced high-class culture, while *Orchids* and other flowers contributed not a little of both interest and variety.

FORCED BULBS.

In this section we were particularly struck with the excellence and variety of those grown in bowls of fibre and staged by Messrs. R. H. Bath, Limited, Wisbech. In all probability no similar exhibit has so fully demonstrated the value and possibilities of this interesting phase of gardening. Eminently suited to town and suburban dwellers, the exhibit also demonstrated that as high a standard of flower excellence was possible by these means as under the most skilful method of soil-cultivated examples. Variety, too, was not lacking. *Daffodils*, *Chionodoxas*, *Crocuses*, *Tulips*, and *Hyacinths* were in plenty and of the best. The rich golden Montresor *Tulip* we have never seen finer, or of a more glowing tone of colour. The handsome Leeds *Daffodil*, Crystal Queen, proved that the choicest sorts lend themselves well to this method of culture. The pretty dwarf white sort, W. P. Milner, was also good. *Hyacinths* *La Grandesse* and Grand Maitre were of exhibition excellence; *Chionodoxa sardensis* could hardly have been finer.

Messrs. R. and G. Cuthbert, Southgate, N., filled a double table with forced *Tulips* in groups, Orange Prince, Montresor, Pottebakker (white), Royal Crown, and the yellow Prince de Ligny being remarked among many sorts. The double table of forced bulbs sent by

Lady Tate, Streatham Common (gardener, Mr. W. Howe), evidenced good culture. Here *Hyacinths*, *Daffodils*, *Tulips*, and *Freesias*, among others, joined forces, and to the accompaniment of *Palms* and *Clivias* presented a very effective whole. With the *Palms* at intervals, and surrounded by the *Clivias*, the finer *Tulips* and *Daffodils* were grouped around, usually a circle of one colour. The white Joost Von Vondel *Tulip* was very fine, and not less so the bicolor *Daffodil* *Vanilla*. The groundwork was chiefly of *Hyacinths* and *Tulips* in groups, the two ends having miniature *Hyacinths* (pink and white) and *Freesias* and single and double *Campernelle Jonquils* respectively.

SHRUBS.

The exhibit of cut imported sprays of *Eucalypti* and other things set up by Messrs. R. F. Felton and Sons, Hanover-square, attracted many visitors, *Eucalyptus resinifera*, by reason of the array of reddish-scarlet buds and creamy filaments, constituting in such an exhibition a rare feature. Several other species were included, one of the more distinct being *E. longifolia*. *Grevillea angustifolia*, jagged of leaf, of silvery whiteness below and dark green above, and with reddish flower racemes, was most effective. All are highly ornamental and valuable in decoration by reason of their endurance.

Messrs. J. Cheal and Sons, Crawley, contributed sprays of *Abies* and *Picea* showing considerable variety.

Messrs. R. and G. Cuthbert, Southgate, N., filled a corner with forced *Lilacs*, of which the dark-flowered *Souvenir de Louis Spath* was one of the best. The pretty, white-flowered *Spiræa confusa* and *Staphylea colchica* were also in plenty. In a mixed group of alpines and shrubs from

Messrs. G. Jackman and Sons, Woking, *Erica carnea* was seen in good colour, the more telling plant, however, being Wood's variety of *Prunus Pissardi*, decidedly pinky in bud, the flowers more pinky than white. Of the typical kind there was also a good display.

Messrs. R. Gill and Sons brought from Falmouth a brilliant lot of early-flowering *Rhododendrons*, forms of *R. arboreum* and others. *Shilsoni* (crimson), Mrs. Henry Shilson (pink), and *Cornubia* (one of the most brilliant) were a few of the best. Yard-long sprays of *Erica lusitanica* (*E. codonodes*) showed the wealth and beauty of the Portuguese Heath at this early period in the more favoured districts.

Messrs. W. Cutbush and Sons, Highgate, N., contributed Tree *Pæonies*, *Prunus* in variety, *Magnolia Soulangeana*, and *Camellia reticulata*.

CARNATIONS.

The finest flowers of these came from Messrs. W. Wells, Limited, Merstham; better coloured examples, indeed, of *Pink Sensation* we have not seen. Informal in character, strong of stem, large of flower, and of ideal colour, a dozen or two of its flowers make an imposing stand. *Aviator* and *Champion* (crimson and brilliant scarlet respectively) are also notables in their way.

Messrs. Allwood Brothers, Haywards Heath, showed Mary Allwood very finely in a large collection of the best. Terrific, a pink-flowered perpetual *Malmaison* sort, a pioneer in the new race calculated presently to displace the older types of *Malmaisons*, is full of promise.

Messrs. Cutbush also showed one of these perpetual *Malmaisons* in the rich scarlet *Sabina*, a novelty of the moment quite equal to the largest *Malmaison* we know. *Lady Jugestre* (exquisite salmon-pink) was very good.

GREENHOUSE PLANTS.

The extensive table of *Primula sinensis* from

Messrs. Sutton and Sons, Reading, was a feature, circular basket groups, to colour of the best, being arranged interspersed by a groundwork of other distinct sorts. One of the more conspicuous was the still indispensable *Duchess*, one of the greatest gains to the fancy section of these flowers. *Prince of Wales* is a new, intensely coloured crimson, with deeper crimson eye. *Terra-cotta*, *Crimson*, *White*, and *Pink* are of the *Giant* set, while *Giant* mixed afforded a good idea of the excellence of this strain.

Messrs. H. B. May and Sons, Limited, Edmonton, staged a fine array of *Cyclamens*, in several shades of colour, representative of the *Giant* strain throughout. *Columnea magnifica* was noted in the group with *Davallia Lorrainei*, *Osmunda palustris undulata*, *Gymnogramma schizophylla superba*, and other ferns.

Mr. Elisha Hicks, Twyford, exhibited the climbing form of *Lady Hillingdon Rose*, together with a batch of the single crimson *Princess Mary*. Obviously both force well. Large-flowered *Cinerarias* in variety, and of excellent strain, came from

Messrs. Camell and Sons, Eynsford, Kent, the blue and crimson shades being very striking.

Messrs. Robert Veitch and Sons, Exeter, staged the new red *Cineraria Matador*,

which gained an Award of Merit. The shade of colour is novel and distinct.

Messrs. Stuart Low and Co., Enfield, contributed Epacris and a variety of Acacias not usually met with to-day.

Messrs. J. Carter and Co., Raynes Park, contributed largely of their new *Primula malacoides* King Albert, which gained an Award of Merit. On the occasion of the last meeting the variety was unwittingly presented for certificate as "Rose Queen." That name having been already appropriated for a *malacoides* *Primula*, no second award could be made, despite the fact that the newcomer was recognised as distinct and a great advance. As King Albert it gained, as it also merited, the Award of Merit by a unanimous vote.

Mr. L. R. Russell, Richmond, filled a table with Indian Azaleas, which afforded a mass of rich and varied colours.

HARDY FLOWERS AND ALPINES.

Messrs. Cutbush and Son, Highgate, N., showed many alpiners, notable being *Saxifraga Stracheyi*, *Adonis amurensis*, fl. pl., *Soldanella alpina*, and *Tulipa Kaufmanniana*, the bulbous *Iris Krelagci* and *Hepaticas* being also good.

Messrs. George Jackman and Sons had good examples of *Iris stylosa* (*unguicularis*), Lenten Roses, many choice *Saxifragas*, and their new multipetala variety of *Cyclamen Coum*.

Messrs. Waterer, Sons, and Crisp, Twyford and Bagshot, showed the choicer *Saxifragas* well on a bank of rockwork. The true Cherry Trees (yellow) was excellent, likewise the inimitable Faldonside. *Oppositifolia* forms, *alba*, *pallida*, *pyrenaica*, major, and the type were strongly in evidence.

Messrs. Tucker and Sons, Oxford, had some of the choicer alpiners. Among *Saxifragas* we noted the pretty primrose-yellow *S. Rocheliana lutea*, delicate of colour. *S. Obristi* is among the largest of pure whites. *Stuarti*, *Griesbachi*, *thesalica*, and others represented the red-flowered set. *S. dalmatica* is a good white, not far—if at all—removed from some of the forms of *S. scardica*.

Messrs. Whitelegge and Page, Chislehurst, showed fine groups of *Saxifraga apiculata*, *S. Elizabethæ*, *S. oppositifolia alba*, and others. We thought *Pulmonaria angustifolia azurea* one of the best bits of blue among early hardy flowers.

Mr. M. Prichard, Christchurch, had a well-flowered specimen plant of *Saxifraga Burseriana Gloria*. *S. B. tridentina* was also good. *Apiculata*, L. G. Godseff, *Paulinæ*, Faldonside, *Elizabethæ* (all yellow-flowered sorts) were in generous and telling groups.

Mr. G. Reuthe, Keston, had the rare and choice *Saxifraga ochroleuca*, a distinct yellow. *S. Boydi* and *S. Faldonside* were full of yellow blossoms, and no two yellows equal them. *S. Borisi* is also yellow and of goodly habit. *S. apiculata alba* was very finely presented. The gems of the group, however, were the inimitable *Shortia uniflora grandiflora* and the equally unique *Crocus aeriis*, a Grecian species whose deep violet-blue petals, with paler interior, defy description.

Messrs. Barr and Sons had pretty colonies of *Narcissus minimus*. Such *Saxifragas* as *Mrs. Leng* (yellow), *S. oppositifolia magnifica*, and *S. Burseriana magnifica* were well shown. *Iris unguicularis* and *I. tingitana* were among unusual things.

Messrs. T. S. Ware, Limited, Feltham, showed well of Lenten Roses, *Morisia*, *Polygala Chamebuxus*, *Saxifraga Faldonside*, *Anemone blanda*, and other early flowers.

ORCHIDS.

Messrs. Charlesworth and Co., Haywards Heath, showed the remarkable *Odontioda Dora*, which gained an Award of Merit. It is a dark, richly-coloured form.

Messrs. J. and A. MacBean, Cooksbridge, showed the lovely white-flowered *Cattleya Cowanæ alba*, together with a variety of *Cymbidiums* and *Odontoglossums*.

Messrs. J. Cypher and Sons, Cheltenham, had many choice *Cypripediums*, notably *Beckmanianum*, *C. Victor Hugo*, *C. Maudie*, and *C. Helen II*. *Dendrobium nobile virginale*, full of pure white blossoms, was very beautiful. *D. Ainsworthi intertextum*, with white and crimson flowers, was also fine.

Messrs. Armstrong and Brown, Tunbridge Wells, showed the new *Lælio-Cattleya Erzerum*, satin rose sepals and purplish crimson lip. *L. C. Myra* (yellow and crimson) and the white *Dendrobium nobile virginale* were also noted.

Messrs. Stuart Low and Co. had well-flowered examples of *Vanda Amesiana* and the white-flowered *Dendrobium Jamesianum*.

FRUIT.

Messrs. Cannell and Sons, Eynsford, showed forty-two varieties of Apples. The central basket of Newton Wonder was perfection, every fruit of model character. Wellington was in the nature of a revelation. Little known—albeit excellent—sorts were here too, and of these we selected Stayman's Winesop, Calville Malingre, a fine late sort, and Rymer. Betty Geeson, Lord Derby, Northern Spy, Alfriston, Nancy Jackson, and the yellow-skinned Atalanta were also good.

A complete list of the plants certificated and medals awarded will be found in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

***Polygonum baldschuanicum* (A. H. Maude).**—This is practically a deciduous climber, which in severe weather may be cut to the ground to break away freely in the spring. In mild winters the twining stems retain their vitality and send forth fresh growths in spring from axillary buds along the stem. The beauty of the plant is enhanced when allowed to grow naturally through the branches of some tall tree, as may be seen in its flowering season in the Royal Gardens, Kew.

***Clematis Flammula*, pruning (A. H. Maude).**—As this blooms on the wood of the current year, the best way is to prune after the flowering season is over—say in November. It may then be cut hard back, and it will in the following spring make vigorous growth. If allowed to remain unpruned for several years it forms a dense mass of tangled shoots that spoil the naturally graceful appearance of the plant. When sending queries in future, please write on one side of the paper only, and let each query be on a separate sheet.

***Odontoglossum Lindleyanum* (Netherton).**—The name of your Orchid is *O. Lindleyanum*, and that it should flower among a batch of *O. luteo-purpureum* is nothing unusual, as the two species grow together in the district around Bogota. If you purchased the plants as newly-imported or unflowered in this country, even a firm of standing could not ascertain whether the whole would be absolutely true to name, but if approached they would in all probability exchange them. In these days *O. Lindleyanum* is of but little value.

Good single *Chrysanthemums* (Memorial).—There are many fine, large-flowered single *Chrysanthemums* well suited for the purpose you name. The following are consistently good and can hardly be regarded as novelties: Four beautiful singles of the largest size are *Sussex Yellow* (a golden-yellow of splendid quality), *Jessica* (a reddish-bronze flower having golden tips to the florets, and a flower of beautifully even form), *Molly Godfrey* (a good variety, the colour of the blooms being deep pink with a white zone round the disc), and *Portia* (a large and handsome rich bronzed flower of splendid quality). *Sandown Radiance* when well grown is one of the most beautiful and striking singles. The colour is rich chestnut-crimson, and no collection can be considered complete without it. *Bertha Fairs*

is somewhat new, but it is such a fine single that it should be included in your selection. The colour is orange flushed rose, and the form is superb. *Isobel Felton* is a very large light golden-yellow sort of high quality; and *Junno*, a 7-inch flower of a rosy-lilac colour with silvery zone. We would advise you to allow your plants to break naturally, retaining buds that develop towards the end of August or early September.

The Winter Sweet (*Chimonanthus fragrans*) not blooming (A. H. Maude).—You say nothing as to whether you prune your plant or not. If you do prune, it is possible that you do this at the wrong season. Seeing that the flowers are borne on the previous year's growth, pruning should always be done after the plant has flowered. Then the shoots that have bloomed should be cut back to the main branches, and when growth again starts shoots that will flower the following season will be plentiful. These, again, should be pruned in the same way as those that preceded them. A few twigs in bloom last a long time. No harm is done by cutting away these twigs, as they would be cut away after the flowers have faded.

TREES AND SHRUBS.

Pruning shrubs (A.).—No general rule can be given for pruning all kinds of shrubs, as the operation should vary according to the habit of growth and flowering of each kind. Some kinds bear flowers on the current season's growth, others upon the shoots made the preceding season, and as the object of pruning is to encourage plentiful bloom, the aim of the pruner should be to cut away all growth that appears to be useless in the formation of new wood which will bear flowers. If the bush is very much crowded with shoots, the worst of these should be cut away, so as to give the bush a better chance of producing vigorous growth and ripening it. You had better defer pruning till next season, and in the meantime observe carefully the varying modes of flowering among shrubs, and by next pruning time you will be able to judge for yourself as to the proper way to prune. The principles of the operation of pruning are those given above.

FRUIT.

Protecting Pear blossom (A. H. Maude).—No; if you can, try and protect the blooms. If the trees are on walls protection is easily given by fixing some Bamboo canes to the coping with the other end of the canes in the ground, and on these stretching two or three thicknesses of fishing-net.

VEGETABLES.

Cabbages clubbing (Maeking).—The best remedy for clubbing is gas-lime. That should be applied to vacant ground in the autumn at the rate of 2 bushels to 3 rods if clubbing is very bad. If it be not, then put 1 bushel on 2 rods of ground. After lying on the ground from four to six weeks, dig the dressing in. On the ground which has been dressed with the gas-lime do not plant any of the Cabbage tribe. Plant Potatoes, Seakale, or Rhubarb, or sow Onions, Parsnips, or Beet. By doing so for a couple of years the club trouble may disappear. Peas or Beans also may be sown with advantage. Of course, you must understand that ground dressed with gas-lime cannot be cropped for three months after the dressing has been applied.

MISCELLANEOUS.

Millipedes (A Twenty Years' Subscriber).—The insects you send are millipedes. They are very destructive to the roots of plants, and can only be destroyed by using one of the soil fumigants of which there are now several on the market. We have seldom seen such poor soil as that you send. What it wants is an addition of some loamy soil and a heavy dressing of cow-manure. In soil such as that you send *Violas* will do no good unless you have it thoroughly well manured. There is no body in it whatever.

Leaf-mould (T. D. Lawson).—The best of all leaf-soil is that from decayed Oak leaves, as these seem to be more of a woody nature than are larger leaves. Gardeners, however, collect all leaves irrespective of the trees which produce them for the making of leaf-soil, and so long as they are thoroughly rotted we can see that no harm can follow the use of whatever leaves can be had. Leaves ought to lie for one year before they are used, and in the meantime they should be freely turned, and, if need be, wetted, in order to hasten decomposition. A little lime mixed with them is also very beneficial.

Acetylene gas refuse (Oak, Prestbury).—From an analysis of the residue from acetylene gas it has been found that the value of this product is entirely due to the lime it contains, other plant foods, as nitrogen, potash, and phosphates, being absent. The lime is present either as slacked lime in fresh samples, or carbonate of lime (mild lime) in samples which have been exposed to the air. It should prove an effective and cheap dressing for all purposes for which lime is recommended, and should be of special value on soils which are sour, or deficient of lime, or inclined to be stiff, and as a top-dressing for pasture.

CATALOGUES RECEIVED.

BLACKMORE AND LANGDON, Twerton Hill, Bath.—List of *Begonias*, *Carnations*, *Delphiniums*, etc.

GARDENING ILLUSTRATED.

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Founded by W. Robinson, Author of "The English Flower Garden."

MARCH 11, 1916.

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NOTES OF THE WEEK.

The Cherry Plum in the house.—I have branches of the purple Cherry Plum and Forsythia in the house picked more than a week ago—before the snow—now a sheet of blossom. The Prunus is really lovely, with its white buds and flowers, and little brown leaves just showing.—E. V. P. D.

Mezereums have been this year, particularly the white, a sheet of blossom, and there are two distinct shades of the mauvy-pink ones, all grown from seed. It is sad they take so many years to grow to a good size, but when they arrive at that they are, indeed, beautiful and sweet beyond words.—E. V. PORTMAN DALTON.

Narcissus minimus.—The earliest flowers of this were noticed fully expanded on February 22nd. This is earlier than usual, although at Gatehouse-of-Fleet, some ten miles distant, *N. minimus* was in bloom on the 2nd of the month. Gatehouse is, however, in an exceptionally favoured position.—W. McG., *Balmac, Kirkcubright*.

—This Daffodil has been in bloom for the past two or three weeks. A small group nestling at the foot of a large Elm, where the morning sunshine plays among the flowers, is very pretty, the rich yellow flowers, each scarcely $\frac{3}{4}$ inch across, borne on slender rush-like stems about 5 inches high. It is naturalised in the Grass, and is annually one of the heralds of spring, preceded only in earliness by *N. pallidus præcox*. Both of these should be grown by everyone fond of choice early flowers.—E. M.

Overdoing wild gardening.—The good of this plan is now admitted, and it is practised with success in many places. The danger is in overdoing. In *Country Life* for February 26th there are two views showing Crocuses as thick as the Grass in which they grow. In this way all relief and grace are lost. One-tenth of the number would give a far more pleasing effect.—W.

The dwarf Almond (*Prunus (Amygdalus) nana*) is all too little grown in gardens where early flowers are enjoyed. A bush 2 feet to 3 feet high wreathed with its pink or white flowers on the leafless branches is a source of great delight in the spring. The fully-developed flowers may suffer from frost, but there are generally others to follow, and the little bush is soon as bright as ever.—S. A.

Retirement of Mr. T. Challis.—Mr. T. Challis, for many years gardener at Wilton, has retired, after a long and very active life, fifty-five years of which he spent under four Earls of Pembroke. He now lives in a charming place on the estate with a good garden attached to it, where we all wish him many happy years. Under Mr. Challis, Wilton was as famed for its good gardening as for the beauty of the views in the home landscape.—W.

Humogen—Summary and conclusions of report at Wisley.—Bacterised peat is a preparation of bog Moss acted upon by certain bacteria, and subsequently used as a culture medium for the development of nitrogen-fixing bacteria. The *exact details of its manufacture are not divulged. On this account most of the experiments possible with it are of an empirical nature.* (The italics are ours.) [This must be described as working in the dark.—Ed.]

Primula nivalis in pots.—A native of the Caucasus, the Snowy Primrose is quite hardy. I have seen it thriving luxuriantly as a border plant in central Aberdeenshire, where the thermometer often falls below zero. On the other hand, I have seen it fail in a comparatively mild district, the cause being the lack of proper drainage. This Primula does well in pots, making a brave show during February or March. Five-inch pots are large enough.—ALBION.

The flowering of the Daffodils.—My first Daffodil to flower this year has been *Narcissus pallidus præcox*, which is sheltered beneath a bush of *Spiraea canescens*. It was first observed fully open on February 13th. A day or two afterwards the first flower of *N. minimus* opened. The Saragossa Daffodil, which is usually the earliest here, is not yet open to-day (February 21st). *N. cyclamineus* is considerably later than usual this year.—DUMFRIES.

Crocus *aerius*.—This rare and very beautiful Grecian species gained an Award of Merit at the Royal Horticultural Society's show on February 22nd by a unanimous vote. The predominant colour-shade is deep violet-blue, lighter on the inner segments of the perianth and whiter at their bases internally. The tube portion is golden, the moderately large stigmata of orange-red tone. Although beautiful and unlike any other species, it is quite a gem among the winter-flowering Croci, attracting not only by reason of

colour combination, but also because of its rounded, well-set-up flowers. For alpine house, or frame, where all its unsullied charm would be revealed, it should prove ideal, also, when a stock has been got together, for a sunny, sheltered spot in the rock garden.—E. H. JENKINS.

Viburnum macrocephalum.—Besides the somewhat tender constitution of this fine shrub there is another reason which your correspondent (page 113) does not mention for its scarcity in British gardens. It is usually supplied as a plant grafted on a stock of *Viburnum Lantana* or some other common species. The stock sends up growth at the expense of the scion, and unless this is detected, the choicer species soon disappears. The same mischief lies in wait for the most beautiful of all the *Viburnums*—*V. Carlesi*.—HERBERT MAXWELL, *Monreith*.

Callicarpa purpurea.—This is a very desirable plant for the stove or warm greenhouse, its bright purple berries, freely borne along the long stems, being very effective during the dull days of winter and lasting a long time. Where a moderately high wall is available it is very suitable for clothing it with. It is easily propagated from cuttings in spring, and will make nice plants in 6-inch pots the first season. It can be grown on for several years, larger pots being used. It must be cut close back in early spring.—ALBION.

Apple Bramley's.—I am sending you specimens of Apple Bramley's, just picked from the heap. It is excellent for baking, not bad to eat, and quite the best Apple we have here, as it never fails to bear a crop on standard trees. The tree is very attractive in form, too, so branching and spreading. Do you know Ellison's Orange, a local seedling found in the Rev. C. Ellison's wonderful fruit garden, and thought much of here? On this soil it is a better doer and cropper than Cox's Orange.—G. E. PORTMAN DALTON, *Fillingham Castle, Lincoln*.

Early flowers.—Mr. Arnott having referred to the date at which *Anemone Hepatica* (page 93) and *Iris reticulata* (page 106) usually flower in the north-west, it may interest him to have my notes upon recent years. *Anemone Hepatica*, January 20, 1906; February 2, 1908; January 2, 1909; January 21, 1910 (single red); January 13, 1911 (white and red); January 26, 1913; January 20 (white), February 4 (red), 1916. *Hepaticas* do not luxuriate with me; that is, they do

not increase fast, and there are no seedlings. The most profuse growth of them which I ever saw is in Lord Stratheden's garden at Hartrigg, on Tweedside. There they cover as much of the ground as they are allowed to do—a beautiful sight. Of *Iris reticulata* I have the following dates of flowering:—February 15, 1908; February 19, 1909; February 20, 1910; February 19, 1912; February 15, 1913; February 28, 1915; February 18, 1916.—HERBERT MAXWELL, *Monreith*.

An early-flowering Almond (*Prunus Amygdalus*, var. *præcox*).—In the South of England, particularly in the suburbs of London, the Almond is one of the most popular of all early-flowering trees, and it can be relied upon to bloom freely every year once it has become well established. The majority of the trees grown, however, are of one kind, all blossoming at the same time, although there are several varieties which differ in the colour of the flowers, their size, and the time they open. Of these varieties the one under notice is specially worthy of attention, for it blossoms several weeks in advance of the type or other varieties. This year it was well in bloom during the first week of February. Occasionally the blooms open in January, but the normal time is late February or early March, and they are often about to fall or quite over by the time the flowers of the type expand. Its usefulness in the garden will be readily appreciated, for any tree or shrub blossoming before mid-March is worthy of encouragement. It is as free-flowering as the common Almond, the colour being the same.—D.

Carnation Pink Sensation.—Messrs. W. Wells, Limited, Merstham, who appear to have excelled in the cultivation of this handsome American variety since it first reached these shores, had the best coloured blooms of it I have seen at the Royal Horticultural meeting on February 22nd. There was nothing to equal them in this respect or for size in the entire exhibition. Of a superior type of excellence in many ways, particularly in regard to the easily-disposed petals, their large, uniform size to near the centre of the bloom—ever a strong point in a high-class flower—and the rosette-like formation of the bloom as a whole, it is a variety which appeals forcibly at a glance. Easily the largest of the American class—4-inch large blossoms are not uncommon—and characterised by broad, flaky, roundly-notched petals, it is distinct from all. Size alone, however, would have but little weight with anyone qualified to judge of the merits of a variety, but when to this, colour, good form, and not a little refinement are wedded, we have some of the things that matter and which go to make a Carnation popular. Did it but possess fragrance it would be ideal. Its strength of stem is remarkable.—E. H. JENKINS.

The Dwarf Russian Almond (*Prunus nana*).—This is a miniature Almond in all its parts, for leaves, flowers, and fruits resemble those of the common Almond in all respects except size. It is found wild in Russia, its native habitat being S. Russia and other parts of S.E. Europe. It forms a bush, suckering freely from the roots. The bright rose flowers are each about 3 inch across, borne from the axillary buds of the previous year's shoots. Several forms have been given varietal names. Of these, *alba* has white flowers, and *georgica* and *Gessleriana* have more richly coloured blooms than the type. *P. nana* should be given a sunny position in good loamy soil. It can be increased by detaching suckers, but if such are not available then the lower branches should be layered, for cuttings are very difficult

to root and the fruits rarely ripen in this country. A position near the front of a shrubbery suits it admirably, or it may be planted in a small group on the margin of the lawn.—D.

The purple Cherry Plum.—This is usually called *Prunus Pissardi*. Like all the world I took to it, but never succeeded with it, owing to the birds, which took out all the flower-buds. This may have been only one cause. I think it loves warmer ground than mine. I planted the ordinary trade form, which is grafted on the wild form. Some years ago I planted some from seed which I got abroad. I heard that the tree came true from seed, and so planted some trees in a shrubbery. I notice now they flower more freely than the others. To me it is one of the most charming things we can have in the house—buds and blossoms—at this season. It is a simple purplish form of the old Cherry Plum, long known in England. The common form has been largely advertised as a fence plant, for which it is useless and not nearly so good as our own Quick.—W.

Cydonia japonica, var. *cardinalis*.—The various forms of the Japanese Quince are amongst the most beautiful of early-blooming shrubs; moreover, they have a very long-flowering season, for they are often in bloom soon after Christmas, and blossoms continue to open until late spring. The varieties show a great range of colour, for there are many shades of red, pink, white, and a combination of pink and white. The most beautiful are those with dark-red flowers, and of these *C. j. cardinalis* is perhaps the best, for it blooms freely, and the flowers are each from 1½ inch to 2 inches across. There is, however, another variety which runs it close for first place, that being *sinica*, which has semi-double flowers of a rich crimson hue. Although these kinds can be grown as bushes in the open ground, they flower much earlier when planted against a south or west wall. During the present year plants have been blossoming freely ever since the New Year, and are still in good condition. The better varieties can be increased by cuttings or by layers, the latter being the better method.—D.

Bulbs among border Carnations.—Where Carnations are allowed to remain undisturbed for several years the Turk's Cap Lily (*L. Martagon*) or Narcissi can be successfully grown with the Carnations. The leafage of the Carnations affords that slight shade to the Lily bulbs they so much appreciate, and has no ill-effect on the Narcissi. The planting of both layers and bulbs may be done in early autumn or spring—the former for preference. If, when the Carnation plants are worn out, the bulbs should be still doing well, leave them where they are and replant the site with *Violas* or dwarf annuals. If preferred, the bulbs can be lifted and replanted where the fresh Carnation bed is to be. From the second year it will be found advantageous to both bulbs and Carnations to give a slight top-dressing of old sifted manure and leaf-mould, or burnt refuse and decayed manure. A somewhat similar practice was followed by the late Dean Hole. The Dean's plan was to plant Carnations and Narcissi in alternate rows, so that when the latter were over they were soon followed by a display of Carnations. The system advocated in this note is to plant a Carnation bed or group in the usual way and then plant some bulbs between the Carnations. This plan, of course, is advocated only from a decorative point of view, and would be of no use to those who grow for exhibition.—C. TURNER.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

SUMMER ANNUALS IN THE FLOWER GARDEN.

If it is a fact that alike in the majority of public and private gardens there is to be little or no attempt at summer bedding, those whose flower gardens are already well stocked with Roses and a representative collection of hardy plants will have reason to congratulate themselves, otherwise the beds will have to remain bare and untenanted unless they are filled with annuals. There is, fortunately, a goodly number of these available, but if one has to rely on them almost entirely for the summer display it is necessary to make a careful selection alike of the most enduring, the most suitable respectively for large and small beds, variety of colour, different shades in the particular colours, and other matters. There are some annuals possibly more brilliant than anything else one can plant, but which, unfortunately, are only short lived, like some of the *Viscarias*, as *cardinalis* and *fulgens*. The best and most enduring annuals for small beds in different colours would be *Linum grandiflorum* (scarlet), *Marigold Legion of Honour* (chocolate and yellow), the latter shade predominating, *Nemesia Blue Gem*, and *Petunia Rosy Morn*; or if a dwarfier rose was required a *Tufted Pansy* of the shade and habit of *William Niel*. The flat appearance of such beds can be relieved by one or more plants, as may be required, of *Grevillea robusta* or *Eucalyptus cordata*, and a very charming effect is produced with the light, graceful foliage of the taller things. About a dozen of each of the dot plants will be sufficient for quite a considerable area, and the little extra trouble in raising and growing them on will receive compensation in the general effect produced. In taller flowers the scarlet-purple and rose shades will probably be best represented by *Antirrhinum*, *Clarkias*, and *Pentstemons*, and of the three I prefer the last named, for they combine rich colour with endurance and a light, graceful appearance. When treated as annuals it is advisable, if distinct colours are required, to sow seed of a good strain. Not much trouble or labour is required to keep over in a cold frame sufficient to plant two, or more, beds. Representatives of the colours above-named to guide in the selection of seedlings are *Southgate Gem*, *Paul Cambon*, and *Louis Grandeau*. If the planter is content with beds of mixed colours the seed can be sown in February.

Yellow, or rather its many shades, from deep orange to primrose, might be used for one or more large beds, and is easily obtained. A pleasing arrangement is to mark out a few irregular groups and put in a few seeds of the *Canary Creeper*. These can be enclosed with twiggy *Pea* boughs not too symmetrical in outline, and the remainder of the bed filled in with dwarf *Nasturtiums*, either in one shade or several, according to taste. Careful selection and seed saving will give in time a splendid variety of rich and soft colours. If a regular, somewhat flat, surface in yellow is not objected to it can be supplied respectively in tall and dwarf annuals by *Calendula Orange King* and *Tagetes pumila Golden Gem*. In brilliant rose and pure white we have *Lavatera splendens* growing well over 30 inches in good soil, and making, either individually or mixed, a pleasing and enduring display; indeed, when one notes the delicate nature of the petals, the endurance of the flowers, either in the open or in a cut

state, is remarkable. Another very enduring annual, noteworthy, perhaps, for individual beauty of flower rather than the striking display made in the beds, is *Salpiglossis*, a new dwarf strain of which is decidedly attractive, producing a great variety of different shades. E. B. S. Hardwick.

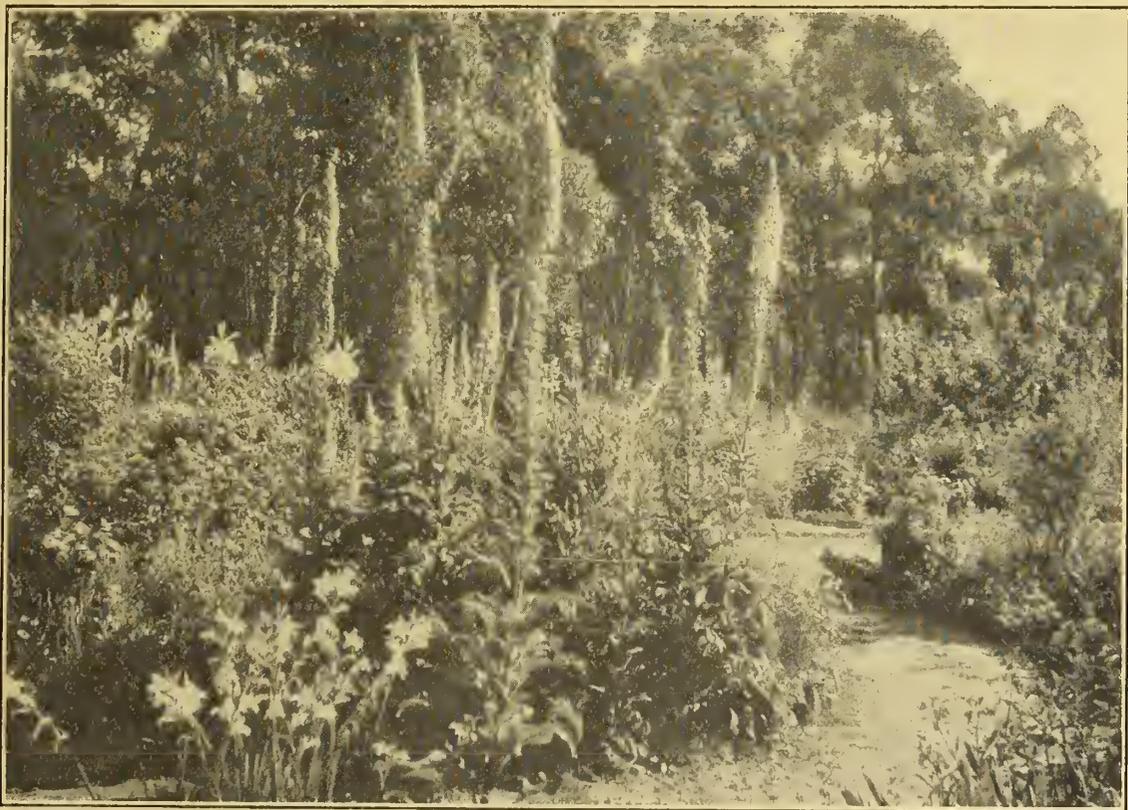
AUSTRALIAN NOTES.

It has taken the people of Australia close on a century to realise the vast decorative possibilities of Australian vegetation. Other folk, then, may well be forgiven their ignorance of the fact that Australia in her flowering trees and shrubs possesses a wealth of beauty calculated to give any garden-lover pause. In Victoria alone, a few miles from the heart of the capital, starry Ti-tree (*Leptospermum scoparium*) blossom, fragrant Wattle, royal purple Sarsaparilla, and creamy Clematis blossom are present in such abundance that the visitor is apt to overlook the

No one who has seen these Wattles in bloom, almost meeting 20 feet above a creek, covering the water below with golden pollen, or overhanging some wide river is ever likely to forget them. The blossom appears to gather up the sunshine of early spring till the trees actually vibrate with colour. So dense is the blossom in good seasons that one may thrust an arm amongst it and, with the shoulder pressing into the fragrant mass, the finger-tips may not have entirely fathomed it. The trees are singularly shapely, and, though somewhat short-lived, make lawn trees of exceptional beauty. In Australia, where Wattle-bark is used largely in the tanneries, big tracts of Wattle-tree are grown solely for utilitarian purposes. Bee-keepers also regard the Wattle family with very friendly eyes, and the farmer is the exception who does not have a group of one kind or another about his homestead. Very few trees will thrive on so many different soils or in

its most forcible appeal. As an individual tree the quaint, almost grotesque lines of its rough trunk are delightful, while its crest, affording a most excellent shade, somewhat suggests the Cedar of Lebanon with its horizontal foliage. The tree realises its greatest glory very shortly after midwinter, when it blossoms with an abandon characteristic of no tree subjected to the climatic wear and tear that the Ti-tree gets in its native habitat. The blossom resembles Hawthorn, though it is considerably larger. The method of propagating Ti-tree is interesting and unusual. When the trees are in full bloom branches are cut off and dried for a week or two. They are then burned and the ashes spread over the soil. The burning liberates last year's seed, and this seed comes up readily in the ashes of this year's foliage.

In praise of the Gum-trees (*Eucalyptus*) known specially as flowering Gum-trees there is a vast amount to be said. The



Foxgloves in an Australian garden, with the bush beyond. From a photograph sent by Mrs. C. Walker, Wombolano, Ringwood, Victoria, Australia.

claims of scores of less important though equally beautiful flowers.

One of the chief characteristics of these Australian trees and shrubs is their extreme adaptability. Australia itself presents an immense diversity of climate, and the fact that the various Gum-trees, Wattles, and Ti-tree have been successfully established from end to end of this Continent indicates the possibility of their thriving equally well in almost any country of the world. The Wattle, practically adopted as the national flower of Australia, usually has first claim on gardeners. The varieties of Wattle seem endless, and though few gardens of any note fail to show the Cootamundra (N.S.W.) Wattle, either singly or in groups, or the magnificent Golden Wattle that comes originally from the mountains, the equally beautiful Silver Wattle and the Black Wattle are rarely cultivated seriously. Both these latter varieties denote watercourses, though both will thrive away from water.

such varied climates, and, given the necessary shelter, they are particularly happy in the southern counties of England.

Another tree with great decorative possibilities is the

TI-TREE (*Leptospermum scoparium*). As a hedge plant it has few rivals. No drought is so intense but what the Ti-tree will retain its greenness through the very worst of it. No weather is too cold, too dry, too wet, or too rough for it. It quickly forms a shelter of the most perfect kind, and in several of the small coastal towns a Ti-tree hedge is grown round public school gardens before the children start the little ornamental and utilitarian plots in connection with which most Australian school-children are taught the elements of horticulture. The pleasure-gardens in exposed places are also frequently given the benefit of a Ti-tree hedge, and no gales are ever strong enough to damage it. It is not, however, as a hedge plant that the Ti-tree makes

trees have large, tough, dark green, oblong leaves, showing, after the fashion of all the *Eucalyptus* family, a great deal of red in the younger stems and leaves. The trees are beautiful from the first, and attain a growth of from 30 feet to 50 feet in a few years. The flowers, each of which is about as large as a Walnut, grow in great clusters. They are of the same fluffly nature as Myrtle blossom, with an infinity of thread-like petals, and very beautiful. They vary greatly in colour—flame-red, rose-red, pink, deep cream, and a greenish-white being among the most familiar kinds. They have found their way into the majority of suburban gardens in Australia, and their gorgeous blossom often gives the only distinction to a quite common-place thoroughfare. Like most Australian trees they are, however, frequently to be found living in perfect harmony with flowers and trees from other lands. HENRIETTA C. WALKER.

Victoria, Australia.

NOTES AND REPLIES.

Antholyza crocosmioides.—I have a very large clump of *Antholyza crocosmioides* which has not been disturbed for many years. There are quantities of flowers, and I think last autumn they were even better than usual. I have been taking up a good many tubers lately for my friends, and am surprised to see what an enormous quantity there are—five or six all joined together. Can you tell me whether these tubers should be pulled to pieces and only the top one replanted?—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

[While we are inclined to regard the chain-like arrangement of tubers as in the nature of reservoirs—not so much in British gardens, perhaps, as in the native country of the plant—it is fairly clear that that most recently formed is the most important. For preference we should retain two, though the commercial grower often sends but the one. Some South African terrestrial Orchids have the same chain-like formation of underground tubers. Receiving a batch a few years ago we planted some intact and divided others, but only the former flowered the following year. Hence, we concluded the removal of the others constituted a check.]

Border Carnations.—With a view to reducing labour as regards watering, etc., anything that can with safety be planted out now will be dealt with. The above-named, which have been well hardened off, will be planted in a long border prepared for them some weeks ago. Carnations need an occasional change of soil and site. The border mentioned is situated in quite another part of the garden. The plants will be set out in groups, each group containing three plants of each particular variety, the groups being 18 inches apart each way. To prevent sparrows despoiling the plants by cropping down the young, tender leaves on the point growths, the border will for a time be netted.—A. W.

The Carpathian Snowflake (*Leucojum vernum carpathicum*).—Is not Mr. Markham (page 82) referring to *L. vernum*, var. *Vagneri*? According to Mr. J. G. Baker, who refers to the *Botanical Magazine*, *Erinosma* (now *Leucojum*) *carpathicum* of Herbert, "is a form with the perianth segments tipped with yellow instead of green." *L. Vagneri* is the tall, robust variety, which generally produces two flowers to a stem, blooms earlier, and has very fine, deep green spots. *L. v. Vagneri* is often sold for *L. v. carpathicum*, which is later than the other. *L. v. carpathicum* is not yet (February 9) in flower, although *L. v. Vagneri* has been in bloom for about a month.—S. ARNOTT.

Aster Thomsoni.—This beautiful *Aster* is frequently lost in the process of propagation. The following advice, given me a number of years ago by a successful amateur, has been so useful that I reproduce it for the benefit of other growers:—"If you want to increase it, take it up just as it begins to shoot in spring, and cut it up. I generally select three or four crowns, start them in moderate warmth, harden off, and then plant out. If you try to divide it as the ordinary Michaelmas Daisies, you will lose it." Still another method is to lift the plants in autumn, divide them, pot the pieces, and keep them in a frame all winter.—S. ARNOTT.

Dahlias.—The tubers have now been placed in heat in order that shoots may be produced for propagation. These, slipped off with a heel, or, better still, taken with a small piece of the parent tuber adhering, if kept close in a warm house soon root. The various sorts of Dahlias required, if packed closely, with a little leaf-mould, in spare window-boxes and placed upon hot-water pipes, will soon furnish plenty of good cuttings. This method, if a little rough-and-ready, will be found to answer admirably, and space, always a consideration in spring, is economised.

Gladioli.—As these are useful over a long period, the first batch has been boxed-off and placed in a greenhouse, followed by a second lot put in about three weeks after. In addition, large quantities are planted in a dormant state, at intervals, in the open, and by this means a succession of spikes is secured almost until the end of the season. Those planted dormant are put fairly well down—as, indeed, are those started in boxes—this helping to steady the foliage until stakes can be given.

Crocus Imperati.—I am glad to see, in GARDENING ILLUSTRATED of February 26th (page 111), that Mr. Cornhill praises this *Crocus*. It is early, the flowers have more substance than those of several of the others, and are thus better able to withstand the rigors of the earliest months. It is pretty even in the bud state.—S. ARNOTT.

GARDEN FOOD.

NOTES AND REPLIES.

The Celery Cabbage.—The *Celery Cabbage* is a new vegetable introduced into this country from China. It supplies a long-felt want—a vegetable which can be eaten either cooked or raw, and is quite equal to boiled Spinach. It is also first-rate as a salad, or for sandwiches or soup. The plant is a very rapid grower, and is fit to be cut in eight weeks from the time of sowing, and would be splendid for *cloche* work or in a cool frame. Salad could be grown all the winter. It grows to about the size of a *Cos Lettuce*, having the same upright growth, and it has a white midrib, which is excellent when boiled. Seed should be sown in early spring and autumn in rows 15 inches apart, and it should be thinned out to 9 inches between each plant. In the hot season the plant is liable to run to seed. In Canada it is used for cold slaw, which is made as follows:—Cut the *Celery Cabbage* in half and lay in cold water, then shave it very fine; boil from half to a pint of vinegar, stir into it the well-beaten yolk of an egg, and then pour it over the *Cabbage*, and serve with cold meat.

[Can any reader tell us anything of this?—Ed.]

Food in the garden.—The most important crops are Potatoes and other roots usually termed tap-rooted. The land for the latter should be thoroughly aerated by exposure, but no fresh manure applied. Early Horn Carrots may be sown in shallow drills in February and again in March or April. The small early Horn Carrots do not require much thinning, as they are fit for use when quite small, and, by drawing the largest for use, the smallest will continue to grow. A small bed of the early Horn Carrot will produce many dishes. Parsnips, if large roots are wanted, may be sown early in March, but if flavour is considered, delay sowing till April, or even the beginning of May. Beet transplants well, so seeds for early roots of the Turnip-rooted variety may be sown in boxes under glass and transplanted to a suitable position outside when well hardened off. From this time onwards Peas and Beans may be sown as required in succession, fortnightly or otherwise. Cabbages may be transplanted at any time during spring and summer so as to have a regular succession. Brussels Sprouts are sown in boxes under glass in February, and outside for later planting in April. Spinach can be sown as a catch crop between rows of Peas or wherever land is vacant. Those who are often brought into contact with amateurs or allotment-holders know that more attention is given now to easily-grown food products than formerly, and the matter is worth consideration.—E. H.

Cape Broccoli.—A reader lately inquired where to get the seed of this, as he liked the flavour of it. At first we thought he referred to the Purple-sprouting Broccoli, which, to the taste of those who know the Kales, is the most delicate of vegetables for the spring. But we have since found that there is another form of Broccoli which makes a head something like a Cauliflower, but rather different in colour, and has the excellent flavour of the Purple Broccoli. Many of the Cauliflowers have a disagreeable after-taste, from which these Broccoli are free. It is curious how a difference in colour often goes with a distinct gain in flavour. Cape Broccoli is the market name for the plant which is grown by market gardeners near London, the seed of which is supplied by Messrs. Watkins and Simpson, Covent Garden.

SAVOURY VEGETABLE COOKERY.

A NICE savoury can often take the place of a pudding, and prove not only economical, but a pleasant change, many people preferring a savoury dish to a sweet. As a rule, a savoury is considered a small "snack," but where strict economy is the rule the savoury can be made one of the substantial dishes of the meal. These dishes are particularly nice for supper. The following is

A DELICIOUS SAVOURY PIE which might be the sole hot dish provided for supper or luncheon. Grease a deep pie-dish with butter or other fat, and cover the bottom with cold boiled Rice which has been nicely flavoured with salt and pepper. Slice a large Tomato and spread thinly on top, then a sprinkling of finely-chopped sweet Herbs and a little finely-minced Onion. Cover this with thin slices of cheese, then a layer of bread-crumbs. Repeat the layers, with a little cayenne pepper, until the dish is full. The top layer should be of Rice. Pour in a small cupful of brown gravy or rich white sauce, add a little dissolved butter on the top, and bake in a hot oven until the top is richly browned. Send to table in the same dish with a serviette folded around.

STEWED CABBAGE is a change from the usual way of serving this vegetable. Take six cupfuls of finely-shredded Cabbage. Only the white heart must be used, the rest can be boiled in the ordinary way. Melt a tablespoonful of butter in a clean saucepan, and fry a thinly-sliced Onion for five minutes, then add the Cabbage and continue frying for ten minutes longer; add a liberal allowance of salt, a pinch of sugar, half a cupful of water, and two tablespoonfuls of white vinegar. Cover closely and cook for half-an-hour. Add a pinch of cayenne pepper, or white pepper if preferred. Roll a dessertspoonful of flour in the same quantity of butter and stir into the mixture. Cook for three minutes longer. Lay a large piece of buttered toast at the bottom of the vegetable dish, pour the Cabbage over, and send to table very hot.

SCALLOPS are always nice as a supper dish and can be made with Jerusalem Artichokes, Parsnips, or Salsafy. Any of these vegetables can be used, with layers of bread-crumbs, pepper and salt, and a little white sauce or stock. The mixture can be baked in scallop-shells or else in a deep pie-dish. The latter is better when the dish is to be the main one at a meal, the shells being used for special occasions. Almost any recipe for scallops may be used. I boil the Jerusalem Artichokes in sufficient water to cover, and a few minutes before they are done I add a cupful of good milk and simmer until the vegetable is quite tender. Then a dessertspoonful of butter is fried in a pan with the same quantity of flour, and the mixture stirred into the liquid of the boiling Artichokes. Have ready a deep pie-dish which has been well greased (butter should be used, as the flavour is nicer). Spread a layer of bread-crumbs at the bottom, sprinkle with salt and pepper, and then add a deep layer of the Artichokes (which must have been chopped coarsely) and sufficient of the sauce to soak the bread-crumbs. Dot a few pieces of butter on top. Repeat the layers of bread-crumbs and Artichoke, finishing with a layer of bread-crumbs. Pour a little dissolved butter on top and bake in a quick oven until nicely browned. Serve very hot. Cheese or chopped sweet herbs may be used to vary this dish, but I think the flavour of the vegetable is nicest when unmixed with anything else.

H. THOBURN-CLARKE.

TREES AND SHRUBS.

OLEARIA AVICENNIFOLIA.

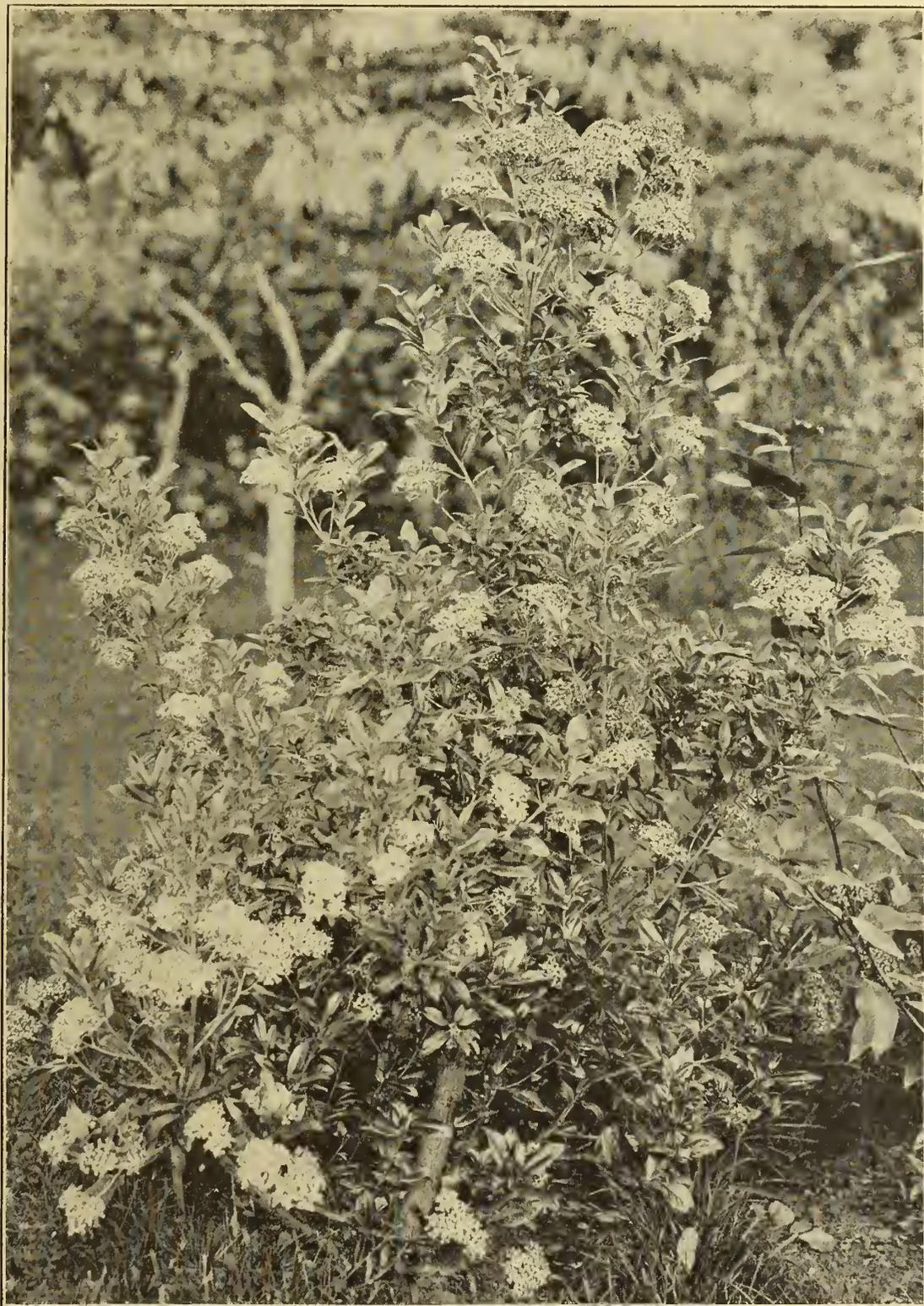
A SMALL branching tree from New Zealand, but apparently hardy in the south of Ireland. Its leaves are glaucous green,

CEANOTHUS GLOIRE DE VERSAILLES.

THE protection of a wall for this handsome shrub is in most cases unnecessary south of the Thames. Although it is undoubtedly very fine when thus grown, there are so many other beautiful plants

margin, and spreading out on the Grass, flower almost as freely as the better-placed growths.

Now is the time to prepare the soil and purchase the plants, which are usually sold in small pots, and are comparatively cheap. On arrival, if root-bound, they



Olearia avicenniifolia at Ashbourne, Glounthaune, Co. Cork.

and its heads of flowers are numerous, white, and last for a long time. The flowers remain upon the tree for months after they have withered and turned to a brown colour. It thrives in the sunniest spot in the garden in poor, open soil, and the wind does not affect its growth.

Cork,

R. H. BEAMISH.

which really require such shelter that it becomes very important to reserve as much wall space as possible for them. For the past ten years I have grown this *Ceanothus* as a group on the lawn, and it is one of the best plants I have used for that purpose. The lower branches droop sufficiently to hide all the soil and turf

should be potted at once and placed, if possible, in a cool frame or house. The site should be carefully chosen. Bear in mind that the height of the plants will probably not exceed 6 feet, and that the colour of the flowers, produced from July to October, is a rich lavender-blue, just the colour which is so valuable to

associate with pink flowers, such as those of Rose Debutante and others. Dig the ground thoroughly, adding anything, such as wood-ashes or leaf-mould, which will help to lighten it in the case of stiff soil, or retain moisture in a light one. Plant out in April 4 feet apart. If the plants were potted when advised the young roots should be showing through the outside of the ball, and in good order to start foraging at once in the new bed. Place a stake to each plant and mulch and water during summer if the soil is light or the weather very dry.

When grown in bush form this *Ceanothus* should be pruned late in February or early in March. If a height of 4 feet is sufficient the previous season's growths may be cut down to within a few inches of their base, but if a taller group is desired the points of the main branches may be shortened only, as in pruning the Red Currant, all side growths being reduced to a few inches. As soon as pruning is finished a coat of manure or other top-dressing may be forked in. Such liberal treatment will encourage vigorous growth and abundant flowers. A shoot 4 feet long will often produce as many as twenty panicles of flowers in summer, and five or six more in autumn.—J. COMBER, *Nymans Gardens, Handcross.*

SOME EARLY-FLOWERING RHODODENDRONS.

ALTHOUGH May and June are usually looked upon as the months for Rhododendrons there are many kinds which bloom at an earlier date, and in mild weather in those gardens where a representative collection is grown one or more sorts may be found in blossom from Christmas until the middle of July. In the south and south-west counties of England and in various parts of Ireland and western Scotland the largest number of early-flowering kinds is to be met with, for there many of the Himalayan species and their hybrids grow luxuriantly, and they are usually at their best before the end of March. In less-favoured localities a goodly number of species, hybrids, and varieties bloom early, though sometimes they are severely injured by frost.

The mild weather of January of the present year was peculiarly favourable for the earliest kinds, and the bright red *R. Nobleum* was in first-rate condition from the middle to the end of the month. Sometimes it does not bloom before the middle of March, and occasionally flowers open in November. Plants 12 feet high and almost as far through are sometimes met with, although it is often smaller. Thirty years ago this variety was grown rather largely in the neighbourhood of Liverpool for forcing. As a contrast to this noble variety we have the small-growing *R. parvifolium*, a straggling bush with thin, wiry branches, small evergreen leaves, and rosy-purple flowers which open in January. It is a native of Manchuria and Korea, and is quite at home in the rock garden. *R. dahuricum* is another January-flowering bush. It is of erect habit, usually deciduous, and bears rosy-purple flowers each upwards of an inch across. The variety *sempervirens* has evergreen leaves. This species is from Siberia, and flowers are often open by Christmas. A closely allied form from N. China, Manchuria, and neighbouring countries is found in *R. mucronulatum*. Of upright habit, it is deciduous, and the flowers, which are pale rosy-purple, are produced freely in January and February. It is more effective than *R. dahuricum* and will probably largely displace that plant as it becomes better known. A few flowers may be found on the dainty little

R. intricatum in February, but it is usually at its best towards the end of March or early April, the point of every shoot at that time bearing a small head of pretty violet-coloured flowers. Of dwarf, compact habit, it will probably not exceed 12 inches in height, but it is of good constitution and is well fitted for planting in groups in the rock garden. Allied species with flowers somewhat similar in colour are *R. fastigiatum* and *R. nigro-punctatum*. A hybrid that has long been popular in gardens is *R. præcox*, an evergreen bush 2 feet to 3 feet high of shapely habit bearing pale rosy-purple flowers in February. It was raised by the late Mr. I. Davis, of Ormskirk, by crossing *R. dahuricum* and *R. ciliatum*. Early Gem is not sufficiently distinct to warrant its being kept separate from *R. præcox*, but *R. Rosy Bell* is a charming kind showing a good deal of the blood of *R. ciliatum*, its bell-like flowers being deeply stained with rose. They are at their best in March. Amongst the

HIMALAYAN kinds one of the finest is *R. grande*, growing sometimes 20 feet high. It has very large evergreen leaves with a silvery under-surface and large, dense heads of creamy-white flowers, the clusters sometimes 9 inches long and as far through at the base. *R. Falconeri* is another very fine Himalayan species, whose dark green leaves are thickly covered with brown felty hairs beneath, and its heads of creamy-white flowers are as large as those of *R. grande*. *R. arboreum* is also a very attractive kind. In the best forms the flowers are blood-red, but there are kinds with light red, pink, and white flowers. As a rule, the plants which have a silvery under-surface to the leaves are fine-flowered kinds. Cornish growers have raised many hybrids, some of which bear larger heads of flowers than the type. In some Cornish gardens the specimens are said to rival those of the Himalaya in point of size, for they are between 30 feet and 40 feet in height, with trunks over a foot in diameter. It cannot be grown successfully in the open about London. Another attractive species with blood-red flowers is *R. barbatum*, recognised by the long, stiff hairs on the leaf-stalks. This should be seen in bloom before being purchased, for there are two forms, one with fine, large flowers, and the other with small and very inferior blossoms. It grows and flowers about London. *R. Thomsoni* is hardier than the last-named and sometimes grows and flowers very well in the Midlands. Its rich crimson, tubular flowers are very effective. It blossoms between February and April. A number of very beautiful hybrids has been raised in Cornwall between this and other species. Good ones are *R. Shilsoni* (crimson), *Gill's Triumph* (very bright red), *Beauty of Tremough* (pink), *Glory of Penjerrick* (rich red), and *Gauntletti* (pink). *R. Griffithianum*, with its immense saucer-shaped white flowers each 4 inches to 5 inches across, is very effective in March in many parts of the milder counties, whilst *R. ciliatum*, a free-flowering bush 3 feet or 4 feet high, with white, rose-flushed flowers, is also an effective shrub.

There are other species which bloom before early April and many hybrids and varieties, but those mentioned will serve to direct attention to the value of the family during the early months of the year. D.

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INDOOR PLANTS.

CHRISTMAS ROSES IN POTS.

In your issue of January 29th, in the paragraph "Flowers at Christmas in the greenhouse," you mention Christmas Roses as one of the plants which can be had in flower then. If Christmas Roses are not very difficult to flower in pots, I should be very much obliged if you would let me know what treatment to give them. What size of pots should they be potted up in? What potting soil and what manure should be used, etc.—A. R.

[These plants are not difficult to flower when grown in pots and accorded rational treatment. To lift them at the last moment when the flower-buds are already formed, cram the roots into any convenient-sized pot, and bring them into a heated structure with the sole object of getting the flowers they produce, are wrong in principle and bad in practice. There are many bulbous flowers to be had for greenhouse decoration at Christmas, but they need preparation weeks, sometimes months, in advance, and it is the lack of rational, thoughtful preparation in the case of the Christmas Rose that, in conjunction with subsequent rough treatment—which often includes the return of the plants to their old places in the garden—is one of the chief causes of their undoing. There is no reason why the Christmas Rose should not be more or less permanently grown in pots for greenhouse work if required. During spring and summer the plants could be plunged in the open in a slightly shaded place, and if given attention to watering and feeding they would do fairly well. The qualification is necessary, inasmuch as pot-grown examples would naturally be bereft of soil-depth, and unless the nourishment this contains is not otherwise supplied great success would not result.]

The best time to pot and prepare the plants is during September, at which time healthy bits with three or four good crowns should be potted into 8-inch pots. The soil should consist of good loam with leaf-mould, sand, and a small quantity of well-decayed manure. If at hand a dusting of bone-meal might be added to the whole. Firm potting and perfect drainage are essential. Correctly—i.e., rationally—cultivated, and not forced into flower in strong heat, the plants would be quite good for two years, when they should receive a shift into larger pots. During growth the plants would be benefited by watering with weak liquid manure and soft-water at intervals of a few days. Larger pots, of course, than those named could be employed, but not larger plants than those described. Instead, for pots of 10 inches or 12 inches diameter employ three or five plants of quite medium size. Such as these always transplant best.]

NOTES AND REPLIES.

Hyacinths falling.—Enclosed please find Hyacinths, which were potted on December 6th and covered with ashes up to February 16th. As you will see, there are no roots. I have about 200, all of which are the same as the one enclosed. If you could give me any advice as to what to do I shall be obliged.—C. SPECK.

[There are abundant evidences of mite on the bulb sent, though we believe its condition to be due, in greater measure, to the fungus known as "black smut" (*Sclerotinia bulborum*). The stronger may flower to some extent, though the quality will not be high. If all your bulbs are like the one sent you should forward specimens to those from whom you purchased them. You appear to have planted them very late. You had better, later on, burn the whole lot, also the soil in which they are growing.]

Germination of old seeds.—If seeds are kept dry and cool their period of vitality may be much extended. Never throw

away old seeds till they have been tested, and one way of testing is to place a sample in an earthen vessel like a flower-pot saucer with a little water and place on a hot-water pipe, or, at least, under the influence of heat. Another way is to put some seeds in flower-pots and plunge the pots in a hotbed. I prefer the water-pan on the warm pipe, as one is able to watch the seed swelling from day to day. I think the best way of keeping spare seeds is to let them remain in packets in a close-fitting, airtight tin-box in a cool room. Though I believe new seeds of most things are best, I should never throw away old seeds without testing them in some way. Cucumber, Melon, and Marrow seeds will keep alive a long time. All

light position on shelves suspended under the roof glass. In potting, care is taken to keep the young combs partly elevated above the surface of the soil. A light syringing twice daily serves to promote a speedy formation of roots with a corresponding increase of stout leaf-stalks and firm foliage—A. W.

Sea sand.—During the week a considerable amount of sand was collected upon the beach, not far distant, and carted home. This sand is rather coarse and shelly, but excellent for most purposes. Opinions differ as to the advisability of using sea sand, but for years it has been used here without any symptoms of evil ensuing to plants. It is generally recommended that such sand be washed, but I

WOOD FIRES FOR GARDEN MEN.

In our variable climate shelters in gardens are wanted for various good ends; among others for men's meals and for wet days when work out-of-doors cannot be done. A good, easily-managed wood-fire is, therefore, essential in a country place of any size. It is not unusual to see coal burnt in a grate in such sheds, the coal brought miles from a distant railway station and in places in which there is plenty of wood. I was once in a house in Devonshire where there were hundreds of acres of woodland near, and saw the inhabitants trying to keep warm round a coal fire in a grate ugly with heavy iron bars.

In many gardens and grounds near the



Down fire for country house. In this the hearth of Ruabon brick is raised 10 inches above floor level. The fire-hearth is of cast iron. Fire-back, old Sussex. A simpler, bolder plan should be followed for working shed.

the Cabbage tribe will keep several years. Onions also, and many others. Carrot seeds will grow the second year, but are not reliable after.—E. H.

Seedling Cyclamens.—The young plants raised from seed sown last autumn, and which were subsequently pricked off into pans, are now ready for transferring to 3-inch pots. These will be well drained and a piece or two of flaky loam placed over the crocks. The compost, consisting of one-third good fibrous loam, one-third leaf-mould, one-third peat, with a liberal addition of sand and a small quantity of fine lime-rubble, will be placed in warmth a day or so before potting takes place. Potting will be done in the house in which the plants are growing, and when this is completed the plants will be accorded a

use it just as it comes from the beach, where it is covered by every tide.—KIRK.

Manuring Ferns.—In the article on "Hardy Ferneries," in your issue for January 29th, "A. G." mentions that Ferns object to manure either in a liquid or solid form. I have never found it so in my long experience. I do not say that it is necessary for Ferns planted out, though they certainly benefit by it, but for pot plants and indoor ferneries it is necessary for their welfare. I planted a fernery about twelve years ago, and the Ferns are doing splendidly. The gardener told me he sprinkled a little artificial manure on the soil and watered it in.—G. P. EGGETT.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.

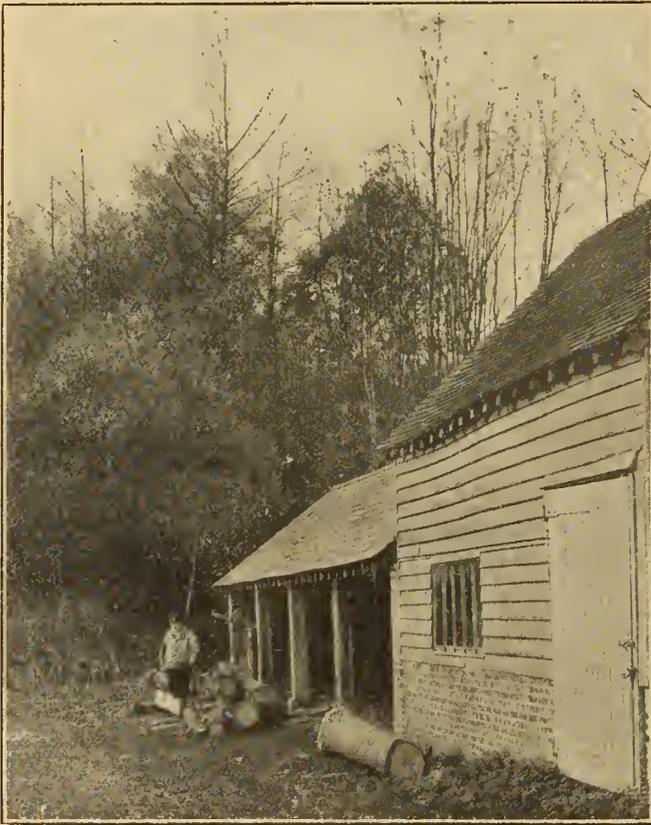
house, owing to the overplanting of rampant evergreens, there is usually much wood that wants clearing, and trees also out of place, like solitary Cedars, that the wind knocks over. These might be a source of wood to feed the fire on the hearth. There should be no grate, but the simple old-fashioned down hearth. Any boy can light such a fire, and a well-made hearth will last for generations—unlike the flimsy kitcheners and grates that often get out of order. Such a fire may often be fed from the refuse wood of the garden and pleasure-ground.

The mixed muddle shrubberies that pretended landscape gardeners plant are a frequent source of fuel as the ill-chosen trees begin to kill each other. The woodlands in a place of any size should give

plenty of "batwood" for burning from the mixed underwood which has to be cleared periodically.

In every place where wood is well used there ought to be a comfortable shed for the woodmen to work in on days when work out-of-doors cannot be done. It should be open in front and have a sound roof. The back may be against a shelter, but the front should be open to the sun and air. Near should be, as in this case, a shed for housing tools, and any empty sheds or barn near might be used for storing wood.

In such a wood-shed many things of use in gardens may be prepared, such as posts and rails for fences, gate-posts, stakes for Peas and climbing Beans. The use of wire on walls is not so picturesque as the old way of training on Oak and Chestnut stakes, and these can be easily made in bad weather by the woodmen.



Open wood shed for wet-day work and tool-house for woodmen. Gravetye. (See page 137.)

The recent gale has thrown over many fine trees, not only common ones, like Elm, Beech, and Fir, but also some more precious ones, like the Cedar of Lebanon. Very often this loss occurs where there is no means of using all the branch wood in the right way—that is, the old hearth fireplace, best raised 8 inches to 10 inches above floor level, a good draught and good level hearth of fire brick, or, as I prefer, a rough cast-iron plate and iron fire back, too. Every country house should have such fire-places.

A thing worth considering is the black filth of the Newcastle coal as it affects delicate flowers near the house. Before I mastered the question of wood fires my Tea Roses round the house were often dotted with the blacks of this coal. The adoption, therefore, of wood fires for hall and sitting-room would be a great gain to the flower garden. W.

FRUIT.

DESSERT APPLES AND PEARS IN PRIVATE GARDENS IN ENGLAND.

Most of us will agree that the choice in dessert Apples of first-rate quality is a very limited one if we fix the standard as high as Ribston or Cox's Orange Pippin. The nurseryman's catalogue teems with varieties, good, bad, and indifferent, but we cannot say that the description given as to quality is often realised by the grower who plants the trees. No doubt locality and climate have something to do with it, but, apart from these influences, are not our catalogues full of worthless sorts of Apples, which should be ruthlessly eliminated, or, at any rate, the warning words "For exhibition only" put in italics against them? Then, again, look at the many recent crosses, especially with Cox's. Evidently size, appearance, and

Wyken Pippin, Lord Burghley, and King's Acre Pippin. I am also told that the following are good and worth a trial, namely, Ashmead's Kernel, Rosemary Russet, Belle de Fontenay, and Reinette de Canada. I might add that I have made a fairly exhaustive test of well-known advertised varieties up to date, and it is surprising how few of them come up to their catalogue description in my garden, or can be described as even good, let alone of first-class quality.

I have only dealt with the question of the later Apples, as these interest me most. Undoubtedly there are a good many early Apples which are delicious if picked from the tree and eaten just at the right time. Most of these, however, if not all of them, entirely lose their quality and flavour if kept any time.

When we come to consider Pears it is a different matter. Thanks to the efforts of Continental growers we really have a good number of first-class varieties for all seasons. Keeping strictly to the later varieties it is not difficult to select six first-class sorts. Moreover, speaking generally, one can place more reliance on the descriptions given in the catalogues. Nevertheless, we still find such a variety as Pitmaston Duchess upheld as a first-class Pear. If ever a fruit wanted "For exhibition only" printed against it in the catalogue this is the one, yet we find the market inundated with it, and the public having to buy it during its season from lack of a better variety. It seems such a pity that this should be so, seeing that there really is a good choice so far as Pears are concerned. F. B.

Springfield, N.

PLANTING DORMANT VINES.

THE present is a good time for planting Vines in a dormant state, either for the purpose of introducing any particular variety to a viney already furnished with rods, the planting of a newly-erected house, or when replanting has become necessary as a result of having had to discard the former occupants. The soil should be carefully washed out from among the roots, which enables their being disentangled the more readily, and also allows of their being laid out, when planting takes place, with greater facility. Holes large enough in length and width to accommodate the roots when spread out regularly and straight must be opened beforehand. The roots, when covered, should not be deeper than 6 inches from the surface. It is a good plan to work in some fine, sandy soil among the fibrous roots, this inducing greater and quicker activity of growth than if covered with the compost of which the border consists. If the canes have not been cut back to the point or buds from where it is desired to train or take up the new rods, the buds as they break must be rubbed off down to that point, as cutting back now would lead to a great loss of sap by bleeding. If the border is inside the house the soil should be settled into place about the roots with a good soaking of water in a tepid state. Watering for the present is best omitted in the case of an outside border, placing a mulch of short litter over the roots instead. G. P. K.

NOTES AND REPLIES.

Raspberries.—Is not "F. K.'s" plan, February 19th, page 84, of making a new bed every year most unusual, not to say unnecessary? Given 2 feet deep of heavy loam, as he advises, there does not seem to be any need for planting annually. In such soil, given proper attention, they ought to do well for from three years to five years—in fact, in many gardens they stand longer, yielding quite good results. This winter I have taken up and replanted in new ground part of a bed that I understand had not been disturbed for eight years or ten years, and which were still

colour count a long way before anything else with the raisers. They consequently select such Apples as Worcester Pearmain, Peasgood's Nonsuch, etc., to cross with Cox's Orange Pippin. How can we expect to have really fine dessert Apples from such crosses? It is abundantly evident that appearance comes a long way first, with flavour and quality nowhere. One of the finest English Apples known, D'Arcy Spice, is not beautiful in appearance, but it has all the other virtues. I recently endeavoured to make out a list of six first-class second season and late dessert Apples, but after getting as far as D'Arcy Spice, Ribston, Cox's, and Claygate Pearmain I could get no further with any certainty. There are, of course, many other varieties which are good, but D'Arcy Spice, Cox's, and the Ribston seem to tower like giants over the lot. For instance, the following I consider good Apples from personal experience:—Margil,

doing fairly well. I have strong, moist soil to deal with, and where such exists a bed of Raspberries, if properly made at the time of planting, can remain for several years. What does "F. K." mean by cutting the canes lower down to obtain late fruits? He has previously referred to Superlative, the ordinary summer variety, and I have never practised any cutting down beyond old canes, supernumary canes, and unripe tips after training has been done.—C. TURNER.

["F. K." refers to the plan which, to our knowledge, he practised for many years of cutting down Superlative in the same way as the autumn-fruited varieties are treated. We have seen Superlative carrying heavy crops when treated in this way.]

Pears for retaining wall.—I have a retaining wall, only very slightly battered (certainly not exceeding 6 inches in 6 feet), soil at the back about 6 feet, faces southwest, sub-soil very sandy. The wall is about 25 yards long, no buttress outside, height 7 feet, but could be built up if necessary. (1) Is it suitable for growing choice Pears as cordons? If so, do I plant close against wall or would it be better to grow against strips of wood nailed to wall? If necessary, trees could then grow quite upright. *Yes; allow stems at base to be distant 6 inches from the wall.* (2) Kindly name good Pears, including early, mid-season, and late? Early: *Beurré Giffard, Beurré de l'Assomption, Fondante d'Automne, Souvenir de Congrès, Mme. Treve, Summer Beurré d'Arenberg, Belle Julie, Autumn Nelis.* Mid-season: *Beurré Hardy, Beurré Superfin, Comte de Lamy, Louise Bonne de Jersey, Marie Louise, Charles Ernst, Doyenné du Comice, Thompson's Fondante de Thirriott.* Late: *Nouvelle Fulvie, Winter Nelis, Josephine de Malines, Le Lectier.* Very late: *Olivier de Serres, Président Barabe, Beurré Pervan.* (3) Are Ribston and Cox's Orange suitable as cordons? *Yes.*—FOUR OAKS.

VEGETABLES.

OUTDOOR TOMATOES.

Those who grow Tomatoes in the open, stand the most likely chance of success if they have a south or east wall or boarded fence at command. It matters not if it is but 4 feet high, as to allow of greater length the plants can be trained obliquely. With such conveniences success in an ordinary season is almost a certainty. The greatest mistake is that of not having the plants large enough at planting time, owing to late sowing. As a rule, the plants cannot be put out with safety until the end of May. At that time they should be at least 1 foot high, sturdy, and growing in 5-inch pots; if 6 inches higher, and proportionately stocky, all the better. Such plants, directly they take hold of the soil, commence to show flower-trusses, and if carefully managed as to watering and the regular removal of all side shoots, confining the plant to one stem, there is not much trouble in obtaining a "set" of fruit. When once this is assured the full height of the plants the point should be removed to concentrate the energy of the plant into the development of the fruit. I would, therefore, emphasise the absolute necessity of preparing the plants in time by sowing at the end of March seed of an approved variety. In reds good varieties are Sunrise, Holmes's Supreme, and Up-to-date. If a small-fruited yellow is required then Golden Nugget may be chosen.—S. H.

Cabbage Little Gem.—Those who have space and can grow the best type of summer Cabbage will find Little Gem an ideal variety. Tender, quickly-grown, small Cabbages come in useful between the Peas,

Beans, Marrows, etc., and, by many, are much liked. I have chosen the above variety for summer use on account of its flavour, which is mild and not readily influenced by the weather. As its name implies, it is very dwarf, making a close, compact growth with few outer leaves and a short stem. When full-grown it is one of the best to remain solid a long time. Owing to its compact growth it does not require so much room as the larger growers, a distance of 18 inches to 2 feet being ample between the rows. I would not advise sowing too early for late summer use, a season of the year I have found it most useful. April or early May sowings will give good material.—C. R.

Notes on vegetable culture.—Amateurs, even those in a small way, are turning their attention more to vegetable culture, and it is important to sow or plant only when the land is in a suitable condition, which means that the soil has been enriched and sweetened by exposure to the atmosphere. The waste materials of house and garden should be collected and made the most of by passing through the fire. Early Potatoes, such as May Queen, Duke of York, Ninetyfold, and others should be placed in boxes, crown upwards, to start. The best and strongest eyes are in the crown, and when a couple of the strongest are started the others may be removed, as by so doing there will be a crop of even-sized tubers. If such prepared sets are planted in March we may reasonably expect a good crop. Cabbages may be set out and the plants already in growth may have a little earth drawn up to their stems as a support. Onions should be sown early in March, Early Horn Carrots also, and Turnip-rooted Beet, but main crops of most things will be in time enough if sown in April. When Onions are started in February under glass they should be planted out in April and room given to develop. Where glass is available early vegetables and salads are now on the way. In country districts a good deal of vegetable forcing can be done on beds of leaves.—E. H.

Early small Radishes.—We now have some remarkably quick growers, the best in this respect being the small varieties, which are not great favourites for market. Early Rose, a variety with a remarkably small top, is an ideal Radish for first supplies, as it comes so soon to maturity. For years I found it a good plan to sow this on a well-drained, warm border, covering at night with dry Bracken or litter, removing this as the sun reached the quarter next day. Other good small early forms are the White Olive, Forcing Carmine, and Earliest of All. The last only makes three or four small leaves. If large roots are desired there is no lack of excellent varieties, such as French Breakfast and Early Frame, both good. These do well when sown a little later for a succession. No matter what variety is grown it is important to protect, as advised, from frost, taking care to remove the protecting material whenever possible to admit sun and air.—C. F.

Parsnips, hardness of.—Last year I grew some for seed, and not being able to get a portion cut when ripe, some of the best heads dropped their seed. When the crop was cleared, the ground not being wanted, the seeds were left on the surface of the soil. In October I noticed that the seed had germinated, and I resolved to allow the seedlings to remain for another crop. Now, early in February, the plants look well, having grown during the mild weather. I noticed during the frost we had in November that the young seedlings, only just coming up, did not suffer. Wishing to test the hardness of the seed, I sowed a row beside them at the close of January. I intend sowing again in March and May. I shall be interested to see if these self-sown autumn plants run to seed.—WEST SURREY.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM FEBRUARY 24TH.—*Rubus biflorus, Arbutus canariensis, Ericas (in variety), Forsythia suspensa, F. spectabilis, the Purple Plum (Prunus pissardi), the Cornelian Cherry (Cornus mas), Laurastinus (various), Azara microphylla, Daphnes (in variety), Periwinkles, Berberis (in variety), Genista hirsuta, Gorse, Osoberry (Nuttallia cerasiformis), Cydonias (in various colours), Yew, Alnus (various), Hazel (various), Edgeworthia chrysantha, Osmanthus Delavayi, Coronilla glauca, Andromeda (in variety), the Goat Willow (Salix caprea), Crocus (several species and varieties), Dog's-tooth Violets (Erythronium Dens-canis), the Carpathian Snowflake, Arabis (double and single), Aubrietia, Primroses, Violets (in great variety), Galanthus (in variety), Chionodoxa sardensis, C. Lucilia, Scilla sibirica, S. taurica, Polyantheses, Narcissus pallidus praecox, N. maximus, N. minimus, N. Grand Mouarque, N. Tazetta, the Tenby Daffodil, Saxifrage (in variety), the Scarlet Wind-flower (Anemone fulgens), the Greek Wind-flower (A. blanda) (various colours), the white Wood Anemone (A. nemorosa alba), the Poppy Anemone (A. coronaria) (various colours), Aconites, Tritelia uniflora, Lenten Roscs (in various colours), Puschkinia scilloides, Blue-eyed Mary (Omphalodes verna), Iberis, Hepaticas (in various colours), Violet Cross, Hyacinthus azureus, the Algerian Iris (I. unguiculata), the Netted Iris (I. reticulata), Wallflowers, Barrenwort (Epimedium sulphureum), Viola gracilis.*

WORK OF THE WEEK.—A further plantation of *Acer colchicum rubrum* has been made along the banks of an old lane. The site comes well under the eye when seen from the house. A hundred *Larix kurilensis*, having come to hand in a small state, have been planted in rows 18 inches apart in the nursery until they can be safely transferred to the woods. A few plants of *Sedum purpureum* have been added to an existing group which has been naturalised in the Grass. Sweet Peas sown early in February are now growing freely, and have been transferred to cooler quarters. Seeds of *Celastrus scandens*, *Decaisnea Fargesii*, *Holboellia sinensis*, African Lily, *Ipomoea*, etc., have been sown in pans and stood in a warm-house; a slate or piece of glass cut to fit is put over the top of the pans. I prefer slate until the seeds have germinated, as it does away with the daily shading necessary when glass is used, and is equally satisfactory. Cannas and Cardinal *Lobelia* for the flower garden have been overhauled and potted into 5-inch and 6-inch pots, the former placed in heat and the latter in cool-frames. The *Lobelia* were very badly infested with wireworm, which eats away the roots in winter and eventually finds its way to the heart of the young growths. So badly were some of them attacked that whole boxes had to be destroyed, the rest were carefully cleaned over, and will be given a fair amount of lime whenever watered. A batch of Shamrock Pea, struck from cuttings inserted in autumn, has been potted off separately, also a batch of *Verbena*. Monroe's Mallow and *Felicia abyssinica* are all nicely on the move, and will be given cool treatment. Various forms of the Apennine Anemone, the double white Wood Anemone, and the blue and white Italian *Scilla* have been planted in the Grass. *Triteleia uniflora* and its deeper coloured form were planted to form an edging in the Azalea garden. Allium

Moly and Camassias in variety have been put among cut-down groups of Rosemary, while rare Narcissi and other choice subjects have been planted in the nursery. A group of Rosemary has been planted on a steep bank, and a further batch of *Erica mediterranea hybrida* has been put below Azaleas. An overgrown line of *Epimedium sulphureum* has been lifted, split up into medium-sized pieces, and replanted a foot apart as an edging to a young plantation of the Nootka Cypress. E. M.

Sussex.

SOUTHERN COUNTIES.

Calceolarias.—These must now be lifted from the bed in which they were inserted as cuttings last autumn and planted out 4 inches to 5 inches apart each way in a frame. Treated in this way the plants can be lifted with good balls. As soon as the plants begin to make new roots the frame will, whenever circumstances permit, be freely ventilated. To promote a sturdy and bushy growth frequent stopping of the shoots is resorted to.

Pentstemons.—These do best when treated in the same way as Calceolarias, but unless it is possible to get them planted out early they need a trifle more space for development, otherwise they are apt to become drawn. They do not require to be stopped so severely as Calceolarias, but at the same time a certain amount of it is imperative. Coddling is to be deprecated, and the more naturally they are grown the more satisfactory are the after results. Unless a very severe frost is apprehended merely closing the frame at night suffices in the way of protection.

Pansies.—A quantity of Pansies raised from seed sown last autumn will now be pricked off into boxes and given frame treatment for a few weeks; they will be used to take the place of some of the half-hardy annuals generally used for summer effect. The seed was saved from the best and choicest large-flowered varieties.

Herbaceous borders.—As the whereabouts of most of the plants grown in these borders is now visible the soil will be forked over between them and all made tidy for the season. Part of the portion next the lawn being used for such hardy annuals as harmonise with the herbaceous plants will be dug up and prepared accordingly. The surface will be left rough so that it may become weathered and sweetened. Finally rake down and form a good seed-bed for the sowing of the seed early in April.

Sweet Peas.—A long row will now be sown outdoors to supply flowers for cutting after those raised in pots are past their best. The varieties favoured are those of the large frilled type. The seed is thinly distributed in the drills, which at this date are drawn more shallow than will be the case for the next sowing. The pot plants alluded to are now in a cold pit, where they have abundant ventilation on every favourable occasion.

Violets.—Having a surplus of the double varieties, suitable pieces or cuttings will be detached from the plants and dibbled into boxes filled with light, sandy soil. These will be placed in a cold frame and shaded from direct sunlight until new roots are formed, when the frame will be ventilated in accordance with weather conditions until the plants become established and ready for planting out. The object in doing this is not so much to gain time, and have the plants in a forward condition when the time comes round to plant them in frames as to avoid so much labour in watering which is entailed for some considerable time

when the plants are pulled to pieces after they cease flowering and the selected portions planted at once outdoors. Until they form new roots, and get a grip of the soil, they must, if the weather is dry, be kept regularly watered, but if sufficiently rooted in advance, so that each, when lifted, has a ball of soil attached to the roots, much less attention in this direction is then needed. Suitable well-rooted pieces of the single varieties being always available, it is unnecessary to take the same amount of trouble with them.

Frame Carrots.—These should now be thinned to a couple of inches apart in the drills, and when completed a good watering applied with a rosed can will again settle the soil into place about the roots. By closing the frame moderately early on fine days the roots develop the more quickly. The frames must be well aired in the forenoon otherwise top growth alone will result.

Early Cauliflowers.—Frames for the moment not being at liberty into which to prick off the young plants from recently-sown seed, they are instead being dibbled into boxes which will be put into slight warmth for a time, and the plants lightly shaded until the roots get a hold of the compost. They will then be moved into a cooler place and finally planted in a frame. Brussels Sprouts being in the same condition as the former in regard to growth will be similarly dealt with.

Jerusalem Artichokes.—The plot these are to occupy has been given a dressing of manure. Digging and the planting of the tubers will, therefore, now be undertaken at one and the same time. The rows will be 3 feet apart and the tubers 1 foot distant from each other in the rows. On the completion of planting, the plot will have to be securely netted round to keep out rabbits, which otherwise will eat off the young growths as fast as they appear above ground.

Onion sowing.—Directly the soil can be had in a suitable condition the seeds will be sown in shallow drills drawn 1 foot apart. Profiting by the experience gained since the war broke out a still larger area will be devoted to this crop this season. The firming of the soil when closing in the drills with the feet after sowing, suffices on our heavy soil, no rolling being required.

Globe Artichokes.—The protective material, whatever it may consist of, may now be removed and vacancies made good. Where provision for doing so was not made last autumn by potting up some suitable side growths, and placing them in a cold pit, dig round the outside of some of the largest of the stools and detach the best of the young growths with roots attached. Globe Artichokes appreciate a warm position and a deep, rich soil. To keep the soil in a fertile condition a good dressing of well-rotted manure should be dug in between the stools every year.

Hardy fruit.—The loosening of fruit-borders and the pointing between and under fruit-trees, as well as of alleys, have been brought to a conclusion. The tipping of summer-fruiting Raspberries has also been finished and Peach and Nectarine trees protected with three thicknesses of netting. Trees and stocks which are to be grafted should now be cut back to near where the scions are to be worked on, the remaining portions to be cut off when the actual grafting is about to take place. The bloom buds on Pears are very plentiful, but in far too forward a condition for the time of year. The blossoming of fruit trees generally promises to be very profuse.

Shadings.—These must now be repaired and put in working order, as the heat of the sun daily becomes more powerful and shade cannot, therefore, be longer dispensed with. A. W.

MIDLAND COUNTIES.

Amaryllises (*Hippeastrums*) that have finished flowering must be occasionally given some liquid manure to assist in the development of the foliage and the building up of the buds. This must be continued until the leaves begin to turn yellow, when water should be gradually withheld.

Calanthes will soon require repotting, therefore it is advisable to get in a sufficient quantity of good fibrous loam, and place it where it will get just warm, but not too dry.

Liliums in pots, having made an inch or so of growth, have been removed from the plunging-bed and placed in cold frames. When well rooted, batches are introduced to gentle heat as required. By placing a small batch in heat once a fortnight a constant supply is maintained and the flowering season prolonged until autumn. The varieties I use for forcing include *L. longiflorum Formosanum*, *L. longiflorum giganteum*, *L. speciosum rubrum*, *L. speciosum magnificum*, and *L. auratum*. The earliest batch of *L. longiflorum Formosanum* is now in flower.

Salvia azurea grandiflora (syn. *S. Pitcheni*).—There are several *Salvias* which flower during November, December, and January, but the above, I think, is the most beautiful of all, and probably the least grown. This is to be deplored, as its colour—a lovely azure-blue—should ensure it a place in every garden. (It is much preferred here to the scarlet *Salvia splendens*.) This *Salvia* is easily propagated from cuttings inserted in sandy soil and kept in a warm greenhouse temperature. The present is a suitable time to insert the cuttings, as this variety requires a rather longer season of growth than some. As soon as struck, the cuttings should be potted off singly, and in a few days have the points of the shoots pinched out to encourage a bushy growth. When well hardened off these plants may be stood out-of-doors during summer and treated like *Chrysanthemums*.

Violets in frames should be copiously watered in the early morning when it is found that the soil is getting dry, choosing a bright day for doing this. Do not leave decaying matter about the plants, and remove the lights daily during favourable weather, tilting them at night if not frosty. At this season efforts must be directed to maintaining a healthy stock of plants from which to propagate next month. Red-spider will give little trouble if the soil of the beds is kept in a moist condition and the plants occasionally syringed, especially the lower sides of the leaves, doing this with a nozzle syringe in the forenoon of warm days, afterwards leaving off the lights so as to disperse the over-abundant moisture before nightfall.

Evergreen shrubs.—I do not advocate the formal cutting of evergreens with the knife or shears, but it is necessary to look over banks of shrubs and single specimens once a year, cutting back here and there any branches which are inclined to upset the balance of the shrub. Some of the variegated Hollies are apt to produce growths with quite green leaves. These should be removed each year, for if allowed to remain, the green-leaved shoots increase. The present is the best time for this work, as back buds will push freely soon and hide the effects of the knife.

Perennials for growing in shrubberies.

—Some of the stronger-growing Asters, as the *Novi-Belgii* and *Novæ-Angliæ* types, are excellent, as they make good growth and require no attention. They also make useful material for cutting. Other plants that do well in similar positions are *Delphiniums*, *Heleniums*, *Solidagos*, *Polygonums*, *Pæonies*, the best varieties of *Foxgloves*, etc.

Campanula pyramidalis and C. caly-canthema.—Plants raised from seed sown last year are now ready for planting where they are intended to flower. The sites should be well manured and deeply dug. Plant firmly, allowing plenty of space for full development.

Gladioli.—Any corns starting into growth may be grouped in the hardy plant borders, in beds by themselves, or amongst dwarf shrubs. The soil should be well prepared by deep digging and manuring.

Carrots.—As soon as the soil is in a suitable condition, the first bed of Carrots will be sown in the open, choosing a warm border. Much may be done to assist germination by placing litter over the beds at night and during frosty weather. For this sowing *Early Gem* is one of the best.

Cauliflowers.—The lights are removed from autumn-sown Cauliflowers on every favourable morning, and unless the weather is frosty tilted at night, so that by the end of the month they will be quite hardened and ready for planting out in a rich and sheltered part of the garden. Nothing is gained by putting these plants out before the weather is settled. The young plants raised from seed sown six weeks ago have been pricked into a cold frame in good, rich soil, where they will make rapid progress and form a close succession to those raised in the summer. A sowing of *Magnum Bonum* and *Early Snowball* will be made on a sheltered

Victor, Ashleaf, and Duke of York are good first early varieties. The last-named is very prolific and of good flavour in this locality, and may be classed as one of the best earlies. In this locality it is yet too early to plant Potatoes in quantity, but much may be done now to ensure success by laying out the sets thinly, as previously advised. F. W. GALLOR.

SCOTLAND.

Hardy plant borders.—The work among the hardy plant borders was, for the present, completed in the beginning of the week. The advancing season makes these borders, apart altogether from the display of bulbs, very interesting. The various shades of green, already in evidence, contrast well with the purple and red stems of the different *Pæonies*, which are a trifle further advanced than is generally the case so early in the year. One plant, *Artemisia lactiflora*, is exceptionally far on, the foliage at this time being notably earlier than usual. Such plants as require re-labelling will be attended to when the soil is drier; meantime, the necessary labels, of a good size and length, have been got ready.

Rose borders.—Contrary to the usual practice, Rose borders have been lightly dug over after a dressing of manure was given. In a general way the annual stirring up is deferred until after the pruning is completed. On many of the Roses growth is far advanced, *Zephrin Drouhin*, indeed, showing quite a good lot of buds.

Pricking off has claimed some attention during the week, Leeks, Onions, Parsley, Cauliflowers of sorts, Lothian Stocks, and a few of the other earlier-sown seeds having been handled. Until growth is noticeable these things will be kept in a fairly brisk heat; afterwards they will go into cooler quarters.

Beds in spare cold-frames have been prepared in anticipation for the reception of seedlings of the various kinds of Brassicas. These, pricked off into such beds, always make plants of the very best type, and well repay the little time consumed in the pricking off. The beds in the frames were forked up, and an addition to the present soil was made by allowing about 4 inches of finely-sifted and well-decayed vegetable mould to each sash. In such soil plenty of fibrous roots is formed, and the plants lift with excellent balls and go ahead without a check when put out. When time can be spared for this pricking off, the course is always followed, the plants being altogether superior to those raised in the ordinary way.

Seed-sowing is now of almost every-day occurrence. The bulk of *Lobelia* seed has been sown, while a pinch of a good strain of *Begonias*, the same of *Gloxinias*, *Perilla*, *Primulas* of different kinds, *Ageratum*, and such like has been put in. A light, not too rich, soil is preferred for seed sowing, and a good heat is given until germination is assured. Minute seeds like those of *Begonias*, *Gloxinias*, etc., are scattered evenly on the pans, and lightly pressed into the soil, no covering being given. Sheets of obscured glass, or of glass covered with paper, are then placed on the top of the pans, watering being done through a very fine rose.

Potting.—A quantity of *Salvias* has been taken from the propagating-case and put into suitably-sized pots. These are for planting out. Their places were immediately filled up with a fresh batch of cuttings. Similar treatment was given to a number of double *Petunias*. Well-rooted young plants of brightly-coloured *Coleuses* have gone into 3-inch pots. Some pieces



A Rose border.

When the ground has settled let the corns be planted 6 inches deep, and before covering with soil sprinkle them with soot to ward off slugs. When the corns are grown for cutting, it suffices to draw deep drills 9 inches apart in well-prepared soil and plant the corns 6 inches apart. Any that have not started may be planted in two or three weeks' time, and thus form a succession. *M. Lemoine's* hardy hybrids are dwarf and beautiful early-flowering varieties. *G. Childs* is a fine robust race of *Gladioli*, the flowers of great size and substance. *G. Gandavensis* varieties, as regards brilliancy and variety of colour, are unequalled. *G. brechleyensis* is one of the hardiest, and the best for planting in shrubberies.

Carnations will be benefited by a sprinkling of soot or Carnation manure, lightly pricking it in with a fork. A good dressing once or twice in the spring also prevents the sparrows eating the tips of the plants.

border, so that there may be no break in the supply from the time the first heads are cut from the autumn-sown plants until *Walcheren* and *Autumn Giant*, sown a fortnight later, bring the season to a close.

Brussels Sprouts should be sown now for the main crop. This vegetable requires a long period of growth, and those who sow late rarely see such fine buttons as the plant is capable of producing.

Potatoes.—The first planting of early varieties of Potatoes in the open will now be made on a warm border, where protection can be afforded if necessary, as the crop is not out of danger before the middle of May. My soil being rather heavy, a liberal dressing of leaf-soil and wood-ashes is worked into the staple, also a little of the same material sprinkled into the furrows with the sets. The sets should be planted about 6 inches deep, 20 inches from row to row, and 12 inches to 15 inches from plant to plant in the rows. *Sharpe's*

of *Pancretiums* having become rather too crowded, several potfuls were broken up and repotted—three bulbs to a 9-inch pot. In a year or two these will make excellent plants, and, as the repotting was done with as little disturbance to the roots as possible, it is expected that these bulbs will flower as usual in the course of the season.

Statice profusa.—Some cuttings of this most useful greenhouse plant were put in during the week. This, apart from its intrinsic value, lasts well when in bloom; and as it is not, nowadays, so commonly met with as was at one time the case, it invariably attracts attention when in bloom. In my own experience cuttings of *S. profusa* are not so easily managed as the majority of greenhouse plants, being liable to damp off before roots are formed.

Tomatoes.—A full sowing of Tomato-seed was made during the week. The plants are intended for pots, and will be kept moving from the beginning. For this purpose but one variety is used, *Perfection*, which, if now somewhat old, gives a good return, the bunches being large, and the fruits uniform alike in size and in colouring. For pots, nothing is gained by using too many varieties, it being better to rely upon a single sort of proved excellence.

Ivy-cutting.—A beginning has been made with the annual clipping of Ivy upon walls and gables. It is customary to delay this work until March is well advanced, but, under present conditions, when time can be spared at this time, it is advisable to get it done. Even if the young growths get nipped by a late or severe frost, they soon recover. Where neatness is essential the garden shears is used, but in out-of-the-way corners much quicker work can be done by using an ordinary reaping-hook, and if a little care be taken the result is not noticeably inferior to that produced by the shears. Immediately after any given stretch is completed, the clippings are at once removed to the fire-heap, and where these fall into parks occupied by cattle they are swept up in order to prevent accidents.

Plant-houses.—Some further work in the way of cleaning, etc., was done during the week. Vaporising was done in a greenhouse, not because there was any real need, but to prevent any possibility of aphids becoming troublesome upon *Cinerarias* or upon *Arum Lilies*. These plants, at this time, are easily infected, and prevention is better than cure. A trifling outbreak of mealy-bug upon a roof plant of *Mandevilla suaveolens* was promptly dealt with, the only plant in the garden upon which it is known to exist. A close watch is, therefore, kept upon it, and whenever any insects are noticed, a brushful of methylated spirit soon puts an end to them. The display of bloom in plant-houses is satisfactory, and there is plenty of material for cutting. Greenhouse temperature from 55 degs. to 60 degs. at night, stove round about 65 degs., with a slight fall in both cases towards morning or during frosty weather.

Vegetable garden.—It was intended to make a start with the preparation of the soil for sowing and planting in the course of the week. When time would have permitted, however, a spell of stormy and wintry weather—including hail and snow storms—set in, and, as a result, the soil is again in a wretched state. With the lengthening days and the increase of the sun's heat it ought not to be long before some progress can be made, and, in any case, there is no time lost as yet.

W. MCGUFFOG.

Balmac Gardens, Kirkeudbright.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of confusers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Tuberose the second year (Tuberose).—Tuberose cannot be depended upon to flower in a satisfactory manner the second season, our climate not being favourable for the development of flowering bulbs. Yours will, in all probability, throw up plenty of foliage, and perhaps in a few weeks spikes, but, speaking generally, by far the most satisfactory way with Tuberose is to throw them away after flowering and obtain freshly-imported bulbs the next season. They may be bought at a very cheap rate.

Calceolarias in cold frames (A. G.).—As the plants are growing spindly they should be stopped; but this spindly growth must be because the glass lights have been kept too closely over them. It is now time to replant them in the frames, so that the plants may have more space to grow. They should be at least 4 inches asunder. If they are strong, as much as 6 inches may be allowed between each plant, so that they may have ample space to grow into nice bushy specimens by the end of May, when it is time to plant them out in the flower garden.

The Sweet Sultan (C.).—This hardy annual ought to succeed in a light sandy loam made fairly rich. An open and sunny position is best. Possibly your plants have been kept too long in the boxes before they were pricked out, or not kept sufficiently moist afterwards. It is always best to sow some seeds in the open ground, thinning the seedlings out to 4 inches or 5 inches asunder, and some in boxes. Then, if one lot fails, the other you have to fall back on. Treated as a hardy annual, we have always found the Sweet Sultan grow freely enough in any open garden soil.

Chrysanthemum leaves, injury to (G. Taylor).—The Chrysanthemum leaves you send have been attacked by the grubs of the *Marguerite Daisy-fly*, which, as you will observe, bore between the upper and the lower cuticles of the leaves, in which, if you examine them, you will find the grubs. The only way to destroy this insect is to pick off the infested leaves and burn them, or, if the attack has only commenced, to pinch the leaves where the grubs are. Syringing with an insecticide is of no use, as it would not reach the grubs, but if applied in good time it might prevent the flies laying their eggs on the leaves.

Repotting plants (Inquirer).—It is seldom wise to shake every particle of soil from about the roots of a plant, and even then when it is necessary to do so through its unsatisfactory behaviour. We presume you have fairly well-established examples, and if so, pot them out without disturbing the ball of soil more than necessary, just removing a little of the rougher particles. When the plants are entirely shaken out the roots are often much damaged, and thus progress is considerably impeded. Amateurs or beginners frequently come to grief over this matter. A reduction of the old ball of soil does not signify removal of every bit of soil.

Feeding greenhouse plants (Inquirer).—The best all-round nourishing liquid for the usual run of greenhouse pot plants is a weak infusion of either horse or sheep-droppings. It should be the colour of beef-tea and quite clear; if thick, a little lime will help to clear

it. For a change (and it should be remembered that plants, like human and other animals, always enjoy a varied diet), some weak and clear soot-water is very useful now and then, while a weak solution—3-oz. to the gallon—of sulphate of ammonia for flowering plants, and nitrate of soda for fine-foliated ones, is also excellent, as promoting root-action, and enabling the plants to more readily assimilate stronger food. The golden rule in giving liquid-manure is weak and often. Soot-water should be only just coloured—not inky, but almost clear, with a blackish tinge.

SHORT REPLIES.

V. S. Wrigley.—Under the circumstances, the only thing you can do is to net the Peas.—R. N. Ferrall.—Try dusting lime in the centres of the plants. Since you have found the ammonia effective, why not use this. You may use it now, and thus get rid of the slugs before the young growths are too far advanced.—Moor.—What you evidently want to do is to have the ground thoroughly trenched and give it a good dose of lime. Unless you do this you cannot expect to have any success, more especially with such roots as Carrots and Parsnips, which must have a good depth of soil to be of any value.—Inquirer.—Between 37 yards and 38 yards.—M. Grieve.—Regret we know of no other books dealing with the subject than those you have. A second-hand bookseller might have some second-hand books bearing on the subject.—D. W.—Write to the secretary, Mr. T. E. Henwood, 16, Hamilton-road, Reading, Berks.—John Moffat.—You should procure a copy of "Vines and Vine Culture," Barron, 13, Sutton Court-road, Chiswick, London, W., free for 5s. 6d.

NAMES OF PLANTS AND FRUITS.

Names of plants.—Murray T. Foster.—*Tillandsia Lindenii*.—M. L. J.—1, *Freesia refracta alba*; 2, *Primula obconica*; 3, *Iris reticulata*; 4, *Coleus thyrsoides*.—H. E. C.—1, *Andromeda japonica*; 2, *Skimmia japonica*; 3, *Deutzia gracilis*.—J.—1, *Selaginella kraussiana*; 2, *Adiantum concinnum latum*; 3, *Adiantum gracillimum*; 4, *Pteris cretica albolineata*.—Acacia.—1, *Acacia dealbata* (*Mimosa*).—J. W. B.—1, *Spiraea canescens*; 2, *Forsythia suspensa*; 3, *Juniperus sinensis*.—Mrs. C. Boulnois.—Your *Berberis* is evidently *B. japonica*, but it is difficult to say with any certainty from such a poor spray of flowers.

Names of fruits.—A. T.—Apples: 1, *Alfriston*; 2, *French Crab*; 3, *Newton Wonder*; 4, *Lane's Prince Albert*.—W. R. S.—Pears: 1, *Winter Nelis*; 2, *Josephine de Malines*; 3, *Nouvelle Fulvie*; 4, *Nec Plus Meuris*.

CATALOGUES RECEIVED.

B. R. CANT AND SONS, The Old Rose Gardens, Colchester.—*Rose Catalogue and Guide, 1915-1916.*

MRS. GARDNER, Priory House, Stroud, Glos.—*Special Catalogue of Hardy Plants, etc.*

MESSES. WATERER, SONS, AND CRISP, LTD., Twyford, Berks.—*Seeds for Vegetable and Flower Garden, 1916.*

M. CUTHBERTSON AND CO., Rothesay.—*Flower and Vegetable Seeds, etc.*

JAMES COCKER AND SONS, Aberdeen.—*Special Cheap Sale of Nursery Stock, Spring, 1916.*

RANSOMES, SIMS, AND JEFFERIES, LTD., Ipswich.—*Lawn Mowers, 1916.*

R. H. BATH, LTD., The Floral Farms, Wisbech.—*List of Carnations, Begonias, Dahlias, etc.*

THOMPSON AND MORGAN, Ipswich.—*Catalogue of Choice Seeds, 1916.*

Name wanted of Rhododendron.—I wonder if any of your readers can tell me the name of a white hybrid arboreum, with maroon spots, that always flowers in February. I should judge it to be too rigid and upright for a caucasium hybrid. It is quite an old variety, as I remember large plants of it in Cornish gardens more than forty years ago. I thought it was called *gintatum pictum*, but am told I am wrong in this, as this is a later-flowering plant.—LANARTH.

OBITUARY.

MR. W. WELLS.

FREQVENTERS of horticultural shows, and lovers of Chrysanthemums in particular, will regret to hear of the death on February 28th of Mr. W. Wells, of the Chrysanthemum nurseries at Merstham, with which his name has been so long identified. He introduced many Chrysanthemums from America (which he visited some years ago) and Australia, and took the greatest interest in their development. Lately the firm has been turning its attention, with success, to Carnations. Much sympathy is felt for his family in their loss.

GARDENING ILLUSTRATED.

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Founded by W. Robinson, Author of "The English Flower Garden."

MARCH 18, 1916.

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RIGHT TRAINING OF GARDENERS.

A FELLOW of the Royal Horticultural Society writes us as follows:—"In my experience the young men with the best certificates and diplomas are by far the worst gardeners. The system is wrong as applied to gardening. The Rev. Wolley-Dod was always very eloquent upon the subject, and matters have become much worse since his time. He used to say that the only true way of training a gardener was to start him in a good garden as soon as he left school and then the right way of working would become as second Nature, and an intelligent lad who took an interest in his work would learn more from observation than any lecturer could tell him. He would then, with advantage, read gardening books and papers without going in for the pernicious practice of cramming. Three years ago I had a fine example of a lad who brought enough papers to prove he was perfection. I never had a worse. He was everlastingly holding forth about analysis of soils, humic and ulmic acids, shrinkage and cohesion, humus and nitrates, and so forth, but they were only names to him, and he was out of his depth upon the first questioning. He had not the faintest idea of how to mix an ordinary compost for potting, and, as to weeding, he did not know a weed from a good seedling, and rooted up any amount of valuable self-sown seedlings around the parent plants. The only way was to give him pieces of Grass, Groundsel, and Dandelion, and tell him to pull up anything he found to match his patterns.

The colleges cannot teach knowledge of living plants, and the work which is made for purpose of demonstration is not like the routine demanded by Nature. Another mistake is that college lecturing and teaching will suit one district and be absolutely wrong in another. Here, again, is shown that observation is the golden rule. A garden at one end of the parish needs certain treatment, whereas in another at the opposite end success will be achieved by quite different methods, and the best of lectures can never equal the lessons taught by Nature.

One of the best outside gardeners I ever had could neither read nor write. He had started work in the garden at the age of nine and had stayed in the same place until his master's death, when he came to me. It was a treat to see his neat, careful work and his methodical way of setting about it. His knowledge of plants and

their ways used to surprise me. It had all been gained by observation and by always taking a profound interest in his work. He used to make his overtime long after he was 70. His work was all mapped out in his mind, and he was rarely at fault or behindhand in his operations. The disadvantage of not being able to write or read labels was more than compensated for by his unfailing memory of individual plants and their requirements, their position in the borders, and whether they should be propagated by root cuttings or pipings, and so forth.

I am not trying to prove that my man was such a good gardener because he had neither book learning nor college training, but what I do maintain is that a man can be a first-rate gardener without either the one or the other, provided he is interested in his work and has early training in the thing itself—the only training worth a thought. Reading or writing may not harm a man, it is the book teaching coming before the garden apprenticeship that does it." F. L.

NOTES OF THE WEEK.

Tulip Kauffmanniana flowered here in 1915 at the end of March or at the very beginning of April. The bulbs were replanted on December 20th. To-day (February 29th) I find one flower ready to open and several buds nearly as forward. *Antirrhinum Asarina*, in a very exposed position, has a number of buds which will apparently open with a little warmth and sunshine. This seldom flowers here before May.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

Viburnums and grafting.—After reading Sir Herbert Maxwell's note of warning I hurried away to see my *Viburnums*, and there I found them nearly strangled by strong shoots of the *Viburnum* common in our hedgerows, and not therefore wanted in the garden. Nurserymen have much to answer for owing to their purblind ways of destroying valuable flowering shrubs and trees; I mean by unnatural ways of propagating without regard to the future life of the plant.—W.

Kaulfussia amelloides.—Readers who are unacquainted with this delightful little plant should certainly obtain a packet of seed. There are three varieties, a crimson, a white, and a blue, but I think the blue is far the best. Sown as an edging in March or April to a border of

annuals the effect is very pretty, for the blue flowers are very showy; or nice patches may be sown in the rock garden and will give a fine display. The plant only reaches a height of 6 inches, and may also be raised from seed sown in heat in the same manner as half-hardy annuals.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Freesia refracta alba major (syn. *F. Purity*).—Messrs. W. Mauger and Sons, Guernsey, send us two bunches of this handsome *Freesia*, the flowers of which are white with slight traces of lilac on the backs of the petals. In this variety the flowers are larger, the foliage also being longer and narrower than in the well-known *F. refracta alba*, but with the same yellow blotch and purple markings in the throat.

Oenothera Lamarckiana.—This fine, hardy biennial should be more frequently grown. Most readers are acquainted with the annual and the perennial Evening Primroses, but this one, being biennial, is somewhat neglected. The proper place for it is towards the back of a good mixed border, for it is rather a tall plant growing to a height of about 4 feet. Its fine yellow flowers make it a showy addition to the border. Seed may be sown at once in heat and the plants treated in the same way as Stocks and Asters, should flower in the autumn. They will, however, come into their full beauty next year.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Narcissus Brilliancy.—Messrs. R. H. Bath, Limited, Wisbech, exhibited this magnificent incomparabilis variety at both of the February meetings of the Royal Horticultural Society in company with Bath's Flame, which is of the same parentage, the old yellow trumpet sort, M. J. Berkeley, and a poetical variety. It is one of the many good things raised by Mr. Engleheart, and is in every way a great Daffodil, great in stature, in size, colour combination, and withal a good doer. Those who know the older sorts may get an idea of the beauty of this modern giant when I say that the flowers, poised at the summit of 2½ feet long stems, are each upwards of 4 inches across, perianth segments of an enhanced Frank Miles tone of yellow and golden cup of Sir Watkin size bordered by a heavy flounce of intense deep orange. To some extent this last appears to permeate the interior of the crown, and lightly suffusing with the gold, impart to this portion of the flower unusual life and warmth.

The appearing of Brilliancy in such good form in early February—it was in perfect condition on the 8th of that month—stamps it as a good forcing sort. Of the two, Brilliancy is the finer. Both, however, are excellent.—E. H. JENKINS.

Kennedyya monophylla rosea.—I enclose you a spray of a plant which received an Award of Merit from the Royal Horticultural Society on February 22nd under the name of *Kennedyya rosea*, but I am rather doubtful if this is correct, and I am sending a spray to Kew. The plants belong to the Countess of Cranbrook, who has a house near here. She brought them from her place in the south of France, where the plant grows freely out of doors, although it gets cut down in severe winters. She has them growing and flowering freely in a cool greenhouse here. There is also a very pretty purple form, *K. Comptoniana*.—R. C. NORCUTT, *Woodbridge*.

[A graceful twiner. In our cool-houses we do not make enough use of graceful Australian climbing plants as this, the correct name of which, according to the Kew authorities, is *Hardenbergia monophylla ovata*. It also does well at Abbotsbury, Dorchester.—Ed.]

Gaultheria Shallon.—Of the several species of *Gaultheria* this is the most generally useful. A native of Western N. America, it was originally introduced in 1826. It dislikes lime. It does well in loam and peat, preferring a rather light, permanently-moist soil. Mature plants are often about 3 feet high, although under certain conditions that height may be doubled. Branching freely and producing numerous sucker growths, it develops into a dense bush. During late spring and early summer numerous racemes of pinkish-white urn-shaped flowers are borne, these being succeeded by conspicuous blue-black fruits. Seeds are borne freely, but seedlings grow very slowly for a year or two. Another means of increase is division. To effect this, cut the plants well back in spring, divide them up into small sections, and pot each section separately into sandy peat and place in a close and warm frame until growing freely, when they may be planted out. If the sections when divided are planted out-of-doors they do not re-establish very quickly. *G. Shallon*, sometimes called by the common names of *Salal* or *Shallon*, gives good results in semi-shade and also in open places.—D.

Saxifraga dalmatica.—I do not know if there is authority for this as a specific name. It does not occur in Mr. Irving's useful book on Saxifrages, though it is occasionally met with in catalogues. The plant answering thereto is, however, a good one—virtually a *scardica* and not greatly removed—very little indeed—from those in circulation under the name *S. scardica obtusa*, of which there are two or three nearly related forms. That known as *Kestonensis* comes into the same category, but is earlier and therefore occupies a place apart. The subject of this note is white flowered, the parted, ovately-inclined petals, flower clusters, and short peduncles all suggestive of *scardica* relationship, as does also its time of flowering. Happily it blooms at a time—April—when it is welcome, and if there are others near akin of equal flower effect at the moment one never tires of an abundance of such things in due season. It is easily grown in gritty loam.—E. H. JENKINS.

The Winter Aconite poisonous.—At the present time, when round so many old country houses the ground is yellow with *Aconites* and when the plan of open-air

shelters for tuberculous cases is so much advocated, a word of warning may be given. A lady who spent all her days out of doors in a shelter had it placed in a wooded part of the garden carpeted by *Aconites*. During the month, when they were at their best and brightest, all went well, but after the flowers faded and seeds began to form she was taken seriously ill and every symptom of acute *Aconite* poisoning set in, with a fatal result in a few weeks. The doctor and a herbalist who were called in had no doubt it was from being surrounded by these flowers, the poison of which was most acute as the seeding process began, and, of course, this, acting on a delicate and consumptive person, had power it would not, perhaps, have on strong, healthy people. Certainly a wood in this country of arching trees overhead, sparsely clothed with brushwood and shrubs, is a lovely sight in the February sunlight, with its golden carpet. One regrets it should ever be found to be so dangerous.—MRS. PORTMAN DALTON, *Fillingham Castle, Lincoln*.

Pieris japonica.—Of the various species of *Pieris*, this is the best for general effect, for although *P. formosa* is a more imposing shrub when at its best, it is not hardy enough for general outdoor culture, and only gives really satisfactory results in the milder counties. *P. japonica*, however, thrives in many parts of the country and gives excellent results if treated as *Rhododendrons*—that is, grown in soil fairly free from lime, moist, without being water-logged, and sheltered from drying winds. Some people imagine that peat is necessary for the successful growth of this shrub, but such is not the case, although a little peat placed about the roots when planting is an advantage. An aid to success is shallow planting, placing a layer of 2 inches or 3 inches of leaf-mould over the surface of the ground to keep the roots moist and encourage surface-rooting. The white, pitcher-shaped flowers are borne in large, drooping panicles from the points of the shoots during March and April. The pendent inflorescences form a good distinguishing mark between this species and *P. floribunda* in which they are erect. The reddish colouring of the young leaves is another point in favour of this species.—D.

Plants from Holland in war time.—I used to get some hardy plants from Holland, mostly of a simple kind, that thrive best in the cool, peaty soils there, but my man, who has supplied me for many years, says he cannot send now owing to new rules as to registry of plants and fees. I wrote to M. Van Tubergen inquiring as to the question and he writes as follows:—

Up to now the only difficulty put into the way of importing bulbs, etc., from Holland into England is that *Lily of the Valley* and *Spiræas* (*Astilbe*) are strictly forbidden, the former on the ground that a portion of the same comes from Germany, although every Dutch grower himself cultivates these here and does not obtain them from anywhere else. Why *Astilbes* are forbidden is a mystery. These cannot be grown in Germany, but require our low-lying, moist ground to develop properly. Then there is the necessity of having an official declaration that what one sends is actually Dutch produce. No other formalities or regulations have as yet been issued, but in these times no one knows what the next day may bring. Postal packets can be sent as formerly without any difficulty.

FRUIT.

DESSERT CHERRIES FOR SMALL GARDENS.

DESSERT Cherries would certainly be far more satisfactory than poor varieties of Plums and Pears, for they are a favourite fruit, and, given a suitable selection, say in three or four varieties, are available for two months of the year. I do not, of course, imply that they should out the more profitable Plum and Pear in the best varieties, but rather that a few trees provide a nice variety. The great advantage of a few wall-trees over those grown in the open as standards or bushes is that they can be protected easily and cheaply, the blossom from frost and the fruit from birds. The blossom, being delicate, quickly succumbs to spring frost, and there is little chance of getting much ripe unprotected fruit if starlings and blackbirds are numerous. Where it is decided to plant a few trees a selection should be made of those varieties least susceptible to gumming and canker. This is important, especially in times like the present, when, if the natural soil is hardy to the liking of the Cherry, there is not much chance of getting a substitute in the way of expensive loam. Sorts whose growth, as a rule, keeps clean and healthy, arranged in the order of their ripening, are *Early Rivers*, *Governor Wood*, and *Florence*.

After frost, birds, and canker, the chief enemy of the dessert Cherry is black fly, and this has to be dealt with promptly if the foliage is to remain healthy. It curls up as soon as attacked, consequently, an occasional dipping of the shoots in a bowl of *Quassia* extract or some similar compound is much more effectual than syringing. Red spider is sometimes troublesome, and it is as well to give walls and every portion of the trees a thorough washing with the garden engine before the flowers begin to expand. E. B. S.

Hardwick.

OUTDOOR VINES.

Good advice was given a correspondent in a recent number of *GARDENING ILLUSTRATED* as to the various methods to be adopted for improving the condition of an outdoor Vine. It might still further have been improved by the suggestion of the substitution of a white Grape for a black, for whereas the best of the outdoor white Grapes, as *Stillward's Sweetwater*, will give a good return of very fair fruit, it is extremely difficult in the majority of seasons to keep the black generally represented by the variety known as *Black Cluster* free from mildew. I do not quite know why this should be, unless the skin of the black is more susceptible, but the difference is very marked, even in exactly similar soils and situations; indeed, I have noticed the difference when the two were growing practically side by side.

Grafting is not often practised on outdoor Vines, but if your correspondent has a few healthy shoots near the base of his Vine he might try the experiment if a similar number of pieces of the *Sweetwater*, well ripened, with plump, well-developed buds can be procured. There is not much difficulty in getting the graft to come away kindly if care is taken as to the union of bark, the tying, sufficient grafting-wax or clay, and that the Moss bound over this is kept damp. If the situation is exposed and the weather hot and dry it is advisable to hang up a bit of shading material until growth is well on the move. Care should be taken that such growth is firmly secured to the wall to avoid danger of breaking off. If a fair amount of growth is made by the end of the season it should

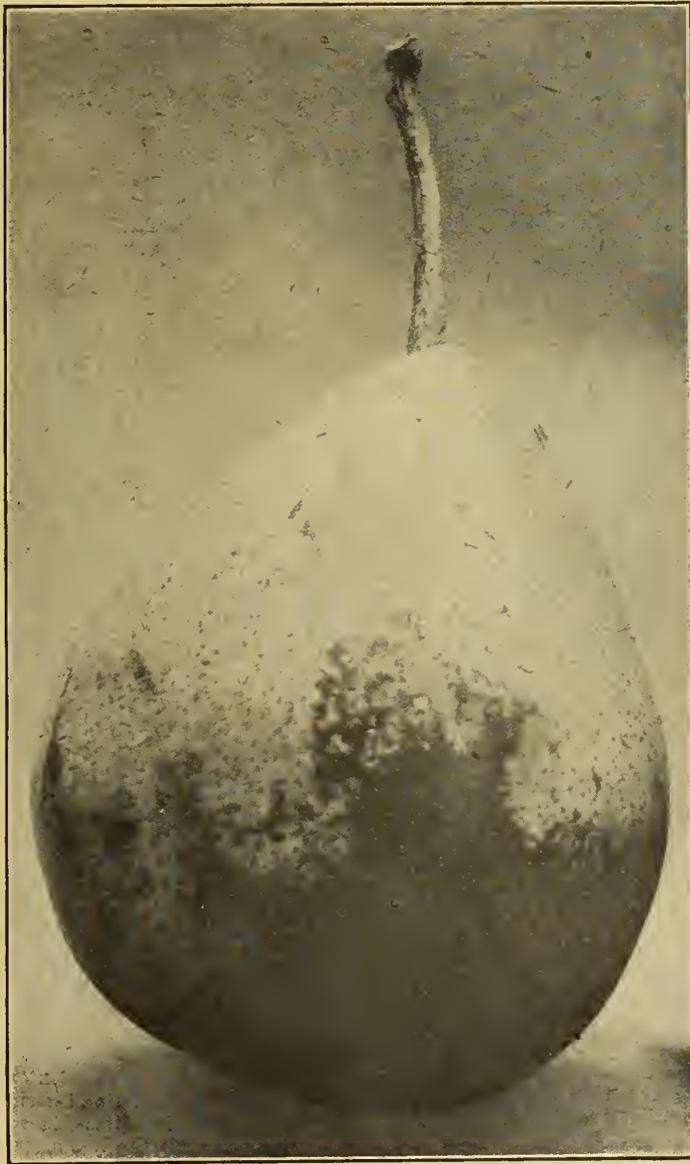
be headed back to well-ripened wood, and possibly a bunch or two of Grapes may be taken the following year, that is, if the buds break kindly and well. Failing grafting or inarching I should think young plants of Stillward's Sweetwater would prove in the end far more satisfactory than attempting to rejuvenate the old black.

E. B. S.

Hardwick.

PEAR MME. HUTIN.

In this we have one of the most distinct Pears in cultivation, and when a fruit is cut it creates a little surprise, as the flesh is quite pink. Another characteristic is



Pear Mme. Hutin. Gravetye, Sussex.

its exceptionally long stalk, sometimes over 4 inches in length. The fruit attains a good medium size (usually half a pound in weight), the skin of a pale yellow dashed with russet; flesh, soft, melting, and juicy; season, December and early January. I have only one tree, a five-branched cordon, growing on a wall facing south-west, in which position it is moderately vigorous, clean, and fertile. In autumn, when the leaves change colour, it is the most beautiful of a very large collection.

This Pear was raised in 1841 by M. Leon Leclere, from a pip of Leon Leclere de Laval.

CORDON PLUMS.

ALTHOUGH Apples and Pears are generally accepted as illustrating the system of cordon culture I think "C. R." (page 107) would find some of the Plums do equally well. There are, however, two points that seem essential towards securing success with Plums, the one to choose the very free-bearing sorts, and the other to give rather more liberal treatment than is usually meted out to wall-trees, bushes, and pyramids; more, in fact, as one would treat pot-trees. I do not mean an over-rich soil, but that the ground at planting time should be well done with a fair proportion of thoroughly decomposed manure

be almost entirely a question of summer pinching, and this, as with Pears, should be deferred until there is a slight sign of ripening. However, with some sorts, notably Early Prolific, the difficulty will be to get the wood.

The Plum has many enemies—aphis, red spider, and scale among the small insects, besides bullfinches and wasps, and in some districts it will doubtless be found advisable to net the trees against the birds, this being decidedly more effectual than dusting with lime and soot. The shoots of cordons are accessible, and aphis is easily dealt with, but red spider is a more insidious enemy, and must be taken in time, for injury to the foliage is detrimental to the trees. Given a clean start scale is not often troublesome if the foliage is kept in a healthy-growing state. If the trees are trained to wires great care should be taken that the wires are painted.

E. B.

Air roots on Vines.—When roots are emitted from the stems of Vines it is generally thought that there is something wrong with the roots. Generally speaking, this may safely be assumed, but there are circumstances under which these adventitious roots may be produced even when those in the border are healthy and under perfect control. The modern Grapewgrows are not so fond of atmospheric moisture as were those of former days. The latter were great advocates of evaporating-troughs; as a matter of fact, in the older type of vinery these were cast on the pipes. From the day the houses were closed until the time the Grapes began to colour, these troughs were kept full of water. Not only so, but in some cases liquid manure took the place of water after thinning was completed. In such houses, and under such conditions, air roots were freely produced, and such roots could not reasonably be held as proof that the real roots of the Vines were unhealthy. They were merely the result of environment, and it is quite possible that in many cases where these roots are present they are due to too much atmospheric moisture. No doubt many will have observed a similar tendency in the case of Tomatoes, which, if grown in a rather moist atmosphere, will develop roots, not only, like Vines, at the joints, but up the stem as well. In both cases, as soon as the ripening stage approaches and the atmosphere becomes drier on the reduction of moisture, the roots shrivel up and cease to grow.—K. BRIGHT.

Fruit-trees and root suckers.—Suckers are very troublesome sometimes, especially among Plum-trees when the land around or among the trees is under spade culture. The spade scrapes the roots, and from the injured surfaces suckers will spring in clusters. To get rid of these the soil must be cleared away, the suckers removed, and the origin carefully pared off with a sharp knife, or that portion of root shortened and removed altogether. In future a fork and hoe only should be used when other crops are planted among them. Suckers on the roots of other trees are not so troublesome as on Plums. The suckers of old Gooseberry-bushes, if neglected, appear round the base, and in preparing cuttings at this season all the buds, with the exception of three at the top of the cutting, should be cut clean away.

Fruit-trees over-pruned.—There is evidence everywhere of this, but thick planting is one cause. Give the trees more space to fill, and the pruner would be less needed. Wall trees are generally too crowded, and the same with espaliers and orchard planting, and if all young trees were lifted and the roots rearranged when about four years planted no root-pruning would be required.

with the loam; also a small percentage of bone-meal and mortar-rubbish. Then if the drainage is all right liquid stimulant can be supplied when necessary. It must be remembered that it is the nature of some of the Plums to produce a superabundance of fruit-buds at the expense of wood, and if one can make a fairly equal balance of the two, success is assured alike with healthy trees and good annual crops. Good sorts for the purpose are July and Transparent Gages, Jefferson's, Golden Drop, and Ickworth Imperatrice for dessert, and Early Prolific, Czar, Victoria, and Belle de Septembre for the kitchen. With the trees once established the pruning will

VEGETABLES.

NOTES AND REPLIES.

Early Turnips.—It is true one may sow earlier in some gardens than others, but my experience of Turnips is that nowhere can they be relied on to do well if sown before the first week of March. I do not now attempt to sow even in the first week, because from this sowing the percentage of edible roots is so small. In frames there is not the same tendency to bolt when sown in February as is the case when sown outdoors in early March. All who need Turnips at the earliest date would choose the Early Milan in white or purple-topped strains. The one is as good as the other in quality, but the white is more favoured as being the more attractive. When cooked there is no material difference between the white and the coloured forms. The Early Milan is distinctly the quickest to attain to edible size, and when it has thus developed, deterioration is just as rapid. For this reason small sowings should be the rule, and made as frequently as individual requirements demand. Netting against bird-raids must not be neglected or failure will result.—W. SIRUGNELL.

Tomatoes.—Plants raised from seed sown in October, and now growing in 6-inch pots, are showing flower, and will shortly be given their final potting, using 10-inch pots, and potting moderately firm. The plants will be placed in a house having a south aspect, and where a temperature of 60 degs. can be maintained at night, allowing a rise of 10 degs. by day, admitting air in favourable weather. When the flowers are ready for fertilisation pollen should be obtained from the best growers. Another sowing of approved varieties has been made for succession, and the pots containing the seeds placed in a temperature of 70 degs. As soon as the young plants appear they are placed as close to the glass as possible.—F. W. GALLOP.

Breaking up new land.—There are at least two ways of dealing with rough turf-land in preparing it for cultivation. One way is to trench in the rough surface and bury it deeply, and the other is to smother-burn the turf and rubbish and dig them in. Usually rough turf-land is badly infested with wireworm and other troublesome insects, which the burning will destroy. If the turf is trenched in it should be given a dressing of some soil fumigant or a mixture of salt and lime. The salt may be omitted from Potato-land, as it is apt to make the tubers waxy. The following are profitable Potatoes to plant during March and April:—First earlies: May Queen, Sharpe's Victor, Duke of York, and Midlothian Early. Later sorts: British Queen and King Edward VII. Great Scot, a new variety, has a great reputation as being immune from disease, especially black scab. Change of seed occasionally from north to south is useful.—E. H.

Immature seed Potatoes.—The fact that immature seed Potatoes give better results than those which have been fully ripened finds its way slowly among amateur cultivators of vegetables, and I have known of such Potatoes when found among other seed being rejected. Some people practise greening the tubers by exposure to the light after lifting them previous to their full maturity. I have tried this, and find that these greened, immature Potatoes yield excellent results.—S. A. M. D. [This "greening" is nothing new, as I can, as a boy, over fifty years ago, well remember my father—a gardener of the old school, lifting the tubers of a variety then largely grown under the name of Dalmahoy, selecting the seed tubers, and putting them into cutting-boxes which were stood along the sides of the garden walks. These tubers after a time became quite green and were then carefully stored in the boxes in a frost-proof shed, where they remained until wanted for planting.—T.]

GARDEN FOOD.

NOTES AND REPLIES.

An early Rhubarb.—For many years I had a considerable demand for early Rhubarb. Size was not wanted, but as early as possible, and the stalks had to be of a deep rich red colour. After repeated trials of all the best varieties I found the Early Scarlet the most reliable. This has a deep, rich colour, and, when cooked, is excellent. Such kinds as Royal Albert or Early Red are good, but these are later than the one named; also larger. Early Scarlet I found at times could not be got quite true to name. I have frequently had the one called Linnæus sent for it. Linnæus, though an excellent variety, is larger and of a pale pink colour, and was soon found fault with. For size such kinds as Daw's Champion and Myatt's Victoria would be preferred if earliness were not considered. For main-crop supplies The Sutton is an ideal variety. I have found it an excellent plan to sow seed of the Early Scarlet. If this is done one can very soon work up good forcing material. I also found I could get fairly reliable results from seed. As the seedlings soon show their colour in the stalk it is an easy matter to discard a pale or poor variety. Where roots can be secured by division at this season of the year it will be found, if this work is done early, say in March, good results are secured.—M. C. R.

Seakale in April and May.—We do not make as good use of this vegetable as it deserves, as grown naturally it gives little trouble, merely covering over for blanching. Kale grown for late work lasts for years. At the same time I find I get much better results by planting fresh stock, say every half-dozen years, and by so doing have very fine Kale. It is a mistake to cover the plants too early. I prefer to cover as late in February as possible, but much depends upon the season. If the plants have been well grown such aids as pots are not required. I find it quite sufficient to give the plants a little fresh lime over the crowns, this keeping slugs and worms at bay, and then a covering of fine coal-ashes is beneficial, and after that a quantity of soil from between the rows well banked up over the plants. Plenty of room is necessary between the rows to prevent damage to the roots. The Kale, when strong, has a tendency to push out at the side, hence the importance of plenty of soil when covering. In a warm spring I have often had to retard the growth by an extra covering of Bracken over the soil if it is light. In heavier land growth is less active. Kale grown thus will give good cutting material for from four to six weeks, and of fine quality also.—F. K.

Two good Peas.—To obtain a regular succession of Peas some little attention to varieties is necessary. If Pilot and The Duchess be sown on the same date a succession will be assured. The former is too well known to call for comment, but the good qualities of The Duchess do not seem to be so generally known. Between 5 feet and 6 feet in height, the variety carries a very heavy crop of large pods, each containing at the least nine Peas—often more. The flavour is all that can be desired, and from the fine shape of the pods The Duchess is not without value as an exhibition sort. Personally, I prefer it, for this purpose, to the Gladstone Pea.—Scot.

Potato Langworthy.—I am quite in accord with you respecting the Langworthy. I wrote you recommending it in the early part of 1913; and I find a note

in your paper of January 18, 1913. Unfortunately it does not crop well enough to grow for market, and I have not been able to get enough this year.—HERBERT MALIN.

Solid Red Celery.—I was pleased to see "Kirk" mention Major Clarke's Solid Red Celery, as it was always considered one of the best. Sulham Prize Pink was a more robust grower and a splendid keeper, and a good early white was the Sandringham White. Those three varieties thirty years ago were largely grown, and I have no doubt they are to be found now under other names, as they were too good to disappear altogether.—E. H.

A good Potato for baking.—Questions have been asked in GARDENING ILLUSTRATED as to good baking Potatoes. I find Arran Chief bakes splendidly.—K. M. H., Surrey.

RHUBARB DISHES.

RHUBARB properly cooked is one of the most useful of "pie-plants," but, unfortunately, it is usually swamped with water and stewed, very seldom being prepared in any other manner. Stewed Rhubarb is very nice, but no water should ever be used with the stalks. If very tender they should be washed, cut into inch lengths, dropped into water, and then put into a stewing-jar while still wet, sufficient sugar added, and the jar placed in a moderate oven until the stalks are tender. Rhubarb stewed in this way is far nicer than when water is added. Two or three slices of Lemon will vary the flavour. Many people cannot eat pastry, but a delicious

RHUBARB-TART can be made without pastry. Fill a pie-dish very full of Rhubarb cut into short lengths, sprinkle sufficient sugar over, add a shred or two of Lemon-peel and three tablespoonfuls of water. Take sufficient fine breadcrumbs to cover the Rhubarb, and mix with them a little sugar and a tiny pinch of powdered cinnamon. Spread the crumbs over the top of the Rhubarb. Sprinkle a little dissolved butter over the top and bake in a moderate oven until the top of the crumbs is nicely browned. This tart can be eaten with custard or whipped cream, but it is very nice without any accompaniment.

RHUBARB BREAD-AND-BUTTER PUDDING is another nice way of cooking Rhubarb for the children's dinner. Stew some Rhubarb, as in the preceding recipe, and fill a deep pie-dish with layers of bread and butter and stewed Rhubarb. There should be sufficient juice to just soak the bread. Bake in a moderate oven until slightly browned on top. Serve either hot or cold.

RHUBARB FOOL is another dainty way of serving this "pie-plant." Cut the Rhubarb into lengths and stew without water with sufficient sugar to sweeten. Beat the Rhubarb to a purée and set aside to get cold. There should be a pint of the purée. Place a pint of milk over the fire, sweeten to taste, and add a small piece of Lemon-peel. When it boils remove from the fire, take out the Lemon-peel, and stir in a well-beaten egg. Beat for ten minutes, then pour from one jug to another until the thin custard is cool. When cold mix gently with the Rhubarb purée and place the mixture in a deep glass dish. Grate a little nutmeg on top and serve very cold.

RHUBARB PASTY is quite an unusual way of cooking Rhubarb. Take a pound of Rhubarb and cut it into very small pieces, place in a jar with two heaped tablespoonfuls of Currants and an ounce of candied Lemon-peel chopped finely. Add enough sugar to sweeten and place in an oven until the Rhubarb is tender. Line a cooking plate with a layer of nice flaky pastry. Add the Rhubarb mixture, and cover with pastry. Decorate the edges and brush over the top with a little milk. Bake in a hot oven until the pastry is nicely browned and well cooked. Serve either hot or cold. H. THORBURN-CLARKE.

TREES AND SHRUBS.

THE TULIP-TREE.

(*LIRIODENDRON TULIPIFERUM*).

THE accompanying illustration of a Tulip Tree growing at Woolbeding, Surrey, directs attention to one of the most ornamental and interesting of deciduous trees suitable for garden decoration. A native of North America, it has long been an

as Perthshire. Good examples 40 feet to 50 feet or more high have been noted in the Lowlands of Scotland, although about Edinburgh it does not grow really well; those in Perthshire, however, are of average development.

It is as a tree for the Midlands and South of England, however, that it makes special claims upon our attention, and in those parts it can be planted freely. In America it sometimes grows between 150 feet and 180 feet in height, with a trunk

quantities it is probable that the tree might be planted successfully for commercial purposes. The wood is imported under the names of Basswood, White Poplar, Yellow Poplar, and Canary White-wood, and timber grown in this country compares well with that from America. The only drawback to its wide cultivation as a forest tree is the supply of seed, for a very small percentage of that produced here is fertile, and seeds would need to be imported. Until 1875 it was considered to



The Tulip-tree (Liriodendron tulipiferum) at Woolbeding, Surrey.

occupant of our gardens, for in 1688 it was grown in the famous garden of Bishop Compton at Fulham, and in the following century various references were made in old gardening works to well-grown examples in the neighbourhood of London and in other parts of the southern counties. But it is not only in the south that it is a success, for it gives excellent results in the Midlands and in some parts of the North of England, whilst north of the Tweed it thrives in the milder localities and in sheltered positions as far north

5 feet in diameter. Here it does not grow so tall, although there is plenty of specimens between 80 feet and 110 feet high with trunks between 3 feet and 4 feet in diameter. It is not very particular regarding soil, but perhaps attains the best proportions when planted in good, deep loam that is permanently moist without being water-logged. A little peat or leaf-mould placed about the roots at planting time is appreciated by the tree, although they are not really necessary. As the timber is useful and imported in large

be the only species of the genus, but in that year Mr. Shearer discovered a second species,

L. CHINENSE, in China. Mr. Maries reported it again in 1878, and Prof. Henry also collected specimens. It, however, remained for Mr. E. H. Wilson to introduce the tree, he sending seeds to Messrs. Veitch in 1901 from Hupeh. This species is very similar in appearance to the older tree. Prof. Henry considers that the leaves are more glaucous and the flowers, which have not yet been borne here, are said to be

greenish and smaller than those of the American tree. It can be grafted upon stocks of the common Tulip Tree and grows very freely. D.

NOTES AND REPLIES.

Planting bed in exposed position.—I have in front of the house five very large beds. Four are filled, one with Laurustinus, one with Berberis, one with the common St. John's Wort, and the fourth with the purple Heather, all of which are very effective and suitable. The beds are in a very exposed position, and everything is kept very dwarf on account of the wind. What can I put into the fifth bed? It is very large, and, therefore, whatever is used must not be costly.—E. M. T.

[Without seeing the spot, we should keep the whole set of beds for hardy Heaths. There are so many good kinds now, even flowering in mid-winter. A few dwarf evergreens may be grouped with them, like the Menziesias, Partridge Berry (dwarf), Daphne Mezereum, the dwarf Japanese Box, and Blaeberry, with some hardy flowers between them, as Scarlet Windflower (*Anemone fulgens*), Spotted Lungwort, *Campanula glomerata*, and Barrenwort (*Epimedium*).—Ed.]

Shrubs for bleak aspect.—My house, with a strip of garden, faces west, and the wind from that quarter is abominable here. What shrubs, 6 feet to 8 feet high, evergreen, and as far as possible ornamental, would form the best shelter? They must be quite hardy. What would be suitable flowering shrubs to grow on the sheltered side of these?—WYNDALE.

[The following should answer:—The true Laurel (syn. Sweet Bay), hardy, we think, in your district; Laurustinus, several kinds; any form of the common Box and the Minorca Box, Savin, double Furze and Hollies, a fine variety of which may be seen in any good nursery, such as that of Fisher, Son, and Sibray, at Sheffield. The soil and growth in your district will tell you if the Rhododendron will thrive.—Ed.]

Stachyurus praecox.—Although this shrub has been in cultivation in a few places for many years, it is not well known. It grows 8 feet or more high in its native country—Japan—and probably it will attain similar dimensions here, although plants growing in the open are inclined to develop laterally rather than in height. The young wood, of dark red hue, is conspicuous during winter by reason of the unopened flower-buds which are formed in autumn and remain unopened until the first warm days of the New Year. They then develop rapidly, and during February or early March, according to the weather, the yellow flowers are freely borne in drooping racemes, each 3 inches to 4 inches long, from almost every bud of the previous year's wood. At Kew a fine plant, about 3 feet high and 4 feet across, was covered with flowers during the first week of February, two or three weeks in advance of the normal time. The flowers and young shoots are liable to injury if very cold weather is experienced. Plant in a position sheltered from cold winds, in light loamy soil containing a little peat or leaf-mould, or in cold districts it might be trained to a wall. One or two new species have been introduced from China within recent years, but they do not appear to be any improvement on the Japanese shrub.—W. K.

Hollies from seed (A. G. R.).—The berries are gathered when ripe, mixed with double their bulk of dry sand, and turned over every month, which hastens the decomposition of the fleshy portion. The seeds are thus stored in a heap in a shady spot outdoors till the following autumn, when they are sown in rich, light soil, covered about a ¼ inch deep, and a few Spruce boughs laid over the bed till the seedlings appear, which will be in May, and only then a few, a succession being kept up till the next spring. Leave till the following autumn before transplanting. You may also store the seed, mixed with sand, in a flower-pot, and bury it till the autumn, sowing it then in boxes or pans in an ordinary cold-frame.

PLANTS AND FLOWERS.

INDOOR PLANTS.

RAISING GLOXINIAS FROM SEED.

If seed is sown at the present time, and the resulting plants grown on afterwards without a check, excellent specimens can be obtained which will yield a fine display of bloom in late summer and autumn. Where Gloxinias are appreciated this is a good method of forming the nucleus of a collection, as if seed of a good strain is purchased plants yielding flowers in a great variety of lovely colours may be had. The best can then be selected and saved for growing again the following year. This is also the best way of keeping stock up to date. A packet of seed will, if properly sown, yield a large number of plants. A pan is better than a pot in which to sow. This should be well drained and filled to within 1 inch of the rim with a mixture of peat, loam, and leaf-mould, with enough sand added to render it porous. On this a ½-inch layer of the same material passed through a fine sieve is placed and made firm. The pan is then immersed not quite up to the rim in a bucket filled with tepid water, where it is allowed to remain until the compost has become thoroughly soaked. It is then removed, and after draining for an hour or so the seed is distributed as evenly as possible over the surface of the soil, and is then lightly covered with silver sand. After covering with a sheet of glass with paper on top, both to prevent the surface drying too quickly and to favour quick germination, the pan is then stood on a shelf in the stove. When the condition of the soil indicates that a further supply of moisture is required the pan is partly immersed in tepid water as before, which method is preferable to watering with a rosed can, as no displacement of the seed can then occur.

G. P. K.

HIMALAYAN RHODODENDRONS.

I WANT to increase my stock of large-flowering Himalayan Rhododendrons. The original unnamed plants are giving out through old age. I enclose a blossom to show the largest kind. They are all grafted plants. Would you kindly tell me on what stock to graft them? Would they do grafted on the common Rhododendron ponticum?—ROSAMOND A. CHRISTIE.

[The enclosed bloom of Himalayan Rhododendron is too much shrivelled to name with any degree of certainty, but it appears to be Countess of Haddington, a hybrid between *R. ciliatum* and *R. Dalhousiae*. These Rhododendrons are grafted on to seedling stocks of some allied kinds, while cuttings are not difficult to root where proper structures and appliances such as are to be found in trade establishments exist. Failing a low, close structure containing propagating cases, and wanting in practical experience, we fear that you are not likely to succeed. As a stock to these Rhododendrons plants of *R. ponticum* would be useless. Most of these Himalayan Rhododendrons and their hybrids seed freely, and young plants can be readily raised therefrom. The seeds should be sown in well-drained pans of sandy peat, placed in a greenhouse, and kept shaded till germination takes place. Of course, they will take four years to five years, or even more, before they flower.

The grafting of greenhouse Azaleas is practically in the hands of the Belgians. The stocks employed are two varieties—namely, *A. concinna* and *A. phoenicea*. The cuttings are obtained* from the soft shoots pushed up at the base of the young grafted plants. They are dibbled into pots of sandy soil and placed in a close

propagating case in a warm house. When rooted they are potted off, and when about the size of a stout straw are grafted. This operation is carried out towards the end of the summer, when they must be kept quite close till a union is complete. These Azaleas may also be struck from cuttings of the young shoots taken in the spring, inserted very firmly into well-drained pots of sandy peat, and placed in a close, warm structure till they root. As there is very little chance of success in your grafting Rhododendrons and Azaleas we would suggest that it would be more satisfactory to purchase the plants required from a nurseryman.]

NOTES AND REPLIES.

Propagating from highly-fed plants.—

At the present day, owing to the fact that highly stimulating manures are put up in such convenient forms, they are used to a greater extent than ever. This extensive use can be defended when the object is to get as great a display as possible from a plant which will, when its flowers are over, be thrown away. Woe-betide the individual, however, who depends upon such plants for propagating, as though fine fat shoots may be available, they take a long time to root, and many fail altogether to strike. Even when this takes place they do not grow away with the same freedom as cuttings taken from plants that have been grown under more rational conditions. After an experience of many years of propagating I always prefer cuttings taken from shoots of medium vigour to the very strong ones. Of course, when the aim is to make as many as possible from a particular plant one is tempted to take both stronger and weaker shoots than are desirable. In all cases, but more especially to the amateur, I should say avoid, if possible, taking cuttings from plants that have been fed with stimulating manures. In the case of these last it will be often found that though the growth may be strong, the root system is more scanty than in the case of a plant grown in a rational manner.—K. R. W.

Balsams.—Among the older greenhouse plants which have been ousted by more recent introductions, Balsams were at one time prime favourites. In these days, when labour is scarce, and easily-managed plants will, for a time, be preferred, a packet or two of Balsams might very well be sown. Seeds sown in April will readily germinate, and if kept near the glass and moved steadily on as necessary, good pieces over 2 feet in height, and covered with bloom, can be had in 8-inch pots during August. These last for some considerable time in good condition. The season of flowering can be prolonged by successional sowings.—KIRK.

Camellias.—The flower-buds of Camellias planted under a south-west wall are beginning to show colour. Camellias are much hardier than is generally supposed. The chief thing to guard against is rough winds, which bruise the flowers. A west or south-west aspect is the best, and if the site is a well-drained slope, so much the better. A periodical top-dressing of roughly-chopped fibrous loam, mixed with a little peat and leaf-mould, is very beneficial. When severe frosts are anticipated mats are laid over the plants at night.—F. W. GALLOP.

Schizanthus Wisetonensis.—A good batch of plants for flowering early has been shifted into 6-inch pots. These were in the right condition for potting, there being just a sufficiency of roots without anything approaching a root-bound condition. Consequently, they should give a good account of themselves when the flowering stage is reached. Until growth becomes further advanced they will remain on a shelf close to the roof in a greenhouse.—G. P. K.

OUTDOOR PLANTS.

LEUCOJUM VERNUM CARPATHICUM (SPRING SNOWFLAKE).

THERE are few more attractive early spring flowers than the Snowflake here shown. Soon after Christmas the buds, pushing through some evergreen undergrowth, are charming. The Snowflakes are admirably adapted for growing through permanent dwarf edgings, or wherever a dwarf groundwork can be provided, as this shows them at their best. They appear quite at home in any position, and any soil suits them unless it is a very dry one. The white and slightly fragrant flowers, usually produced in pairs, are prettily tipped with green, and occasionally canary-yellow, which serves to enhance their beauty.

This form must not be confused with the Summer Snowflake (*L. æstivum*), the type of which is poor in comparison and grows much taller. The best of the Summer Snowflakes I have yet seen is a variety of the above called Gravetye

able to give a light top-dressing of short manure and roll it shortly afterwards, as the thin coat of manure retains the moisture in the soil and is very helpful.—E. H.

AMONG THE HARDY FLOWERS.

WATERING SEEDLINGS IN POTS.—My amateur friends complain of the difficulty they experience in raising hardy plants from seeds sown in pots. Their main complaint is that the seedlings damp off, and that they lose a great number in that way. Much of the trouble arises through injudicious watering. If a thorough soaking is given so that the water passes right through the pot and is carried away by ample drainage there is little fear of the seedlings damping off, especially if they have a sufficient supply of light and air to keep them from becoming drawn. The danger appears to lie in the surface of the soil being damp and that below too dry. I always water the seedlings by dipping the pots in water and allowing it to rise through the surface of the soil. If this is properly done the cases of damping-off are

bought in on the strength of its being, as the list said, "like a glorified White Heather." It may be so in some places, but with me in a moderate climate and in a warm, sunny place in dry soil it has not flowered. Is it a shy bloomer? Perhaps I may not be giving it the necessary treatment, but most of the Stonecrops flourish and flower in similar places to that in which *Sedum primuloides* is planted. It is a comparatively new Stonecrop, and it is very disappointing to pay a higher price than usual for a Stonecrop and to discover that it is a shy bloomer.

AN AMATEUR OF HARDY FLOWERS.

TRANSPLANTING CHRISTMAS ROSES.

REFERRING to Sir Herbert Maxwell's note as to the best time for the above work I may remind him that the treatment prescribed by me at page 62 was given with the full knowledge that in the northern districts of England a certain measure of success attended the planting of Christmas Roses in March, the same period adopted by himself. I learnt that way from my father as a youth, and in a midland county, too, where the Christmas Rose generally was a considerable success. Since that time I have learnt the value of September planting, hence speak with a knowledge of both systems. Moreover, my advocacy is based on the knowledge of root-production in these plants, which cannot lightly be disposed of, much less gain-said, and only those who adopt those principles are likely to obtain the fullest measure of success, with which is incorporated the earliest flower harvest as a return for timely planting.

Sir Herbert Maxwell says: "If we in the west were to disturb Hellebores in September we should run the risk of their being seriously injured by winter wet." Is this, may I ask, a surmise, or actual experience? If the former, it is, for present purposes, valueless; if the latter, I would make "September" read "August," and so, getting in advance of the period of basal-root production in these plants, embrace it and its advantages in all its fulness. Sir Herbert Maxwell evidently does well with the Christmas Rose, assisted, doubtless, by the humid conditions by which he is surrounded. All the same, I do not hesitate to assure him that he may obtain the fullest measure of his present success by observing in his own case the natural period of basal-root production—an annual occurrence in this section of the Hellebores—and be guided by what it dictates. I have no desire to appear dogmatic in the case, my one aim being to demonstrate to growers generally the need for observing certain rules if they would succeed with one of the most precious winter flowers we possess. The fact that *H. niger altifolius* begins flowering in October does not affect the point at issue. Christmas Roses well done do not need replanting each year, and the few flowers sacrificed in the season of planting—if sacrificed they be—would be repaid by the far greater yield of the years to follow—the product of planting at the right time.

Mr. F. W. Gallop thinks I should have found it "impossible" to divide the plants he referred to "without first washing out the soil." He is mistaken. A couple of small hand-forks placed back to back and thrust to their full depth into the plant—the example having been first laid on its side—will successfully wrench in half any ordinary-sized clump, and a repetition or two, as necessary, will reduce it to any size you will. It is, therefore, not "impossible," it is simplicity itself. No method of division is more



The Spring Snowflake (Leucojum vernum carpathicum).

Giant, which, with me, grows 3 feet high and bears several flowers on stout stems. There is also the Autumn Snowflake (*L. autumnale*), a dainty little species rarely more than 4 inches or 5 inches high and bearing, in autumn, white flowers with pink spots. E. M.

Sowing down a lawn.—Good turf free from weeds and their seeds is scarce now, and expensive, and a good lawn can be made from seeds. The ground should be trenched or dug over now, and if necessary manured. Very wet land may require a few drains, 2 feet deep or so, if an outfall can be obtained for the water, and this can generally be found near. It is important that the soil be prepared in good time so that the weeds can be cleared by hoeing before the Grass seeds are sown. The ground for a tennis-lawn should be made perfectly level. A good seed firm can supply the right kind of seeds if they are told the kind of soil. Do not mix Clover with the Grass seeds, as tennis players say it is more difficult to obtain a firm footing. During a showery time in April the seeds soon germinate, but when sown later I have found it advis-

reduced to a minimum. Too thick sowing is also a serious source of damping-off. It is astonishing how quickly seedlings will succumb to this damping-off. Watering carefully appears to me to be one of the prime factors in preventing seedlings damping-off.

COVERING SEEDS OF HARDY FLOWERS.—Many of us have had some difficulty in deciding the depth to which seeds, especially the small ones, should be covered with soil. My experience is in favour of a slight covering of fine soil. Even if this is merely a sprinkling, it is, I think, safer than leaving them uncovered. This covering is especially advisable with seeds which frequently lie a long time before germinating. Hardy Primulas come under this category, and I find that if the seeds are not slightly covered there is not such a good return from later seedlings. In the case of *Primula japonica* the seeds germinate freely if they are not covered with soil, only a sheet of glass and a piece of paper being laid over the pot until the first seedlings have germinated.

SEDUM PRIMULOIDES.—May I ask the experience of others as to the flowering or non-flowering of *Sedum primuloides*? I

expeditious, none fraught with so little loss. What is true of the hand-forks with a plant of ordinary size is equally true of the flat-tined garden fork when dealing with giant clumps of anything herbaceous—yard-wide stools of Funkia, Kniphofia, Pampas Grass, Day Lily, or what you will. For all such the garden fork is excellent, easily displacing chopper and spade, murderous weapons both, ideal for hacking plants to pieces, but for rational division quite useless. E. H. JENKINS.

GROWING VIOLETS.

Will anyone kindly tell me how to grow Violets out-of-doors? How should the bed be made and what is the best aspect? What is the proper time for planting? Kindly name the hardest kinds for a very cold part of North Wales?—HAFOD.

[Runners should be put in every year, April being the best month for doing this. In the case of very light soil, which always suffers if the summer is very dry, a little shade is beneficial. On holding soils Violets are just as well, if not better, planted in the open. This applies to double or single Violets intended for frames or outdoor culture only. Ground for Violets must be of good quality, and be well prepared by trenching or deep digging, with plenty of manure added, and, if possible, some leaf-mould. The single varieties, on account of their stronger growth, require more room than do the double forms. Single varieties of the modern kinds, such as the Princess of Wales, flower freely on the runners which issue from the parent plant, and for this reason such runners may be left. The double varieties, on the contrary, must have the runners removed, so as to strengthen the crowns which give the finest blooms. By the end of October the plants will have completed their growth, and can then, when required, be put into their winter quarters. The frame should be in a sunny position, preferably facing south, the soil should be rather light, and the plants, when placed therein, should come to within 6 inches of the glass. Give a good watering to settle the earth round the roots, and little or no more water will be required until March, or even later. In frosty weather the glass should be covered with mats or straw, but except in a time of sharp frost air must be left on at night. It is only free ventilation that will keep down damp, and the plants should be looked over occasionally and decaying leaves removed. If any symptoms of mildew appear dust the undersides of the leaves with sulphur. Good doubles are Mrs. J. J. Astor, De Parme, Comte de Brazza (white), and Marie Louise. Good singles are Princess of Wales, La France, and Admiral Avellan.]

THE BROAD-LEAVED ROCKFOILS (MEGASÆA).

NEVER have I seen these plants so fine as this year. At the end of January and in the early days of February the clusters of Peach-coloured flowers were borne on stout stems from a foot to 18 inches in height.

The pale colour of the flowers of *M. crassifolia* under artificial light is beautiful, the yellow stamens, when fully developed, enhancing their beauty when cut. The flowers are very lasting. With one or two exceptions the plants are quite hardy, and will thrive under almost any conditions. During the autumn and winter their bold, leathery leaves develop rich tints of red, crimson, and yellow, for which reason alone they are well worth growing. To secure this fine colour in winter they should be planted in broad lines as edgings, as foregrounds to banks of evergreen shrubs, or in groups on

sunny mounds, where the poorer the soil the richer will be the colour of the leaves. The best for this purpose are *M. Stracheyi* and *M. purpurascens*, to which might be added several hybrids. The best results as to flowering are obtained where the plants have enjoyed a little shade during the summer, but this robs the leaves of much of their winter colouring.

Several species are known, these including deep purple, rose, and peach coloured forms, while some of the hybrids are almost pure white, and a few are of a smaller and less spreading character. A group of these plants at the foot of a large Japanese Cherry flowers very early. They are also used in the manner suggested above; also in recesses which occur among trees and shrubs, and naturalised in Grass which is somewhat overhung with trees.

In the last case they practically take care of themselves. It is rather exceptional to see them used in this way, and I would advise anyone having a surplus stock not to destroy them, but provide a space which is not frequently mown.

The following are some good kinds:—*M. cordifolia*, *M. cordifolia purpurea*, *M. crassifolia*, *M. ligulata*, *M. Stracheyi*, *M. purpurascens*, *M. Milesi*, *M. yunnanensis*, *M. Brilliant*, and *M. Corallie*. *M. ciliata alba* is a lovely, almost white flowered form, but not quite so hardy as those just mentioned. E. M.

NOTES AND REPLIES.

Saxifraga hybrids.—In the book on Saxifrages by Irving and Malby two hybrids are named of *Burseriana* origin—parentage same, viz., *S. Burseriana macrantha* and *S. Frederici Augusti*, and both coming from Kew. One is called *S. Burseriana rosea*, the other *S. B. kewensis*. Can you tell me if either is the one called *S. Irvingi*, or is that yet another hybrid of same source?—D.

[It is the one named "*S. Burseriana rosea*" in "*Saxifrages*" that has now been definitely named *S. x. Irvingi*. Strange to say this pretty hybrid, although only a year or two old, has already received three distinct names—viz., *S. B. elegans* originally, next *S. B. rosea*, as more descriptive of the colour, and, finally, *S. Irvingi*, under which name it was certificated and has passed into commerce. The defects of the two earliest names, making the hybrid a mere varietal form of *Burseriana*, being obvious, created the necessity for a third, hence the final name, *S. Irvingi*. Fortunately, as it has only been distributed, we believe, under the last name, no confusion is likely to arise, while the name "*S. Burseriana rosea*" will doubtless be replaced by *S. Irvingi* in the next edition of the useful book referred to. *S. x. Kewensis*, the other produce of the cross, has greater affinity with *S. Frederici Augusti*, its leaf character, much taller forked stems, red bracts and flowers, all leaning strongly to it, to say nothing of its constituting a link of the greatest possible value in the chain of circumstantial evidence as to the hybrid origin of both, the twain appearing in a batch of seedlings of *S. Burseriana macrantha* raised at Kew.]

Groundwork for Rose beds.—As a reader of your paper for nearly thirty years, may I ask your kind assistance in giving me the names of what you would consider the most satisfactory plant to carpet a Rose bed? I have three large ones, and for a great part of the year they are not objects of beauty. Would you approve of dwarf Heath? Preference should, I think, be given to some plant whose colour would not clash with the Roses when in bloom.—E. M. T.

[Begin with Tufted Pansies of delicate colours—mauve, lilac, yellow, blue, and white. You can hardly go wrong with these until the soil gets tired of them, when some other dwarf hardy plants may be tried.—Ed.]

Fasciation in the white Martagon Lily.—It does not appear to be very widely

known that some stocks of the White Martagon Lily are specially liable to the deformity known as fasciation. This fasciation is annoying, as the results are not only flattened stems, but flowers in an ungainly mass. The extent of the fasciation and deformity of the inflorescence vary, but it is annoying to receive bulbs which produce this fasciation. I am satisfied that this fasciated form occurs very largely in certain stocks. I know gardens in which what one may call the good form has been established for years and has never given fasciated stems, whereas some purchased bulbs have, for years, come with a large proportion of fasciated growths annually. I can recollect a nursery in which a row of *L. Martagon album*, imported from Holland the previous year and comprising a hundred or so of bulbs, gave hardly any perfect stems and flowers. Is this a case of the deformity being permanent in the bulb and transmitted by means of propagating the Lily from scales or offsets?—S. A.

Hotbeds.—Owing to the increasing scarcity of manure it will be necessary to employ a larger admixture of leaves than is usual, but as hotbeds, at this time, are principally used for the pricking off of early vegetable seedlings, the matter is of less consequence. A deep two-sash pit will be got ready immediately, the first brisk heat being utilised for starting pots of seeds. The value of such a hotbed is considerable, for after vegetable seedlings are fit to go out, the bed is again used for half-hardy annuals—Stocks, Asters, Lobelia, Antirrhinums, and the like. After these go out, with the increase of solar heat and with a little freshening up of the material the pit is used for growing Cucumbers during the summer and autumn.

Sweet Peas.—A sowing will be made in the open about this date on ground that was well prepared in the autumn. These will succeed the plants raised from seed sown in pots under glass, and which will be planted out as soon as the weather is favourable. A common mistake in growing Sweet Peas is sowing too thickly. Let the seeds be placed 3 inches apart in drills 3 inches deep. To fill up gaps caused by birds, mice, or slugs, have a nursery bed in which sow a dozen seeds of each variety, labelling each group, 2 inches apart each way, and transplant when about 3 inches high into the vacant positions. As soon as the seedlings show above the soil, which will be in a little over a month from the time of sowing, dust them heavily with soot.

Statice Suworowi alba.—Many who are well acquainted with *S. Suworowi* may not know the white form, which is of comparatively recent origin. *S. S. alba* is a hardy annual, and can be used effectively in beds or borders; but it is especially suitable for pot culture. The habit of the plant is dwarf and compact, its pure-white sprays being very freely produced. These when grown under glass are much finer than those from plants in the open, and are, consequently, much more valuable for cutting. Considering the ease with which this and other annual Statice can be grown for greenhouse decoration, many might with advantage give these and similar things a trial during the present season.

Muscari botryoides.—This (March 1st) is showing its blue spikes freely in a warm border fronting a Peach case. The soil is of excellent quality, and the exposure all that can be desired. It is, no doubt, chiefly attributable to these factors that the bulbs increase so freely. A number of years ago there were but a few bulbs, now there is a colony almost 2 feet in diameter in this particular place, and it grows in size and attractiveness annually.

Manuring Ferns.—About two weeks ago I noticed an article on Ferns in which the writer said Ferns would not stand either solid or liquid manures. All I can say is, I always manure my hardy Ferns with both liquid and solid manures, and have, in consequence, had fronds of *Scolopendrium vulgare* nearly 3 feet long and about 3½ inches across.—C. D. LANGWORTHY, Claygate, Surrey.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MARCH 2ND.—*Berberis* (in variety), *Daphnes* (in variety), *Pcri-winkles*, *Andromeda japonica*, *A. floribunda*, *A. calyculata*, the *Goat Willow* (*Salix caprea*), the *Purple Plum* (*Prunus Pissardi*), *Forsythia suspensa*, *F. spectabilis*, *Osoberry* (*Nuttalia cerasiformis*), *Cydonias* (in various colours), *Rubus spectabilis*, *Coronilla glauca*, *Ribes sanguinum*, *Heaths* (in great variety), *Arbutus canariensis*, *Laurustinus* (in variety), *Azara microphylla*, the *Cornelian Cherry* (*Cornus Mas*), *Hamamelis Zuccariniana*, *Snowdrops*, *Violets*, *Crocus* (several species and varieties), *Saxifragas* (various), *Narcissus maximus*, *N. minimus*, *N. pallidus præcox*, *N. Grand Monarch*, *N. Tazetta*, the *Tenby Daffodil*, *Grape Hyacinths*, *Snowflakes*, *Arabis*, *Aubrietias*, the *Algerian Iris*, *Polyanthuses*, the *Greek Anemone*, the *Poppy Anemone* (*A. coronaria*), the *White Wood Anemone* (*A. nemorosa*), the *Scarlet Windflower*, *Scilla taurica*, *S. sibirica*, *Hya-*

clearing of Lily of the Valley beds and pricking over the soil among groups of herbaceous Phloxes has been commenced. Pruning of Climbing Roses, Clematis, etc., still receives attention. A large group of *Bambusa palmata*, which had been allowed to run about of its own free will, was beginning to assume enormous proportions. It was decided to cut down one half to the ground level. This was a rather difficult task, as only a very sharp bill-hook would sever these old canes, some of which were found to be 15 feet long. We are leaving the plants in the ground in order that they may break up afresh. If satisfactory, the other half of the group will be treated likewise another season.

There has been a heavy fall of snow, and many things are prostrate, but very little damage has been done. For the carriage and other drives an improvised snow plough was made by fixing two stout boards v-shaped with two lengths of quartering to keep them in position, a pair of handles for holding it down being fixed over the frame. Weights were added to keep it on

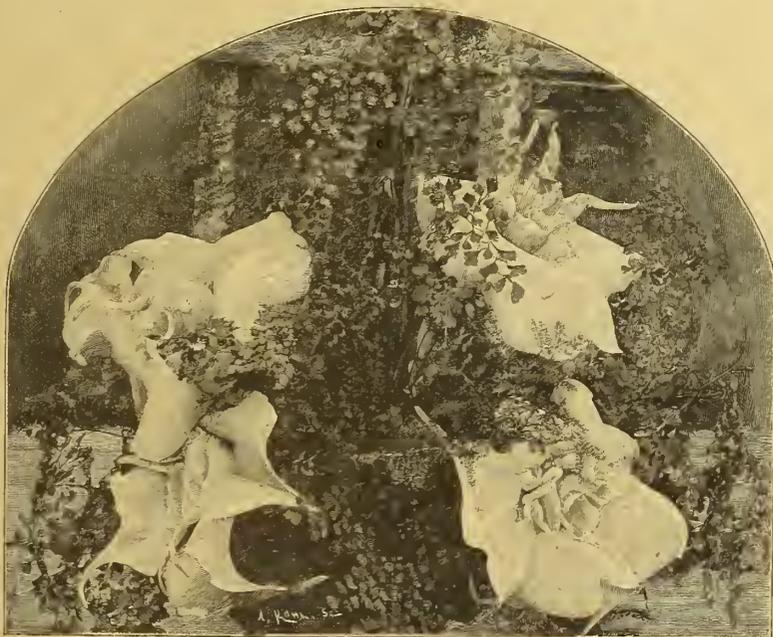
ing through the flowering period syringing of the Vines must cease; in fact, it should no longer be persisted in unless there are very good reasons for doing so, after the berries are visibly swelling. Damping down, except a sprinkling of the floors after closing on fine days, must for the time being be suspended. Black Hamburgs set freely enough without artificial aid, but in the case of Madresfield Court Black Muscat, or any other shy-setting variety, it pays to pass a camel-hair brush or Pampas plume over the bunches about mid-day while they are in flower. Tapping of the rods on fine, bright mornings is not omitted, as this tends to disperse the pollen. Directly setting is complete the border is dressed with a suitable fertiliser, which is washed in with sufficient tepid water to ensure its being well moistened down to the drainage, after which the berries swell rapidly.

Thinning.—As soon as the best set and most shapely bunches can be determined the surplus is taken off, the number in our case being limited to from twelve to fourteen to a rod some 15 feet in length. Though not always possible, the crop is, as far as circumstances permit, distributed on either side of the rods. The tying down of laterals into place precedes the thinning of the berries, which, dull weather excepted, is best done either in the morning or afternoon. To those having many vineries in their charge Grape thinning is a problem that will not be easily solved this season—i.e., under existing conditions—and it will behove all so situated to allow the Vines to carry just what may be termed a sufficient crop only, and to thin as freely as is permissible while the berries are in a small state and the scissors readily manipulated.

Second-house.—Disbudding, best done as soon as the embryo bunches are visible, they will now be reduced to one on each spur. Growth will then visibly quicken and an increase of warmth be required to ensure the bunches developing fully and in a proper manner. The day and night temperatures will, therefore, be raised from 60 degs. to 65 degs. and 55 degs. to 60 degs. respectively. The gradual bringing down of laterals to the wires, the stopping of the same at the second leaf beyond the bunches—the latter being reduced to one, and that the best, when more than one are produced by any lateral—the stopping of sub-laterals to one leaf above the bunches, and rubbing them out or pulling them off altogether are routine matters which each in turn have to be attended to. Between now and the flowering stage being reached the border will receive another watering and be mulched with short litter containing a considerable quantity of horse-droppings.

Late Vines.—Although the houses as yet are being kept cool, care is taken to see that the borders do not want for water. In the case of old and healthy Vines liquid manure, if at disposal, can be given with beneficial results at this juncture if the border is not too dry.

Early Peaches.—The disbudding and the rubbing off of surplus fruits, particularly those which are situated on the underside of the branches, are two of the principal matters now claiming attention. This thinning of fruits must not be carried too far, as a margin must be left to make allowances for a few fruits being cast after the stoning period has been passed, but, at the same time, it is a useless expenditure of energy to allow an inordinate number to remain on the trees until the trying period named has been past and then to dispense with them. Unless absolutely necessary for the filling of any



Datura Knightii.

cinthus azureus, *Chionodoxa Luciliae*, *O. sardensis*, *Lenten Roses* (in various colours), *Puschkinia scilloides*, *Lesser Celandine*, *Aconites*, *Hepaticas*, *Blue-eyed Mary* (*Omphalodes verna*), *Iberis* (in variety), *Wallflowers*.

WORK OF THE WEEK.—A trench 60 yards long has been thrown out, and, the soil being poor, a good deal of it had to be removed and fresh loam brought in to take its place. The trench is required for an additional line of Sweet Peas to be planted out of pots in April. For this purpose the seeds have just been sown this week and placed in gentle heat. A path runs parallel to this trench, and on the opposite side are the autumn-sown varieties. A group of *Thalictrum tuberosum* has been planted in front of a large *Magnolia*, with *Salvia virgata nemorosa* as a background. A few plants of *Sedum atropurpureum* have been added to an existing group in the Grass. *Corydalis cava*, a very early dwarf purple *Fumitory*, which was lifted from the mixed border in autumn, has now been put out. A few rare alpine have been given a place on a raised border, where they enjoy full sunshine. The

the ground, and it was as much as two horses could draw. E. M. Susscr.

SOUTHERN COUNTIES.

Early Vinery.—While the Vines are in flower a day temperature of 75 degs., obtained by artificial means, is necessary to ensure a good set, but it is lowered 5 degs. so soon as the berries are set and swelling. At night the temperature is not allowed to exceed 65 degs. With the changeable weather usually experienced at this time of year ventilation needs very careful attention, otherwise the tender skins of the berries will be apt to become disfigured by rust. The ventilators are therefore slightly opened when the mercury rises to 80 degs., and the volume of air increased afterwards as circumstances demand, but so long as it can be maintained by the heat of the sun the temperature is kept at or near 85 degs. When the latter begins to decline the air is reduced and finally shut off. When the wind is blowing from a cold quarter air should be admitted from the south side only in span-roofed houses. While pass-

vacant spaces the shoots or young growths which will furnish next year's crop should be finally reduced to one on each bearing branch, selecting that, when doing so, as near to the base as possible. The leading growths at the top may, if there is not space to allow them to grow away, after being tied in, be stopped. The other growths alluded to should be carefully tied in as growth develops, and not allowed to grow until they cannot be brought in close to the branch without risk of their either breaking or forming "elbows." Morning and afternoon syringings on a liberal scale are now very necessary, and the water used should always have the chill off it. When warm water cannot conveniently be obtained one or more large pots or buckets filled and stood on the hot-water pipes twice daily will furnish an adequate supply for ordinary purposes. Damping down in accordance with weather conditions also needs careful attention during the day. With a good watering after the fruit was set, root requirements in regard to moisture will at present give rise to no anxiety; at the same time, the border should be tested now and again to guard against falling into a state of false security. Old trees may be assisted with stimulants each time water is applied, but those in a vigorous condition will take no harm if they are withheld until the fruits have stoned. Until stoning has taken place the day and night temperatures should be 65 degs. and 60 degs. respectively.

Second-house.—The weather has not been very propitious for trees in flower, and pollen, in spite of maintaining a warm, dry atmosphere, has not been over-abundant. However, seeing how little of this is required for the fertilisation of each bloom, so long as it is potent, no alarm need be felt as to the outcome. Directly the petals commence to fall and the stigmas to protrude further a gentle dewing with clean tepid water induces the fruits to swell the more quickly, and as they advance in size this may then resolve itself into a vigorous syringing, which will help the fruits to rid themselves of the remains of the flowers. Another watering of the border, which is apt to dry considerably during the flowering period, will also assist in the swelling of the fruit. As disbudding succeeds the pollination of the flowers a gradual reduction of shoots must, therefore, now take place, working from the extremities to the inner part of the trees in doing so, allowing the process to cover a period of ten to fourteen days. At the finish two good shoots should be present at the base—these to be reduced to one unless both are really required—and one at the tip to continue drawing the sap for the nourishment of the fruit.

Late-house.—This must, until the trees actually come into flower, be kept as cool as possible, but when a sharp frost appears imminent the ventilators should be closed and sufficient heat turned on to prevent the temperature falling below 38 degs. to 40 degs. The border should be frequently tested, and water applied liberally when its condition denotes that it is required.

Tomatoes.—Pollination of the flowers must be done as fast as they open, keeping the soil about the roots in the meantime rather on the dry side, as this is an incentive to free setting. As soon as the fruits begin to swell off, a top-dressing of rich compost should be given and stimulative waterings afforded also. Side shoots must be suppressed as fast as they push out on plants grown on the cordon principle, which is really the best method of cultivating Tomatoes under glass, and

the leaders left intact until the limits of the trellis are reached. Plants raised from recently-sown seed are now ready for potting off. Pots 3 inches in diameter are the most suitable for this purpose, and in these the young plants should be placed as low down as possible, so that nearly the whole length of the stems is buried in the compost. They will then be returned to where they were raised until they become well rooted, after which cooler quarters will be accorded them. In due course a fair proportion of the plants will be shifted into 6-inch pots. As these will be required for planting outdoors it is a gain in point of time to have them of good size and well established in advance.

A. W.

MIDLAND COUNTIES.

Melons.—To induce the plants to fruit early the leading growths are stopped when they reach about 18 inches up the trellis. Thin the laterals by the early stopping of superfluous ones beyond their first leaf, in order to prevent the crowding of foliage. Carefully secure the leading shoots, and fix laterals to the trellis, tying them loosely. Stop each lateral at one leaf beyond its first female blossom, which fertilise, and either stop sublaterals or rub them out as may be necessary. During the flowering period it is necessary to preserve a comparatively dry and buoyant atmosphere, and when three or four fruits upon each plant are properly set and swelling remove all subsequent flowers as they appear. At this stage afford a light top-dressing of previously warmed soil, which will be readily filled with roots. Give an occasional watering with liquid-manure. Air early and freely when the weather is favourable, but guard against low temperatures and an excessive amount of atmospheric moisture.

Muscats in flower should have a night temperature of 68 degs. to 70 degs., and a further rise of 10 degs. to 15 degs. on bright days. Keep the points of the bunches near the light, as Muscats do not set well under dense foliage. Fertilise the flowers daily with a large camel-hair brush, using Black Hamburgh or Alicante pollen if obtainable. Examine the border as soon as the Grapes are set, and if found to be dry give a thorough watering. Pay attention to tying down the shoots and stopping the laterals. Later Vines claim attention in the matter of disbudding. Remove the weakest shoots first, as soon as it can be seen which promise to make the best bunches. Select well-shaped bunches in preference to large-shouldered or loose ones. Keep a moderately moist atmosphere by syringing the walls and damping the paths. Give a night temperature of 58 degs. to 60 degs., closing early with sun heat, as this helps to draw out the bunches. The latest house, containing Lady Downe's, has now to be closed for starting.

Raspberries.—Such of the canes as were left at their full length when fastened to the supports should now be shortened to a point 6 inches higher than the stake or wire to which they are secured. Raspberry canes recently planted should be cut down to within 6 inches of the ground to cause strong canes to be thrown up this year for fruiting next year, as, if left at their full length in the year of planting, a few small fruits are borne and then the plants die, there not being enough vigour in them to perfect fruits and produce young canes at the same time. The young shoots that spring from the cut-down canes should be reduced to two when 3 inches in height.

Peaches and Apricots.—So far as one is able to judge, no damage has been done to the blooms of Peaches and Apricots by the frost at the close of February, and if precautions are taken to thoroughly protect the flowers now there is every prospect of good crops of fruit. The only covering used in these gardens is fish-netting in three or four thicknesses, placed in position after the blossoms commence to open. This is kept in position with poles standing out about 3 feet from the base of the wall and let into the border a few inches, being fixed to the coping above. On this the netting is suspended.

Roses.—Most Roses are already in growth, and pruning must be commenced. To prune Roses successfully the operator should be conversant with the habit and growth of the various sorts, as it is advisable that each variety be cut back in accordance with its vigour. Where plants are required to make a good display the pruning should not be too severe. Weakly growths should be removed entirely, as well as all decayed wood, and the remaining shoots cut back to various heights from 6 inches to 1 foot, bearing in mind the constitution of the variety. It is a mistake when pruning Roses to cut all shoots back to one level. China or Monthly Roses as they are sometimes called should be well thinned out, and as the flowering shoots spring from the collar of the plant, too weak ones should be cut down to that part, leaving the other shoots shorter or longer according to strength. The more tender Tea varieties should be left till last. Suckers coming up from the stock that Roses are worked on should always be pulled or dug up, not cut off, when young, but suckers from own-root Roses should be retained, as these develop into strong flowering shoots.

Seed sowing through this month and next demands attention. The embellishment of the flower garden depends very largely on the successful rearing of many hardy, half-hardy, and tender annuals. Many of the hardy annuals (seeds of which can be purchased at a trifling cost) make the garden gay at a comparatively small amount of labour, and are infinitely better than beds of Pelargoniums. All hardy annuals may be sown with safety now, while the majority of annuals succeed, and, indeed, are benefited by being transplanted from the seed beds to their flowering quarters. A few, such as Larkspur, Lavatera, Lupins, Mignonette, Poppy, and Virginian Stock, are best sown where they are to flower, because, being tap-rooted, they do not bear transplanting well. In every case sow seeds thinly, whether in the open garden or in frames, boxes, pots, or pans, as many thousands of seedlings are practically ruined by becoming crowded in their early stages. Seeds of Asters, Stocks, Phlox Drummondii, Nemesis, Salpiglossis, Sweet Sultan, Scabious, etc., should be sown in pots, pans, or boxes, and placed near the glass in cool frames.

Lettuces.—All varieties of Lettuces will succeed if sown on a well-prepared and sheltered border as soon as the soil is in a suitable condition. To obtain an unbroken supply additional sowings should be made every fortnight during the spring and early summer. One of the most useful varieties for early sowing is Commodore Nut or Tom Thumb. Sow the seeds in rows 9 inches apart, and cover $\frac{1}{2}$ inch deep with fine soil. Plants that have been raised under glass should be, when thoroughly hardened, planted a foot apart each way on a sheltered border, taking care to secure a good ball of soil with each plant. If this system be fol-

lowed the plants will be fully as early and generally more satisfactory than autumn-grown produce.

Parsley.—A good sowing of Parsley should now be made even if there is a prospect of the old plants lasting out well, as April or May sowings will sometimes succumb when June happens to be dry, while March sowings grow well. For present sowing a somewhat shady spot is best, and the soil should have been deeply dug and well manured. Sow in shallow drills, and dust with wood ashes before covering in the seed. F. W. GALLOP.

SCOTLAND.

Begonia Weltoniensis.—Cuttings of this useful and showy Begonia having become available, a good number was put in during the week. Of comparatively rapid growth, *Begonia Weltoniensis* can be grown to an effective size in a few months, and such young plants always give better results than older, cut-back pieces do. Apart from its value for the greenhouse, this Begonia is well adapted for summer use in the flower garden, and as it is very easily propagated from cuttings any required quantity can be worked up before planting-out time arrives.

Double Begonias.—These are always appreciated, and a small batch for special purposes now growing freely was potted from the boxes, in which the tubers were started on Cocoa-fibre, into 5-inch pots. At the same time a further, but much larger, batch was boxed in a similar way for general purposes. After an interval a final batch of 100 tubers will be allowed to start in quite a moderate heat for late autumn work. Most of these Begonias are of decided colours, with a few whites and yellows as foils to the brighter tints. It always appears to me that, of all plants, white-flowered Begonias, especially double whites, are singularly ineffective if used separately or in mass.

Begonias for the flower garden.—A beginning was made with the forwarding of the single Begonias required for planting out. These, like the double varieties above referred to, are laid out upon Cocoa-fibre until some growth is made. In their case, however, a bed is made on a narrow border in a moderately warm greenhouse, upon which the tubers are laid, practically touching each other. Growth is not unduly hastened, and by the time the plants are ready for removal the weather is sufficiently genial to permit of their being replanted in beds in cold-frames until the end of May.

Gloxinias.—A further batch of Gloxinias, already showing signs of growth, was potted into 7-inch and 8-inch pots during the week. These, at first, are given a brisk heat, but when growth is well on the move they will be given cooler treatment. These tubers are now in use for their second season, after which they will be discarded. Peat is sometimes recommended for Gloxinias, and while this may be so, excellent results can be had by using well-decayed loam and leaf-mould in equal quantities, with, of course, sufficient coarse sand. One of the best batches I ever grew was potted in leaf-mould and sand alone. The plants made luxuriant foliage and flowered exceedingly well, but they required much more attention in respect of watering—that is, watering at close intervals—than those potted in the usual compost.

Cesneras were also potted up. Three corms are allowed to a 5-inch pot. These can either be grown on, or, should occasion require, the pots can be broken up, each plant receiving a 5-inch pot. Two good batches at an interval of two months

will maintain a display over a long period. The general details of cultivation are similar to those given to Gloxinias, and *Cesneras* can be hastened or retarded in respect of blooming according to the temperature given.

Sowing, pricking-off, and propagating are matters of daily routine at the present time. A large quantity of various *Antirrhinum* seeds was, among other things, put in. These plants are deservedly becoming more popular every year, and are certainly preferable to *Pelargoniums* for flower-beds. Pricking-off is done as soon as the seedlings can be safely handled. Congested seed-pans mean spindly and weakly plants, and if left too long in such a state damping-off is almost certain to follow. As fast as cuttings in the propagating-case are rooted they are removed and potted off, while their places are promptly filled with further needful cuttings.

Cannas.—These cannot, for some reason, be classed as a success out of doors in these gardens, but they have a certain amount of value as greenhouse plants, and during the week the roots have been potted up. In their early stages *Cannas* prefer the heat of the stove, but afterwards a cool greenhouse temperature suits them. They are very thirsty plants, and during the growing season they require copious supplies of moisture.

Flower-beds.—In the course of the week about a score of flower-beds upon Grass were dug up. The near neighbourhood of a number of trees results in the encroachment of the soil by roots, and every year it is necessary to clear the intruders out as much as possible. This is done by digging the beds very deeply and removing the roots. As the work goes on a good dressing of manure is worked in, which maintains these beds in good order through the season.

Wall-fruit.—A look round shows that buds are now becoming prominent on Peaches and Nectarines with a southerly exposure. A continuance of the mild weather will have the effect of expanding these in a short time, and the necessary protecting materials have been got ready. These are coverings which can be affixed to, or removed from, the walls quickly. This method appears to be preferable to that generally adopted—the fixing of three-ply or four-ply netting to the walls in front of the trees, and which is left until danger from frost is over. Very often there is a spell of mild and sunny weather, when the coverings are superfluous; and further, when these can be removed, bees and other insects more easily get access to the blossoms, and there is, consequently, more likelihood of a satisfactory set, although hand fertilisation is by no means neglected, more especially among the earliest trees to come into bloom.

Onion-beds.—Taking advantage of a spell of very suitable weather the Onion quarters have been got ready. The ground is given a thorough dressing of soot, after which it is lightly forked up. Following this, as soon as the forked-up surface is almost dry it is raked and re-raked until it is quite level, and a good tilth obtained. A beginning will be made among the Onions by the transplanting of the autumn-sown varieties, after which seed-sowing will follow. The portion reserved for plants raised in heat is, meantime, not interfered with, being left in a rough state until the young plants may safely go out.

Cauliflower plants from sowings made early in the year make good progress. Owing to losses from damp and from other causes sowing in autumn and wintering the seedlings in cold-frames have been discontinued. If these were not damaged by

damp the comparative mildness of the average winters in this district resulted in plants being too large and weak to be of much service. After all, plants of early varieties sown in heat and well looked after will give heads almost—if not quite—as soon as those from autumn sowing, and frame space is saved.

W. MCGUFFOG.

Balmoe Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

MARCH 7TH, 1916.

THE fortnightly meeting held on this date was hardly up to the March standard of fulness, several of the larger exhibitors being unable to attend owing to the snow. At the same time, the exhibition was not lacking interest, all departments save those of fruit and vegetables being fairly represented. The more important features were the Tulips from Southgate, the bulbs in bowls and fibre from Messrs. Bath than which nothing finer could be desired, and the delightful lot of *Shortias* from Mr. Perry.—Roses, too, from Oxford and from Twyford attracted largely, as did the *Eucalypti* and *Cytisus* sprays arranged by Messrs. Felton. An obviously beautiful hardy plant novelty (*Isopyrum grandiflorum*) from China was seen for the first time.

HARDY PLANTS AND ALPINES.

These were numerous and in unusually good condition. One of the most fascinating was that entirely of *Shortias* from

Mr. Amos Perry, Enfield, the well-flowered examples as good as could be wished. Only *S. uniflora* and its forms were shown, some of them quite rich in colour. For example, the well-known *S. u. grandiflora* was largely represented. In addition, there were *S. u. Amos Perry*, *S. u. rosea*, and *S. u. superba* (the last a lovely bit of colour). Some hundred or so of well-flowered examples were on view.

Messrs. Barr and Sons, Covent Garden, W.C., had choice Saxifrages, the varieties of *oppositifolia* and *Burseriana* being well flowered. *Iris tingitana* was in this lot, also pretty colonies of *Chionodoxa* and *Narcissus minimus*. Forced Daffodils were very good, Sparkler, Alice Knight (white trumpet), Yorick (yellow trumpet), King Alfred, and Sunrise being some in a large lot, though many seedlings were of merit.

Messrs. Piper and Sons, Bayswater and Barnes, had many good alpine, the rarely seen golden-yellow Saxifraga *Ferdinand-Coburgi* being well in flower. *S. Rocheana* was also good, also *Shortia uniflora grandiflora*.

Mr. G. Reuthe, Keston, Kent, again showed an interesting assortment of alpine and shrubs. Of the latter, *Rhododendron racemosum*, the Portuguese Heath (*Erica lusitanica*), and *Berberis nepalensis* were remarked, while among the former a group of the rich golden-yellow Saxifraga *Haagi* was one of the more conspicuous. The sbapely yellow flowers of *S. Borisi* show that this is but little inferior to *S. Faldonside*, the buff and red *S. Stuarti* showing well. *Ophrys aranifera* and *O. speculum* were among hardy Orchises.

In an interesting lot from Messrs. William Cutbush and Sons, Highgate, N., *Soldanella alpina* was particularly good, also double blue Hepatica, *Tulipa Kaufmanniana*, and Saxifraga (*Megasea*) *Stracheyi*. *Rhododendron racemosum*, *Daphne alpina*, and *Erica carnea*, among shrubby things, were all of merit.

Messrs. J. Cheal and Sons, Crawley,

Sussex, had an exceptionally good lot of *Primula denticulata*, a group of the white-flowered variety *P. d. alba* being very attractive. The strength of these plants is ever best displayed by generous grouping. The rich velvet-crimson *Primrose* Miss Massey was also remarked.

Messrs. Whitelegg and Page, Chislehurst, showed effectively such alpinas as *Primula frondosa*, *Morisia hypogaea*, and many *Saxifragas*, of which *S. Elizabethae* was particularly well done. Some new *Aubrietias* were here too, and of these we remarked *A. Violet Queen* and *A. The Queen* (a novelty with exceptionally large flowers of reddish-lilac). It is of *Arabis*-like vigour of growth.

Messrs. John Waterer, Sons, and Crisp, Bagshot and Twyford, arranged many pretty colonies of alpinas on rockwork, such things as *Saxifraga oppositifolia*, *S. o. alba*, *S. apiculata alba*, and *S. scardica obtusa* (white-flowered) being very good. *S. Faldonside* and *S. Cherry-trees* (probably the two best yellows) were of much merit. *Chionodoxa gigantea*, *Narcissus moschatus*, and *N. cyclamineus* were excellent.

Mr. Maurice Prichard, Christchurch, contributed a variety of well-grown alpinas in pots, a score or so of each kind making quite a representative display. We have never seen finer flowers of *Saxifraga Faldonside*, the nearly shilling-large blossoms being of quite a superior type to those usually seen. *S. Cherrytrees* and *S. marginata* (white) were others of this important genus. *Aubrietia Lloyd Edwards* is of richest purple. *Hepaticas* and *Forsythia intermedia spectabilis* (quite the best of its class) were in great beauty.

Miss C. M. Dixon, Edenbridge, Kent, had a group of *Primroses*, *Auriculas*, *Polyanthuses*, and *Myosotis alpestris* *Royal Blue*.

FORCED BULBS.

The most instructive exhibit under this head was that of bulbs grown in bowls and fibre and staged by

Messrs. R. H. Bath, Limited, Wisbech. No pot-and-soil cultivated examples were ever presented in greater perfection. The bulbs, too, were of many classes, *Tulips*, *Hyacinths*, *Fritillaria Meleagris*, and *Daffodils*, representative of half-a-dozen sections, demonstrating the value of the system. The small-growing *Daffodil W. P. Milner* is ideal for the purpose, *Sulphur Phoenix* and *Lucifer* have rarely been better. The mauve-coloured *Darwin Tulip William Copeland* was superb.

Messrs. R. and G. Cuthbert, Southgate, N., again filled a double table with *Tulips*, arranging a totally different set of varieties from that staged at a previous meeting. The best on the present occasion were *Thomas Moore* (orange), *Vermillion Brilliant*, *Coleur Cardinal*, *Mon tresor* (richest golden), *La Rève*, *White Swan*, and *Golden Lion of Hillegom*.

ROSES.

These from two sources were particularly good. Those from

Mr. Elisha J. Hicks, Hurst, near Twyford, were pot-grown examples, demonstrating excellent cultivation, a dozen or so plants of each sort being staged. Mrs. George Norwood (pink, and one of the sweetest *Roses* yet raised) was very fine, the single crimson *Princess Mary* (a remarkable piece of colour) being quite a feature. Mme. Edouard Herriot was also superbly shown.

Mr. George Prince, Oxford, had a greater variety, chiefly in the cut state. *George Dickson* (deep rich red of fine shape) was excellent. *Fortune's Yellow*, *Climbing Niphotos*, Mme. Edouard Her-

riot, *White Killarney*, and Mme. *Melanie Soupert* were a few of those shown. Sprays of the yellow *Banksian Rose* were also included.

CARNATIONS.

Messrs. William Cutbush and Sons, Highgate, N., arranged excellent stands of *Lady Ingestre* (one of the best of the pink set), *Marmion* (scarlet and white), Mrs. C. F. Raphael, *Carola* (crimson), and R. F. Felton.

Messrs. Stuart Low and Co., Enfield, included in an exhibit of these flowers *Pink Perfection*, Mrs. Mackay Edgar, Champion (scarlet), and others. In that from

Messrs. Allwood Brothers, Haywards Heath, the stands of *Rosette* (of rich cerise tone), *Mary Allwood*, *Princess Dagmar* (rich crimson), *Fairmount* (heliotrope), and *Marmion* were the more handsome.

GREENHOUSE PLANTS.

The group of *Cyclamen latifolium* in variety from

Messrs. James Carter and Co., Raynes Park, S.W., claims attention here, and rarely have these beautiful subjects been more finely staged. Arranged in colour batches of many plants each, the effect was excellent. Of pure whites there were *Mont Blanc*, *Charming Bride*, and *White Swan*, all distinct and of high merit. Brilliant, while good by way of contrast with these, was most effective. *Queen Mary* is of rich salmon. Mrs. L. M. Graves, with a much greater leaning to scarlet, is very telling, though perhaps the silver-leaved *St. George*, with salmon-scarlet flowers, is one of the most effective.

Messrs. H. Cannell and Sons, Eynsford, Kent, showed *Cinerarias*, *Pelargoniums*, and *Cyclamens* in variety. Large-flowered and stellata varieties represented good strains of *Cinerarias*, the brilliant winter-flowering *Pelargoniums*, *Firefly* and *Maxime Kovalesky* (orange-scarlet) being two of the more conspicuous of these.

Messrs. R. F. Felton and Sons, Hanover Square, W., again had a remarkable exhibit of *Eucalyptus resiniferus*, one of the most ornamental and decorative of these plants; also very fine stands of the graceful *Cytisus monospermus*, whose white flowers are in striking contrast with the crimson-coloured calyces. Vases of *Roses Lady Hillingdon* and *Richmond* were very good.

ORCHIDS.

Messrs. Charlesworth and Co., Haywards Heath, had many examples of *Odontoglossum crispum xanthotes* and *Odontiodas*. *Odontoglossum The Czar* (first-class certificate) is rich crimson with occasional lines of white.

Messrs. Sander and Son, St. Albans, had several well-flowered examples of *Dendrobium Wardianum giganteum*; also two pure white *Cattleyas*, C. *Majali Sander* and C. *Mülleri*, together with a variety of *Cymbidiums*, *Coleogyne flaccida*, and *Odontoglossums*.

Messrs. Armstrong and Brown, Tunbridge Wells, had some of their choice *Odontoglossums*.

Messrs. J. and A. McBean, Cooksbridge, showed *Cymbidiums* and *Odontiodas* both in some variety. *Cymbidium Alexanderi Excelsior* (Award of Merit) is of richer rose colour than the original.

Messrs. J. Cypher and Sons, Cheltenham, contributed a variety of *Cymbidiums*, *Odontoglossums*, *Cypripediums*, *Lycastes*, and well-flowered *Sophrontis grandiflora*.

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Tulips failing (H. S.).—We imagine your culture is at fault. Very probably you placed them in the stove, which was far too hot for them before sufficient roots had been formed. They ought to have been plunged in the open air in ashes or Cocoanut-fibre, so as to encourage the formation of plenty of roots before the top growth started.

Maiden-hair Fern (Pteris).—You made a mistake in repotting the Fern in December; the beginning of March would have been a better time. When the Maiden-hair Fern is kept altogether in a room it does better in those from which frost is only excluded than in warmer ones. The warmth of your room causes the young fronds to grow; but as soon as they get a little above the soil, the dry, heated air to which they are exposed causes them to die away. Try placing your plant in a cooler room, where it does not get the full force of the sun in the middle of the day.

Deutzia gracilis after blooming (T.).—*Deutzias* that have been forced or flowered in the greenhouse should be gradually hardened off, so that when all danger of frost is past they may be stood out-of-doors. At that time any old and exhausted wood should be cut out in order to allow room for the development of young and vigorous shoots, while, if necessary, the plants may be repotted. The great point is to have the wood well ripened by standing the plants in a sunny position during the summer, taking care that during growth they never suffer from want of water. *Deutzias* will stand for years in the same pots and flower well each season, provided they are occasionally watered with liquid-manure during the growing period.

Zonal Pelargoniums (E. J. Aggett).—Good varieties for your purpose would be *Paul Crampel* or any of its progeny. The class is notable for large trusses of flower, and the growth of the plants is comparatively quick as well as naturally bushy. You should obtain plants in or from small pots, and at once repot into the 5-inch size. They should have a shift later into 8-inch pots, in which they may flower. Loam with a sprinkling of bone-meal is a good compost. In this the growth does not go unduly to leaf. For the time being a shelf in a greenhouse from which frost is kept out will do well for the plants, putting them in a cold frame in May. Take away all flower-buds as they appear up to six weeks of the date of show. When blossoms are developing feed with guano-water or sulphate of ammonia.

Carnations out-of-doors (Dianthus).—If the soil has not been thoroughly dug, lose no time in getting this done at once, incorporating with it some thoroughly-decayed manure if it needs enriching, or, better still, a good dressing of soot, wood-ashes, or any burnt refuse of that description. At planting, which do as early in March as possible, be sure and tread the plants in firmly, as *Carnations* love a firm root-run—in fact, they will not flourish in loose soil. After this the only attention needed is to keep them clean, and when the flower-spikes are pushing up, if fine flowers are desired, it will pay to top-dress them with a little well-rotted manure which may be watered in if the weather is dry. If it is desired to increase them, layers should be put down in July as soon as the shoots are fit for layering.

VEGETABLES.

Celery failing (A. M. M.).—The trouble is due to various causes. Sometimes seed may be saved from a stock that has prematurely sent up flower-stems. Sometimes it arises from sowing too early (the most common cause), sometimes because the plants have inferior culture when young, getting half-starved because overcrowded in the seed-pans or boxes. When the seed is good, plants raised in March or April, the seedlings when strong enough dibbled out under handlights or into other boxes or pans quite thinly, and later culture good, bolting seldom follows.

SHORT REPLIES.

Strobilus.—You may plant *Aucubas*, *Berberis*, *Choisya*, *Enonymus*, *Magnolia stellata*, *Olearia Haasti*, *Rhododendrons*, *Skimmias*, all of which would do well in such soil as you have. —*W. Brown*.—Your query was answered in our issue of February 19th, page 104, under "Short Replies."—*A. B.*—The only thing we can suggest is that very probably the plants were very dry at the roots when you applied the liquid-manure, which was too strong. Fumigation while the leaves were damp would also cause it, while sulphur fumes would also bring it about.—*E. S. Sterry*.—From what you say, we fear you have a grafted plant. The graft has perished, and what you are growing is the stock, probably a variety of the common *Privet*.—*Constant Reader*.—The illustration on page 137 and article will explain the meaning of the term "down hearth."—*F. B.*—See reply to "Oak, Prestbury," in our issue of March 4, page 130, re "Acetylene gas refuse."

GARDENING ILLUSTRATED.

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Founded by W. Robinson, Author of "The English Flower Garden."

MARCH 25, 1916.

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NOTES OF THE WEEK.

Vitis Thunbergi.—The large *Vitis Thunbergi* was bought at Boskoop, in Holland, about 1872, and the plant came from Siebold's Nursery at Leiden.—A. W., *Knap Hill*.

Saxifraga oppositifolia rubra.—This is at present (March 6th) flowering freely in Mr. Hornel's rock garden at Broughton House, Kirkcudbright. Suited by its environment, *S. o. rubra* makes large and handsome tufts, almost hidden by its numerous and effective flowers.

Andromeda japonica.—Here *Andromeda japonica* grows in almost any soil, well mixing leaf-soil and a little thoroughly rotten cow-manure. We have some of the large *Rhododendrons* blown over and many on one side. The snow did not do so much damage as the wind. I hope we may soon have some fine, dry weather.—ANTHONY WATERER, *Knap Hill Nurseries, Woking*.

Sweet Peas.—I thoroughly sympathise with one of your correspondents who wrote some weeks ago on Sweet Peas, and said that the new sorts are much too numerous, and also improved and cultivated to simple coarseness. I prefer three blooms to four blooms on a stem, and a row of them 6 feet to 10 feet high, but I suppose I am hopelessly old fashioned.—AN OLD FRIEND.

Rhododendron intricatum.—A fairy bush in the wondrous family it belongs to. Surely the growth of some lofty alpine colossus among the mountains over 12,000 feet high. From Sir Frank Crisp. These winter-flowering kinds are so apt to get spoiled by frost or fog, that it might be worth the while of those men who enjoy winter flowers to grow a few of the best in baskets to bloom in the house in safety.—W.

Antholyza crocosmioides.—I am obliged for your reply *re Antholyza* (March 11th, p. 134). From what I have since heard, I conclude that it is a mistake to pull an old free-flowering plant to pieces as long as it goes on blooming. If pieces are replanted all the tubers should be retained. If the two top tubers only are retained it takes several years before the plant flowers freely.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

Cotoneaster montana.—There have been recently a good many references to *Cotoneasters*, but the above has not been mentioned. It came to me many years ago under this name. I have always looked

upon it as a form of *C. frigida*. Its peculiarity is that the birds let it alone. It is now glorious when the sun is shining upon it. My biggest plant is 40 feet wide by 25 feet high; a shining mass of red. These berries, except those the winter's gales shake off, will be on next April.—T. SMITH, *Newry*.

Eschscholtzia caniculata Mikado.—Everyone is familiar with the popular *Eschscholtzia californica*, but few seem to know the variety of *E. caniculata*, known as Mikado. Of a compact habit, the blooms are produced on erect and wiry stems, and as they are very numerous a fine effect is produced, more especially on sunny days. The flowers are of a bright scarlet touched with orange, which is more intense near the centre.—SCOR.

Iris reticulata.—I do not remember to have seen any notice of one quality in this delightful flower which distinguishes it from nearly all others of the genus, namely, the length of time the flowers remain fresh when cut. The fault of so many species of *Iris* is the ephemeral character of their blooms. *I. unguicularis* lasts well in a vase, but *I. reticulata* long outlives it. I cut some flowers of both on February 24th; to-day (March 2nd) the former has withered away, but *I. reticulata* is still quite fresh and brilliant.—HERBERT MAXWELL, *Monreith*.

Plants in bloom at Warley Place, Essex.—I have just been looking round and although snow has not quite disappeared I find the following in full flower—not a few stray blossoms. In a few days there will be many more.

- | | |
|--------------------------------|------------------------|
| Correa alba | S. Boydii alba |
| Coronilla glauca | S. oppositifolia |
| Pyrus japonica | S. coriophylla |
| Jasminum nudiflorum | Androsace carnea |
| Orobus vernus | A. Laggeri |
| Saxifraga (Megasea) Aitchisoni | Iberis Garreixiana |
| S. purpurascens | Pulmonaria |
| S. apiculata | Andromeda japonica |
| S. apiculata alba | Erica carnea |
| S. apiculata Alberti | E. alpina |
| S. aretioides | E. mediterranea |
| S. Cherry-trees | E. mediterranea glauca |
| S. Elizabethae | E. codonodes |
| S. Rocheliana | Clematis Armandi |
| S. Boydii | C. cirrhosa |

—E. WILMOTT.

Grevillea angustifolia.—Flowering branches of this attractive greenhouse shrub were staged by Messrs. R. F. Felton and Sons at the Royal Horticultural Society's meeting on February 22nd. The curiously-formed flowers are produced in short terminal and axillary racemes, the greater effect due to the brilliant colour of the inch-long protruding styles of reddish-carmine hue. The narrow leaves,

each 6 inches to 8 inches long, have conspicuously jagged margins, dark green above and silvery beneath, in sharp contrast to the red effect of the flower racemes. The whole plant is hard and wiry, notwithstanding which it is most enduring when cut. The examples referred to were imported, and whether the species is in cultivation I am not aware. In any case it is of high decorative value and worth looking after.—E. H. J.

A fine Arum bloom.—I think it may perhaps interest some of your readers to know the measurements of a white *Arum Lily* now in bloom in my greenhouse. It is the largest one I have seen, and no special treatment given it. I cannot remember from whom I got it, but my gardener says I bought it a few years ago, seeing an advertisement saying it "carried the blooms so well above the foliage," and this you will see it does from the height measurement. It is a splendid bloom, so pure a white and so thick and solid. Only this one bloom is out at present, but two more are coming on, so that it promises to be a free bloomer, as it is a comparatively young plant in an 8-inch or 9-inch pot. The height of the flower-stalk is 6 feet 2½ inches, and the longest leaf measures 52½ inches. The breadth of the flower across is 8 inches, and from the point where the flower folds over to the tip of the bloom the length is 9½ inches.—AN OLD FRIEND.

A winter-flowering Rhododendron.—Of recent years a *Rhododendron* has come to me and others in the district which justifies the description. Not being sure of the name I sent it to Mr. Anthony Waterer, *Knap Hill*, who names it *R. venustum*, and says it was one of the seedlings of arboreum grown there many years ago. Mr. Bean, writing from Kew, says:—

"The *Rhododendron* from Haarlem is very like *R. venustum*, as Mr. Waterer says, but I do not think it quite matches. It is one of the early arboreum hybrids of which some got about without names. If you want more of it, and order either *venustum* or *Jacksoni* from Smith, of Darley Dale, you will get something quite as good and scarcely different."

[The weak point in these winter-blooming kinds is the liability of the flowers to injury from frost, but does not this tell us to grow them in baskets or big pots, so as to be able to readily bring them indoors in mid-winter, and so enjoy them at a dull time for flowers?—W.]

Gardens and water-colours.—May a water-colourist protest against "W.'s" strictures in the note on the above in the issue of March 4th, page 119? If he means by the term "an amateur of painting," the names of Turner, Sargent, and a host of others would show that water-colour is not inferior to or distinct from painting. I venture to think that gardeners have done less to foster true ideals of beauty in gardening than the painters, who, while recording the best that has been attempted, have for centuries sought and immortalised those effects of massed colour and verdure, light and shade, now generally admitted to be the first principles of garden planning. I know no better test of the beauty of a walk or border than its "paintableness."—R. NOLAN FERRALL.

[It is curious how Mr. Ferrall has misread my note. I made no comparisons between oil or water-colour paintings, but tried to make some fun out of a badly-planted garden which the owner excused by using some terms of water-colour painting. Painting, good or bad, was not mentioned. In describing a beautiful garden I should be glad to have the aid of a good artist to paint it, but many gardens are so ugly that an artist would run away from them.—W.]

Potash in the garden.—The note on garden sources of potash in your issue of March 4th is interesting. In view of the fact that the only large deposits of potassium in the world are in Stassfurt, Germany, it is essential that every effort should be made to discover and develop other sources of supply if possible within the British Empire. A most interesting pamphlet, "The World's Supply of Potash," was published by the Imperial Institute last year, price one shilling. But it is desirable that all owners of gardens should, so far as possible, recover their own potash from their own waste-material, such as weeds, hedge trimmings, vegetable waste, and especially Nettles, which contain 2.75 per cent. of potash, or nearly four times the amount contained in any other vegetable material except Wormwood. The potash is easily obtained by burning these materials. The ashes being very soluble must be protected from wet and heavy dews, and frequently removed to a dry place and mixed with super-phosphate of lime. It is necessary that the mixture should be applied quickly to the soil, as it does not keep well. In ordinary gardens it ought to be easy to dig a pit, or, still better, two contiguous ones, so that while one is cooling for the extraction of the ashes the other may be burning any available material. The two pits could be covered with curved corrugated iron supported on iron rods, to keep off moisture. Gardeners would welcome further practical suggestions from your readers on this subject.—L. H., *Nuneham Park, Oxford.*

Primula malacoides.—From the time of its appearing a few years ago—the species secured an Award of Merit in November, 1908, when shown by Messrs. Bees—this remarkable Chinese kind was destined to attain great popularity, a popularity which has not waned. So far as I know attempts to hybridise it with others have not been successful, in which respect it is like another popular Chinese kind, *P. obconica*. Like it, too, the more recently-introduced kind would appear to be endowed with some variability, since it has already given rise to two or three distinct forms as well as others of intermediate colour. Of these alba, robusta, and Rose Queen are the more desirable. Much the finest so far, however, is that recently

introduced by Messrs. Carter and Co., Raynes Park, and which, as "King Albert," gained an Award of Merit at the Royal Horticultural meeting on February 22nd last. Its superiority consists in the warmth of its rosy-lilac flowers—a great advance in this respect on anything yet seen—their larger size and more compactly-arranged whorls of blossoms. It is also remarkable for freedom of blossoming, the array of spikes and the colour of the flowers constituting quite a unique feature.—E. H. JENKINS.

GARDEN PLANS.

MOTHER EARTH OR THE DRAWING-BOARD.

THE few observations I made about Scotney a week or two ago have raised an interesting question. A designer of gardens, whom we will call "Wessex," misconstrued my reference to the "drawing-board." I referred solely to the gardens that were made before English writers and others had thrown light on the subject of true garden design. It is not easy to refer to those old books, they are rare, but the gardens are well shown in Mr. Mervyn Macartney's book on "English Houses and Gardens" (Batsford). They show clearly that there was about as much art bestowed on gardens in those days as people give to kitchen or nursery gardens now. They had straight lines in all directions, not merely round the house, but very often covering the whole of the ground visible from it. Anyone can see that design in any artistic sense of the word was totally absent. "Futilities" is the mildest term that could be applied to them. They steal all the life and character out of the garden.

In the note on "Scotney Castle Gardens," in GARDENING ILLUSTRATED of February 19th, you say: "This is the sort of thing that does not come into the calculations of the man who designs on a drawing-board in straight lines and avenues, and all sorts of futilities to hide the landscape."

(1) It would appear from those remarks that you deprecate the use of the drawing-board, or any attempt at the designing of gardens on paper. (2) You also appear to suggest that the mere fact that one makes a plan of a garden inevitably restricts him to the use of "straight lines and avenues, and all sorts of futilities to hide the landscape." (3) And you further appear to suggest that introductions of "straight lines and avenues" are under all circumstances "futilities that hide the landscape."

Assuming one has an intimate knowledge of the plants, trees, shrubs, etc., required, their habits of growth, and has also studied the situation to be dealt with and made a scale drawing thereof, surely it is practicable to prepare a planting scheme on paper in such a way that they who lack the same intimate knowledge can achieve a success that would be impossible without such a plan. As an instance I might mention the planting of a lake-side, whether for distant or near effect, and even the planting of wild gardens, or even in such quarries as the one at Scotney. Surely it is better for one who knows what is best in such cases to give his instructions in the form of plans and drawings rather than leave the planting during his absence to chance in the hands of some under-gardener who may know well *how* and *when* to plant, but who,

for some reason, may not know *where* to obtain the best results.

The result achieved by thus giving graphic illustrations to workmen will be far less liable to necessitate correction in after years than the mere haphazard dumping in anything anywhere, because it will grow there. Nor is it necessary to depart from the "making good use of the accidents of the ground" because one makes a plan of it. Rather it assures that the draughtsman will, in constructing in miniature the preconception of the results aimed at, find many little ways of improving and simplifying the work. Personally, I have often found that a certain treatment that seemed highly desirable on a previous inspection of the ground could be modified and improved when testing the idea on paper. "WESSEX."

The main question is paper or earth? All other issues are subsidiary to this very important one. Plans may be necessary to professional men in cities, but laying out a garden by means of paper plans is certainly not the best way.

MR. ROBERT MARNOCK was the most trusted landscape gardener of his day. He was a gardener by training, and he knew that work well before he took up landscape gardening. He had good men with him, and plans were essential to his work, and no doubt were as well thought out as they could be; but he told me that however carefully thought out the plan, he found it necessary to modify and improve it on the ground whenever he could. In any work I have had the pleasure of doing in my own or in other places I have never made use of a paper plan or sketch of any kind, but have marked all changes on the ground itself. If any instructed designer can put lines on paper surely he can do so on the ground itself? The only time I have ever worked from a plan has been on making roads, when, some of the work being done by contract, we had a surveyor. Afterwards, on going carefully over the lines I found they were not always of the easiest gradation for the advantage of horse or motor. The only fault I find now is in one place where I did not thoroughly examine the ground after the paper drawing was made. In an up-and-down country things may be overlooked by the surveyor which may have a great influence on the work to be done afterwards.

EDOUARD ANDRE was the busiest gardener in Europe for a good many years. He had to plan out gardens in many places which were far away, and could not, like Sir Boyle Roche's bird, be everywhere, so he had to depend much on paper plans. One day, in discussing with him the effect of such plans on gardening, we both agreed that it was generally bad, and he drew for me some little diagrams of what one might expect in visiting gardens in the neighbourhood of Manchester, or London, or Paris, or Berlin. That shows clearly as anything can the evil effect of office plans even in the best hands.

At that time we went together to see one or two places in Touraine that he had laid out. It is a stereotyped way in France to have an area of gravel round each house or chateau; why it should be so is not clear except it is to keep the burglars from taking advantage of cover. In one place we went to there was level ground on one side of the house. The other side fell into a pleasant vale. No attempt, however, was made in the foreground to keep the two scenes quite separate. That had been done many years ago by André as a young man with stereotyped notions. I asked him: "If you had to do this again

would you do it in the same way?" He replied: "Certainly not," and we quite agreed.

DANGERS OF PAPER PLANS.—The conventional plans which are to be found in every office and every big book on gardening are a drawback to good design. Office plans lead to waste of time and much labour on paper, in often bad light. It leads to the mystification of simple people who might otherwise do good work in farm, garden, or woodland, but who have got the idea that pictures can only be made by professional men in towns. When builders deal with an area of ground about

garden differing from its neighbour according to the taste of the different owners, free from office plans.

A friend of mine, a devoted cultivator of plants, and very successful in that way, left his landscape work to a man now dead, but of some repute at the time, whose plans were generally office made, and to a great extent one like the other. The earth puddings and clumps were not graded in any natural way; they should have been gently flowing to the lawns; they were ugly to look at and difficult to mow and plant; and as the soil was a flinty one the result was most unfor-

TREES AND SHRUBS.

RHODODENDRON NOBLEANUM IN SUSSEX.

I NEVER read a better article on Rhododendrons than the one which, signed "D.," appeared in the issue of GARDENING ILLUSTRATED of March 11th, page 136. So it is quite useless for me to attempt to add anything to what he states. But I would like just to mention that this Rhododendron has been a beautiful sight in a wood on a forest ridge in Sussex—so cheery and bright in the most dismal weather. As an undergrowth in woodland, one can scarcely imagine anything more beautiful.

W.

THE ALPINE FOREST HEATH (ERICA CARNEA) AND ITS VARIETIES.

I HAVE grown for some few years the white and rosy varieties of this attractive little Heath, whose first blossoms usually appear at the New Year. A selection of charming varieties was distributed in 1912 by Messrs. Backhouse and Sons, of York. These were collected by Mr. Richard Potter on the Continent. Although it is, as yet, too early to judge of their beauty, when boldly massed some idea of their value is apparent, and I predict a great future for some of these charming, bright, early forms when they become better known. Some of the names are appropriately chosen, others would have been more interesting had it been possible to name them after some hill, valley, or stream near which they were discovered. So far as growth is concerned they possess the same habit as the parent and are quite as hardy. A little in advance of the others as regards flowering, and the deepest in colour, are *E. carnea gracilis* and *E. c. praeox rubra*. It requires a close inspection to discover any real distinction between them, although I find the former a little more compact in growth. The colours given by the raisers are as follows:—

E. GRACILIS, Italian pink, pale at the base, dark brown tips.

E. PRAEOX RUBRA, rich rose-carmine self, tips deepest madder-brown.

E. KING GEORGE, purple suffused carmine, dark brown tips, a very free-flowering variety.

E. QUEEN OF SPAIN, pale madder-pink, madder-brown tips. My plants of this form have not done so well as the others.

E. PINK PEARL, blush pink, slightly paler at the base. This, of a lovely soft colour, is one of the most distinct.

E. WINTER BEAUTY, pale Italian pink, suffused delicate grey, burnt sienna tips.

E. MRS. S. DONCASTER, rosy-carmine, burnt sienna tips, a very beautiful and promising variety with rather larger flowers than usual.

E. C. J. BACKHOUSE.—The flowers of this variety are, in colour, exactly the same as those of *E. mediterranea hybrida*, although the plant is apparently a dwarfier grower.

E. JAMES BACKHOUSE, pale madder-pink, with delicate suffusion of fawn, rich madder-brown tips. This is a distinct and beautiful form.

E. THOMAS KINGSCOTE, Italian pink, paler at the base, tips rich brown.

E. M.

New Index and Binding Cases for completed Volume.—The Index to Volume XXXVII. of GARDENING ILLUSTRATED is now ready (price 3d., post free 3½d.). The Binding Case for the same volume is also available (price 1s. 6d., by post 1s. 9d.). The Index and Binding Case can be obtained from any newsagent, or from the Publisher, 63, Lincoln's Inn Fields, London, W.C. If ordered together, the price of the Index and Binding Case is 2s., post free.



Rhododendron Nobleanum in Sussex wood in February. Planted some fifteen years in partial shade, about 600 feet above sea level.

a house they have often had no experience of trees or vegetation. In such a case it is easy to get some young man in an office to get out a plan for a place to which it is quite unsuited. The results are seen in gardens and parks everywhere.

Most of the park-like country round London and in the Home Counties is spoilt by planting trees in rings and dots. It needs no elaborate drawing to show that this is wrong.

This stereotyped style in gardening is a great evil, and it is only when one gets away from countries where such a thing is practised that one sees how bad it is. In Madeira, for example, one finds every

tunate for the plants and trees. There was no need to pinch the labour, and all such work should have been done under the direction of an experienced ground workman.

The sum of all this is that it is a complete delusion to suppose that plans for picturesque gardens can be made or improved on paper. In the open air and on the ground things far more important come into consideration—e.g., backgrounds and near groups, views near or distant, gradation of the earth, and nature of the soil and vegetation of the place, all of which call for complete knowledge of the subject and the eye of an artist.

W. R.

FRUIT.

APPLE-TREES FOR PICTORIAL EFFECT.

APROPOS of the notes on this subject, too frequently we find that it is impossible in gardens to combine beauty and utility, and in consequence there is a great waste of good space. This is shown very largely in many modern gardens where fruit-trees are relegated to the orchard or the kitchen garden. Happily, this defect is not present in many of our best gardens, in a number of which there are borders of hardy flowers screening vegetables from the paths, and having behind them some of our best Apple and other fruit-trees. In some good gardens I know there are at intervals Apples trained over pergolas of iron or wood, with Snowdrops, Daffodils, and other flowers beneath. So, also, the trees behind the hardy plant borders when in bloom give most delightful additions to the beauties of the hardy flowers in front. There is, indeed, nothing more beautiful than a fruit-tree in full bloom, as it harmonises with the early flowers of the border, and the two combined afford a picture of floral beauty which cannot well be surpassed.

In certain of our old gardens the aid of the fruit-tree in the garden scheme of decoration was perhaps better understood than now. Their makers had not the wealth of spring flowers which are now at our beck and call, and, possibly as much for their beauty as for their utility, they planted Apple-trees largely in the borders. I know many old gardens where these trees must have been a great feature long ago, and which still reveal in some degree the charms of the combination of Apple blossom and the Narcissi, Anemones, Polyanthuses, Primroses, and other flowers of the season. In addition to the charm of the blooms on the fruit-trees, there is, moreover, that of the fruit. In its various stages the fruit is always interesting, and when the Apples begin to ripen there is a subtle harmony between these and the Sunflowers, the Starworts, the Daffodils, and other flowers. It takes nothing from the attractions of the flower garden to have within its bounds fruit-trees whose beauty does not only consist in the blossoms of spring, but also in the ruddy or golden fruits of the autumn time. If we can admit the Japanese double Cherries or the Crabs into the flower garden or the shrubbery, surely we can find room for our good Apples and other fruits. S. A.

RASPBERRIES AND FAILURES.

C. TURNER's note at page 138 commenting on my note at page 94 is scarcely to the point. He does not read my remarks correctly. He says my advice is unnecessary, and refers to ordinary culture, which all growers of experience know is simple enough. C. Turner says he has a moist, strong loam to deal with, while my note concerned a thin, poor, gravelly soil, that, given ordinary culture as C. Turner advises, produced Raspberry canes no thicker than straws. I am taken to task for advocating what he terms annual culture. I never did. I advised new beds to be made more frequently in such land, and I presume the idea of annuals, as he terms it, arose from the fact that I advised a new bed to be made yearly, but I did not say destroy the others. I advised making a new bed on a fresh site, and by this I meant that it was a good plan to do this, as by so doing one always had good material. It is by no means difficult to plant a few rows of Raspberries, accord-

ing to the requirements, and I always did it at one end of the quarter, destroying the oldest, which may have been five years or six years old at the other end, or if this was not feasible, making a fresh plantation wherever I could. I would ask my critic to read a note in the issue of GARDENING ILLUSTRATED, page 109, on autumn Raspberries, by a well-known fruit-grower, who has had many years experience, and probably has grown some of the best fruit ever seen. Mr. Allan advocates planting annually, so that evidently there is not so much wrong after all. In my case Raspberries were required by the hundredweight daily. My endeavour was to get plenty of fruit of the best quality, and to do this I had to study the soil and vary the culture if necessary. In such a soil I would not keep beds ten years, as advised, however well made, as in such the canes after five or six years become very weak. I have, like C. Turner, been fortunate at times in having a good soil. Though in those days Superlative was not in existence we had others of fine quality. I advised 2 feet of heavy loam, but it must be remembered my soil was worthless, and though I should have added the heavy loam was trenched to that depth, no one would dream of digging trenches and putting in two solid feet of loam. I regret I did not make that point more clear. The loam was placed on the quarter and well incorporated with the top soil as the trenching proceeded, the gravel being removed from each trench. Though a laborious task, it was well repaid, as, once the heavy loam is in position, it can be made good use of for many years. Of course, less would have sufficed on better land.

A few words as to the objection to cutting down the canes to obtain late fruit. It is a common practice to do this, and Superlative is one of the best for the purpose. Many years ago I was employed in a large fruit nursery, and I noted that any canes not sold were transplanted and cut down much lower than one does in a private garden. There was always a quantity of late fruit in consequence, and I found this system in later years just filled the void between the summer fruiters and the late autumn varieties. There was a large demand for these fruits, and it was met in an easy way. F. K.

NOTES AND REPLIES.

Hardy fruit. — Recently-planted trees need to be examined occasionally and all ties and stakes secured to prevent damage from winds, which have been unusually severe this season. Advantage should be taken of suitable weather to have all trees that require it mulched. Mulchings for established fruit-trees should be composed of rich manure, but at this season it is better to apply it in two or three dressings, as a heavy dressing makes retentive soils cold and wet. On soils that are very heavy and cold a good dressing of lime and wood-ashes is preferable at this early season to mulchings of manure. The nature of the soil and the condition of the roots should determine the kind of mulch that is used, for it will do more harm than good if rich mulches are applied to trees when the roots are not in a condition to take up the manurial properties. Mulches applied to recently-planted fruit-trees should be for the purpose of retaining the moisture in the soil, and should preferably be of a light nature.

Strawberry beds.—A resumption of the dressing of the soil between the rows with an artificial fertiliser, which was interrupted by the heavy snowfall, has taken place, and will be brought to a conclusion as quickly as possible. The action of the snow and frost on the soil has been such that it now breaks down more readily than was previously the case.

GARDEN FOOD.

NOTES AND REPLIES.

Pear Olivier des Serres.—The illustration on page 107 shows this fine Pear to perfection, its rather flat, Apple-like shape and distinct eye being well seen. It does remarkably well with me, a row of pyramid trees bearing freely every year. One of the last Pears to be gathered, it often hangs firmly long after the foliage has fallen. Although its season is usually given as February and March, the fruits with me are at their best in the latter part of December and early in January. Every season I have great difficulty in ripening a large number of this Pear. About the end of December little brown specks appear on the side of the eye, quickly developing through the core, and ultimately spreading all over the Pear, the decaying part being very bitter. Large lamps are used in the fruit-room for a few hours in the early morning during December, as the room is rather cold at that time. I suspect the low temperature is the cause of the trouble, but it is such a good Pear that I should welcome the opinion of some other grower who has been more successful with it. The golden-brown skin is very tough, but when this is removed Olivier des Serres is a firm-fleshed and delicious late Pear.—E. M.

[The room is evidently too cold. Try rolling a few of the fruits in tissue paper, placing these in a box and standing in a cupboard in a warm room, and you will find that the trouble you complain of will vanish.—Ed.]

Two useful late Apples. — Though opinions differ as to the merits of certain varieties, I am sure those who wish to grow the best quality Apples will not go far wrong if they rely upon such kinds as Lane's Prince Albert and Newton Wonder for use at this season and up till May. It may be said that Newton Wonder in May is past its best, but I have found it of great value at that date, either for cooking or dessert. This is a great gain, especially to those who can give it cool storage and grow it in quantity. Few Apples at this date are, in my opinion, superior to Prince Albert, and few varieties give a better return. The best results I have had were from dwarf trees, as, owing to its spreading growth and heavy bearing, I think this mode of culture suits admirably. Like the Newton Wonder, this is a good dessert Apple at this season, and crops more regularly than others, owing to its late blooming. Prince Albert, when cooked, is of splendid quality.—M. K.

Celery.—Over-cultivation is the ruin of many crops. Celery is prized chiefly for its crispness and flavour, but so long as this perpetual striving after size is permitted, just so long will Celery be unsatisfactory. In private gardens it ought to be borne in mind that quality is the first consideration, and by growing Celery under more natural conditions that can be procured. Compare one of these huge, pithy exhibition heads with one grown under more natural methods. It will be found that the former is largely composed of coarse outside stalks, while the edible portion cannot be compared with that of the latter in point of sweetness and crispness. Further, the keeping qualities of the smaller and firmer produce are superior to those of the larger and coarser stuff. Less manure and less forcing will, without question, result in better and finer Celery, and, in the case of this vegetable especially, size is not everything.—KIRK.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

AMERICAN PLANTS IN AN ENGLISH WOOD.

AT one time we used, and still often use, the term American for the evergreen shrubs, for which we are, to a large extent, indebted to the flora of America. Often in our own land the garden is set out in the full sun and exposed to all weathers. In the case of small gardens in suburbs there may be no choice, but in country places there is often a chance of finding some spots of value for growing things more naturally, and of this the

away from all distraction. The garden here shown was made by the late Sir Henry Yorke, and no illustration can give any idea of its grace and variety.

W. R.

AMONG THE HARDY FLOWERS.

SAXIFRAGA BURSERIANA.—It is not surprising to find so many people delighted with the varieties of *Saxifraga Burseriana*. They are all very beautiful and their earliness is a source of pleasure. I would suggest that the authorities should not allow so many names of varieties to be recognised. It may be all right for those who are constantly in touch with the new forms, but it is tantalising to spend money on a new Rockfoal of which a glowing

and grit, and a small proportion of old crushed mortar. I have sometimes added a few bits of charcoal, pounded small, with the result that the plants are more vigorous and healthier.

MOSSY SAXIFRAGES BURNING BY SUN.—No garden can be complete without some of the Mossy Saxifrages. These, like the *Burseriana* varieties, are far too numerous. When the plants are small there is little trouble with them, but when a small cushion spreads out into a big one the trouble of burning in the centre appears. An unsightly patch of decay shows itself in the middle, this spreading rapidly. I think exposure to the sun and drought, even in a shady place, are the causes of this decay, and I am now growing my



A garden of American plants in an English wood.

very best example I have yet seen is the one illustrated here.

Taking advantage of an old deposit of leafy and peaty soil near a stream with good trees overhead and for background, here was a chance of growing the evergreens of America to the best advantage. Many of these trees and shrubs, in the south of England at least, do best in shade or partial shade. No design was needed in this case, except planting in natural ways. There was the most complete repose in the surroundings, formalities were forgotten, and the only care was to shut out the rabbit and the hare, and that was done by means of wire-netting concealed in the shrubs. A rustic shelter is a welcome place of repose,

description appears in a catalogue and to find that it is little, if any, better than one which has been in the garden for a year or two, or, maybe, longer. At present I think *grandiflora*, *Gloria*, *speciosa*, and, perhaps, *crenata* might possibly find favour.

DISEASE IN SAXIFRAGA BURSERIANA.—Probably Mr. E. H. Jenkins may have something to say about this disease (if disease it be), which causes the plants to grow bare in the centre and gradually die off unless broken up and the best bits replanted. I think it may be due to want of top-dressing, as I find that my plants last longer if I work in among the foliage in autumn and after they have flowered some good compost made up of fine loam, some old leaf-soil or peat, a little sand

Mosses on the north side of my rock garden, where they are as brilliant in winter and free-flowering in spring, and much longer healthy.

PRIMULA ROSEA.—To read of the new Primulas which are coming to the front is not an unmixed pleasure. Possibly some of our old favourites are being elbowed out to make room for these new species. It would be a pity were this to take place unless the novelties are so much superior to the older ones that the latter appear poor in comparison. I have been fortunate enough to see some of these novelties, but I do not think that *Primula rosea* has yet found a rival. It has just come into bloom with me, and I am again rejoicing in its lovely carmine-pink flowers.

The question is as to where it can be grown best. This is, I think, in a moist place with, at least, some shade. I have seen it charming by the side of a stream or a pond, but I have observed it quite as delightful in a moist, shady border and in a damp corner of a rock garden. I find it is much better for occasional division, and, where it is not divided for a year or two, some soil should be brought well up about its crowns. If left bare below the neck it is poor and liable to rot off.

THE DONDIA.—I see a patch of the little *Dondia* in bud and almost ready to open. It is possibly on the greenish side to be called "yellow," but it is as yellow as some other flowers which we accept as of that colour. It is a nice plant for a shady place.

AN AMATEUR OF HARDY FLOWERS.

WORK OF THE WEEK.

THE weather during the past week has been most unfavourable to outside work; indeed, with the exception of a day or two, this has been completely held up, therefore attention has been given to those things which could be dealt with under cover. A large batch of cuttings of *Felicia abyssinica*, which were inserted—several in a pot—in autumn have struck almost to a plant, and these have been potted off singly into 60-sized pots and placed in a cold frame. *Verbenas* put in about the same time have been treated likewise; also batches of alpine *Veronicas*, *Lithospermum rosmarinifolium*, and *Shamrock Pea*. Hardy *Fuchsias*, struck and grown on in heat, have made nice plants, and are now given cooler quarters near the glass. A number of mixed varieties of *Cannas* which have been in store for the winter have been potted into 5-inch pots and placed in gentle heat. By starting these early, good strong plants are obtained, which commence to bloom almost immediately they are planted out. Some large *Myrtles* and *Bottle Brush* plants used in the flower garden during the summer have had the surface soil removed and replaced with a top-dressing of good sandy loam and leaf-soil. A small collection of *Perpetual-flowering Carnations* for the outdoor garden has been potted into 4-inch pots and placed in a cool-house, where they receive abundance of air. Seeds have been sown in pans and boxes, including those of *Violas*, *Polyanthuses*, *Arbutus Menziesii*, *Columbines*, *Abronia*, *Cotyledon*, *Giant Armeria*, *Ipomaeas*, *Nolana atriplicifolia*, *Nasturtiums* (climbing), *Gilia dianthoides*, etc., all of which have been placed in gentle heat. A quantity of *Violas* sown in cold frames in autumn has been pricked out 3 inches apart into finely-prepared soil in a frame. Those struck from cuttings inserted in autumn are given all the air possible on fine days. *Pea-stakes* have been brought in, pointed, and prepared, all the longest and best being reserved for *Sweet Peas*. It is a good plan to lay the bundles flatwise in a stack and then place heavy weights of some kind on the top. If this is done they will go much further at staking time and look neater. Smaller sprays for supporting the *Peas* in an early state have also been prepared, and a few pegs for the layering of *Carnations* are cut out as this work proceeds.

Flower-sticks have been cut, pointed, and tied in bundles ready for use. Many plants have come to hand, but owing to the impossible state of the soil these have been placed in cold frames. E. M.

Sussex.

NOTES AND REPLIES.

Sowing annuals.—With the advent of April, annuals that are to be sown out of doors in the places they are to occupy through the summer may soon be put in, and if a good and long-sustained blooming season is required they must have a fairly good piece of ground. In the matter of *Mignonette*, for instance, we are sometimes apt to think that any odd corner will do for it. All annuals pay for hard thinning; in fact, if crowded, the flowering season is soon over. If the better-class annuals, as *Asters*, *Zinnias*, *Stocks*, *Phlox Drummondii*, etc., that were sown some time back in gentle warmth are likely to get too thick before they can be planted out, some may be lifted carefully and transferred to boxes. Annuals intended solely for cutting may be sown in rows on some well-prepared border, as thus they can be kept clean so much more easily than when sown broadcast.

Tree Pæonies.—These have come away very rapidly, and it is to be feared that late frosts may yet do damage to the early buds of these handsome shrubs. In the course of the week all the seed-vessels were removed, and any little thinning of spindly or useless wood which was necessary was attended to. Afterwards a top-dressing of well-rotted manure was given, this afterwards being covered by a little fine soil. All of these *Pæonies* are of great age and of considerable size, and annually make a fine, if somewhat brief, display with but little attention.

Crown Anemones.—Both the double and the single flowered deserve to be more extensively grown. Seeds may be sown in boxes filled with good loam under glass now, the seedlings being planted in prepared borders outside in due course. It is a good plan to mix the seeds with clean, dry sand and then gently rub both in the hands to facilitate the sowing. In the meantime, the outside beds should be deeply dug and well enriched with rotted manure. A position slightly shaded from bright sunshine should be selected. In May and June seeds may be sown outside, the resultant plants flowering freely the following year. I have made it a practice to sow seeds in drills between bush fruits, the latter affording the young plants a welcome shade.—BOURNE VALE.

Anemone stellata.—Last spring over 1,000 corms of the *Star Windflower* were planted in various positions, and now (March 1st) it is pleasing to find that these have, in the majority of cases, survived the winter, and look like giving a good account of themselves. I am rather doubtful as to the hardiness of *A. stellata* in Scotland—not, perhaps, on account of the frost, but from the dangers which may attend the corms from damp during winter until they become acclimatised. At the same time it is only fair to say that a considerable number of corms planted about half-a-dozen years ago have done well, although there has not been any very severe frost to test their hardiness.—W. McG., Balmoe.

Sweet Pea Robert Sydenham.—This is one of the best introduced for a considerable number of years, its colour, shape, and constitution all being in its favour. Wings and standards alike are of a fine orange-salmon shade, and the blooms, of a large size and handsomely waved, are borne, always three, often four, on stout, long stems. Unlike others of a similar colour, the variety under notice is sun-proof. This fact alone ought to make it valuable.—KIRK.

Lobelia Tupa.—This, by no means new, always appears to have been scarce and overlooked. It attains to a height of 4 feet, sometimes more in favourable places. Its rich, bronzy-crimson flowers are in appearance similar to those of *L. cardinalis*, but over 2 inches in length, and closely borne on long spikes. If seeds are sown early in spring, and the seedlings brought on in a warm atmosphere, they will bloom in August.—SCOT.

Crocus Tommasinianus.—This does not do so well with me as *C. Sieberi*. It is pretty, and under more favourable conditions would undoubtedly give a better account of itself. But however grown it is more fragile in constitution than *Sieberi*. *C. Tommasinianus* is quite distinct, with a purplish tint in its pale lilac or pale mauve flowers. Though it began to open after *Sieberi* it has already finished.—C. T.

Crocus Sieberi.—A clump of this has been in flower several weeks, and, though the bulk of the blooms is past, there are yet a few more buds to open. The snow and cold do not appear to have had any harmful effect upon them. The yellow base and stigma are a striking setting to the lilac-blue flowers.—C. TURNER.

INDOOR PLANTS.

POTTING AZALEAS.

REPLY TO "A. E. L."

AZALEAS require ample drainage—this is the first consideration in repotting. Your *Azaleas* want repotting. Before repotting, if you find that the ball of soil is dry, stand the plants in a pail of water, so that the soil is thoroughly soaked. Take clean pots, also clean potsherds, place the largest at the bottom, and medium-sized ones next, over this a layer of smaller ones. For *Azaleas* only the best fibrous peat is of any use. Pull this to pieces, but do not sift it, place the roughest soil over the crocks, and then transfer the plant to its fresh pot. Large shifts at one time are not advisable; young plants in 5-inch pots may be placed in 6-inch or 7-inch ones, which will allow of a nice layer of fresh soil being placed all round the ball of earth, but before doing this the old ball of earth should be divested of any inert soil, and the roots carefully loosened when they are very firmly matted. The new soil must be very firmly rammed down with a blunt stick or lath, so that the new soil is made as firm as the old ball of earth. Allow about $\frac{1}{2}$ inch at the top for water, and as soon as potted and set in position for growing give a good soaking of water from a fine-rosed pot to thoroughly saturate the entire mass of soil. The plants should be shaded from bright sunshine, and syringed overhead as soon as the sun declines, and be shut up with a brisk, moist heat. Do not over-water at the roots, but never let the soil get quite dry. Under favourable conditions the plants will make rapid growth, and as soon as the young shoots get firm, flower-buds for the ensuing year will be formed, and as soon as these begin to plump up the plants must be gradually hardened off by admitting plenty of air, and in July they may be placed out-of-doors to ripen their growth. A cool, moist bed of coal-ashes behind a wall to screen the plants from mid-day sun is the best of positions for them, daily attention as to watering being all they will require until the first week in October, when the pots should be washed and the plants set in their winter quarters, which should be cool, light, and thoroughly ventilated.

NOTES AND REPLIES.

Abutilons.—At the present time *Abutilons* seem to be neglected. Nevertheless, they might well receive a measure of support, for not only is the quantity of bloom produced by a well-grown specimen surprising, but the blooms can be had in the winter and spring with a very moderate amount of heat. Plants raised annually are, perhaps, the best; and cuttings strike readily during February. Gradually pot on until the desired size is reached, and throughout the growing period there must be ample supplies of water, and occasionally of liquid-manure. A good holding loam, with, if possible, a small proportion of peat, and a fourth part of leaf-mould, with a sufficiency of coarse sand, suits *Abutilons* well, and there must be ample drainage. The "legginess" sometimes objected to may be avoided by keeping the plants near the glass and by pinching judiciously, while for winter flowering they may be placed outside in June on a bed of ashes and housed in September.—KIRK.

Single-flowered Camellias.—The lumpy character and formal outline of the double-flowered *Camellias* are, no doubt, answerable for their being much less grown than formerly. This cannot be urged against

those with single blossoms. An additional and very pleasing feature is the cluster of yellow stamens. Among the single-flowered kinds we have of true species the typical *Camellia japonica*, with bright red flowers, and *C. cuspidata*, a white-flowered species, for which Messrs. Veitch obtained an Award of Merit a few years ago. *Camellia Sasanqua*, that develops its small pink flowers before Christmas, is very pretty, while its white variety, which is much scarcer, is decidedly pleasing. Messrs. William Paul and Son, Waltham Cross, raised some very fine single-flowered varieties a few years ago. Among the best are *alba simplex* (white), *Apollo* (red), *Jupiter* (large, rosy-red), *Mercury* (rich crimson), *Minerva* (rose), *Snowflake* (white), and *Waltham Glory* (deep blood-red).—K. R. W.

Scented-leaved Pelargoniums.—These are grown, to some extent, for planting out during summer. In the course of the week the young plants—from autumn-struck cuttings—were taken out of the boxes and mossed up in the way which

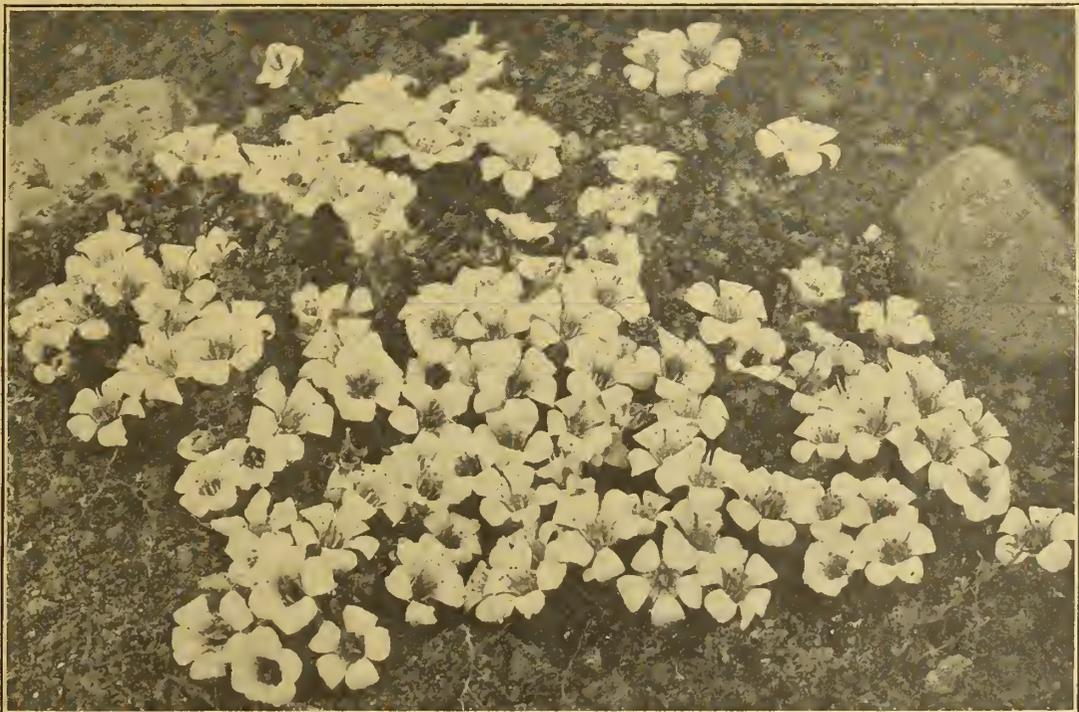
ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SAXIFRAGA OPPOSITIFOLIA VARS.

AMONG the earliest flowering of their race, the opposite-leaved Rockfoils, regarded as a whole, are well known as the most tractable of these plants, affording welcome patches of colour not found in like abundance in any other section of the genus to which they belong. From this point of view, for simple cultural requirements and easiness of increase they occupy a place valuable alike as carpeters of the soil and for a freedom of blossoming quite unequalled. It is during the early months of the year—February and March—that they give of their best, veritable sheets of colour of varying degrees of red, which no description could adequately portray. Welcome in the rock garden in yard wide patches, they are also good in the cool rock wall, and of no little importance to those who indulge in the best of such things for the alpine house. Abundant in

not needed annually in the case of large patches, and in such instances a surface mulching will suffice. Very fine flowering results, however, follow annual increase by division or two-year-old examples raised from cuttings.

VARIETIES.—That shown in the accompanying illustration, *S. o. splendens*, is one of the brightest flowered; *S. o. W. A. Clark* is, perhaps, one of the richest coloured. *S. o. pyrenaica*, *S. o. major*, and *S. o. maxima* are others of the red-flowered set, varying from each other but in minor degree. *S. o. grandiflora* and *S. o. coccinea* are others. Quite among the best is the Italian *S. o. latina*, of rosy-purple hue. These are all characterised by flowers of like form to those shown in the figure. *S. o. pallida* has a distinctive petal character apart from its much paler flowers. *S. o. alba*, while as free and profuse-flowering as any, has much smaller blooms of distinctly starry aspect. In this, too, the only white form with which I am acquainted, good petal quality is



Saxifraga oppositifolia splendens.

was formerly more common than is now the case. Not only does this save pots and space, but the plants, rooting through the Moss, form excellent balls, and when planting-out time arrives they can be transferred to their summer quarters practically without check.—B. G.

Beautiful Heaths in the greenhouse.—In the past, admirers of this beautiful class of plants from the Cape grew them largely and had houses and frames specially for them. That day has gone by, though a few are still popular, such as *hyemalis* and others of the same class, and a few of the spring and summer-flowering varieties, such as *Cavendishi*, *ventricosa*, *propendens*, etc. The war has stopped the autumn trade sales that we found so popular when Heaths and other plants were scattered over the country by the London growers to the manifest advantage of all concerned.—E. H.

Bouvardias.—Stock plants of the varieties grown in pots will now have to be introduced to heat so as to obtain in due course a good supply of cuttings. The plants of *Humboldti grandiflora*, which are to be grown outdoors in a warm border for supplying cut bloom in late summer and autumn, will also be pruned and placed in gentle warmth to start now. When available, a few cuttings will be taken and rooted. Nice bushy specimens for autumn blooming will result. The old plants, as soon as they have started into growth, are partially shaken out and repotted.—A. W.

the Alps and Pyrenees, they are also found on most of the higher mountain ranges, and in Scotland, Yorkshire, and other places, the larger, better-coloured forms coming from the habitats first named. Under

CULTIVATION, while by no means fastidious as to soil, they exhibit an unmistakable liking for strong, loamy soils, not objecting to those of a calcareous nature. In these, indeed, particularly in the case of cool soils, they appear to reach their highest excellence and freedom of flowering. At the same time growing them in pots plunged in sand, hundreds in a batch, in the past it has ever been instructive to note the wealth of flowers on those growths extending beyond the pots into the pure sand of the beds, likewise to observe the freedom of their rooting in the same material. Between strong loam and pure sand there is ample scope for the cultivator, and, given a cool rooting medium—dryness they abhor more or less—failures are few. The best season for transplanting is directly flowering is past. This is

lacking, and in this direction at least there is room for improvement.

E. H. JENKINS.

Saxifraga apiculata alba.—This popular sort is largely cultivated to-day, and, to some extent, its popularity is merited. It is early, free, and, withal, an easy doer. The flowers are made up of small, starry petals which lack whiteness. Moreover, its flower-stalks are weak, and, with age, topple over to a very considerable extent, hence there is room for an improved white *S. apiculata*. I believe, too, there is more than one white-flowered form, as there certainly are two and probably twice that number of varieties of the original, too much alike to be of commercial value, and, doubtless, all in commerce under one name. Curiously, while I have known *S. apiculata* for a quarter of a century or so, and propagated it by hundreds from cuttings, no white sport has ever come my way. To those who get sports I would suggest watchfulness in case the much-needed one of superior merit should occur.—E. H. JENKINS.

ROYAL HORTICULTURAL SOCIETY.

MARCH 14TH AND 15TH, 1916.

The exhibition held on the above dates included the annual show of forced spring bulbs. The outstanding feature was the gold medal collection of Hyacinths from Southgate, N., and only rarely have finer spikes of these been seen. Forced Daffodils, too, were good, the wealth of Crocuses from Edinburgh being also an attraction. Of more than ordinary interest were the Shortias from Enfield. For the rest the collections from various growers of alpine and hardy plants are a never-failing source of interest at these early meetings.

ALPINE AND HARDY PLANTS.

An excellent group of these on rock-work, in conjunction with suitable shrubs, was arranged by Messrs. John Waterer, Sons, and Crisp, Bagshot and Twyford. On this occasion there were several noteworthy groups of bulbs—e.g., Narcissus W. P. Milner, *N. triandrus* (Angel's Tears), *N. cyclamineus*, and the ever-popular white Spanish Daffodil, *N. moschatatus* (Haworth). In addition, *Puschkinia libanotica* was charming. Two lovely blue flowers were *Anchusa myosotidiflora* and *Omphalodes cappadocica*. The rosy-petalled *Fritillaria pluriflora* was beautiful.

Messrs. Dobbie and Co., Edinburgh, sent a fine collection of the best bedding Crocuses in some twenty-five sorts. We regarded Kathleen Parlow the finest white, albeit White Lady, Snow White, and Caroline Chisholm were of high merit also. Maximillian (mauve) stood out from all in this shade. Mammoth Yellow appealed by reason of its rich golden colour and profuse flowering. Albion and Mikado we considered the finer striped sorts. The group of Shortias from

Mr. Amos Perry, Enfield, was the finest exhibit of this unique alpine yet seen. Entirely composed of varieties of *S. uniflora grandiflora*, it embraced several of exquisite shades of rose, *S. u. g. superba* and *S. u. g. rosea* being some of those to which varietal names had been given. Others even deeper in tone were on view.

Mr. Clarence Elliott, Stevenage, had some well-flowered pieces of the charming *Saxifraga Irvingi*, also the large white-flowered *S. Obristi*, *S. Faldonside*, and others. The greater display was, however, afforded by *S. oppositifolia splendens*, of which a hundred or so in full bloom gave quite a feast of colour. A mass of *Soldanella pusilla alba* full of bloom also attracted lovers of choice things.

Messrs. T. S. Ware, Limited, Feltham, had an effective bank of hardy things, such Lenten Roses as *colchicus* and *orientalis* in variety being in considerable force. *Primula frondosa*, *P. denticulata*, and its white variety, a fine lot of *Anemone blanda*, *Iris reticulata*, and *Saxifraga Griesbachi* were very good. The blue-flowered *Synthyris reniformis* was among the more interesting things.

Messrs. Barr and Sons, Covent Garden, W.C., had many pretty groups of bulbous flowers, *Chionodoxa*, *Crocus* species, the fine white bedding *Crocus*, Kathleen Parlow, and *C. purpureus grandiflorus*, *Narcissus minimus*, and others. *Iris unguicularis* was well shown.

Mr. G. Reuthe, Keston, Kent, showed the unique Grecian *Crocus*, *C. aerius*, whose violet-blue, well-formed flowers are a great attraction. *C. Alexanderi* and *C. aureus* were also shown. A remarkable lot of *Saxifragas* was on view, Haagi (golden-yellow), *Obristi* (the finest white of the moment), Pauline, and Borisi, a pair of yellows outside, Boydi and Faldonside, being the best.

Messrs. Bakers', Wolverhampton, staged many showy things, *Primula marginata* in variety, *Ranunculus montanus* (glistening yellow), and the beautiful mauve-coloured *Ramondia serbica* being among them. *Saxifraga* (*Megasea*) *Afghanica* (white) was also noted.

Mr. G. W. Miller, Wisbech, had an extensive exhibit of *Primroses*, *Polyanthuses*, and other spring flowers.

GREENHOUSE PLANTS.

Messrs. M. Gleeson and Co., Watford, had an excellent lot of the fringed or *Papilio* strain of *Cyclamens*, which included many of exceptional size and colouring. The plants were exceptionally well grown and flowered.

Messrs. H. B. May and Sons, Limited, contributed a delightful lot of the fragrant *Boronia megastigma*, also *Cinerarias* and *Cyclamens*, showing a considerable colour range, the former particularly in the crimson, blue, and pink shades. In a central group of *Clematisses* we noted such good things as *Miss Bateman* (white), and *Lady Londesborough* (mauve).

Messrs. R. H. Bath, Limited, Wisbech, again showed bulbous plants grown in bowls of fibre, *Mme. de Graaff* Daffodil, also excellent bicolors and yellow Ajax sorts, *Tulip Hector* (orange and gold), and the mauve-coloured *Darwin Tulip*, *William Copeland*, claiming attention.

Messrs. William Cutbush and Sons, Highgate, N., showed *Azaleas*, *Rhododendrons*, *Wistaria*, *Magnolia*, and other forced shrubs, with hardy flowers at one end. *Tulipa Kaufmanniana* was very good, also *Saxifraga* (*Megasea*) *Stracheyi*.

Messrs. Stuart Low and Co., Enfield, had some good vases of *Carnations*, *Mrs. Mackay Edgar*, *Pink Sensation*, and *Mrs. C. F. Raphael* being some of the best.

Messrs. R. F. Felton and Sons, Hanover Square, W., again displayed great stands of the charming white-flowered *Cytisus monospermus*, one of the most graceful of flowering shrubs. *Ruscus Androgynus* was also remarked for its fine rich green and high decorative properties generally.

SPRING GARDEN.

Messrs. Carter and Co., Raynes Park, contributed a somewhat suggestive piece of gardening, which, enclosed within a planting of Box trees, took the form, for the most part, of naturalising Crocuses on Grass. These were in several shades of colour and not overdone. Beyond the Grass was a narrow border filled with yellow *Crocus*, Grecian Windflower (*Anemone blanda*), Lenten Roses, and other plants; the 6-foot wide borders at right and left, planted with *Euonymus*, were carpeted with well-flowered examples of *Erica carnea*.

ROSES.

Mr. Elisha J. Hicks, Twyford, Berks, showed stands of cut Roses, also pot-grown plants. The former were chiefly *Mrs. Charles Reed* (flesh-pink), very delicate in colour and beautiful in form, and the richly-coloured *Mme. E. Herriot*. The pot-grown examples included *Princess Mary* (single, intense crimson-maroon), *Mrs. John Foster* (reddish-carmine), and the lovely pink, *Mrs. George Norwood*; valuable Roses all, the last three more particularly, by reason of their pronounced fragrance.

Mr. George Prince, Oxford, also had some fine cut blooms, his stand of *Mrs. W. J. Grant*, for size and colour, in the nature of a revelation. *Mme. E. Herriot* was of exceptional colour, showing how well it stands forcing. *George Dickson* (intense maroon-crimson) and *White Killarney* were others of note.

NARCISSI.

Messrs. Barr and Sons, Covent Garden, W.C., staged quite a large collection, many being unnamed seedlings. Of those named, *Sparkler* (rich red cupped incomparabilis) was most attractive. It gained an Award of Merit. *White Queen*, *Sunrise* (very shapely flower), *Ornament* (a brilliantly-cupped Barri), *Sunbeam*, *Mermaid* (a giant Leeds), and *Yorick* (a rich yellow Ajax) were a few of the best.

Messrs. J. R. Pearson and Sons, Lowdham, had a particularly fine thing in *Heroine* (*Englehearti*), whose poeticus white segments and lemon cup fringed with apricot-orange rendered it, most telling. *Vega* (giant Leeds), *Margaret* (white Ajax), *Great Warley*, *Potentate* (handsome yellow Ajax), and *Bernardino* were other excellent sorts.

Messrs. Robert Sydenham, Ltd., Birmingham, had a fine lot of the yellow-trumpet Daffodil *King Alfred*, still unique amid them all. *Princess Ida* (a very early white) was also in evidence, and a fine lot of a pure white *Freesia refracta alba* without yellow blotch. It is both good and distinct.

FORCED BULB SHOW.

The gold-medal collection of Hyacinths arranged by Messrs. R. and G. Cutbush, Southgate, N., was the outstanding feature of the meeting, and finer examples than those staged it would be difficult to find. Red, white, and blue varieties were strongly in evidence, these appearing as side lines to the whole. The central part, made up of circular groups, was somewhat weak owing to the low-placed position of the plants, and, as we thought, a too free use of Ferns in the groundwork. This in large degree obscured the Hyacinth foliage. The high quality of the Hyacinths, however, merited unstinted praise. The best sorts were *City of Haarlem* (yellow), *Jacques*, *Moreno*, *Coral Gem* (pink shades), *La Grandesse*, *Corregio* (white), and *Perle Brilliant*, *Schotel*, and *Grand Maître* (blue), the last named having great massive spikes.

The remaining five classes were all devoted to Hyacinths, and while good quality was general, competition was far from keen. For twenty-four Hyacinths, eighteen distinct varieties, three competitors entered, His Grace the Duke of Portland, *Welbeck Abbey* (gardener, Mr. J. Gibson), taking the lead. The best were *La Grandesse*, *Corregio*, *President Kruger* (white), *Perle Brilliant* and *Schotel* (blue), *Jacques*, *Moreno*, and *Queen of Pinks* (pink shades). Mr. R. G. Morrison, *Wavertree*, who was second, had *Queen Emma* and *White Lady* (white), and *Gounod* (fine blue) among others.

For twelve Hyacinths, distinct, Mr. W. Joyce, *Wavertree*, was the only exhibitor, *Lady Derby* (pink) and *Corregio* (white) being good. For six varieties, distinct, Mr. J. Haslam was first and Mr. T. Compton second.

Six pans of Hyacinths, ten roots in each, brought two competitors, the Duke of Portland being a good first. His set was *La Grandesse* (white), *La Victorine* (red), *King Menelik* (purple), *Schotel* (blue), *City of Haarlem* (yellow), *Moreno* (pink). Second, *Marquis of Ripon*, *Coombe Court*, *Kingston Hill*. These two exhibitors occupied like places in the class for the finest decorative display of Hyacinths, both arranging a score or so of pans, ten roots or more in each, in a bed of Ferns backed by Palms. The quality was less good in this than in the preceding class, and no new variety of outstanding importance was observed.

FRUIT AND VEGETABLES.

Messrs. Sutton and Sons, Reading, staged a useful assortment of vegetables and salads. Of the former, Snow White Broccoli was arranged in pyramids. The curds were very pure and of solid formation. Harbinger Cabbage from a July sowing demonstrated the value of this sort. The Sutton Rhubarb, Market White Seakale, and Golden Ball Lettuce were excellent.

Mr. G. W. Miller, Clarkson Nurseries, Wisbech, had an excellent exhibit of "The Sutton" Rhubarb, remarkable for the richness of its colouring internally as well as externally.

A full list of the certificated plants and medals awarded will be found in our advertisement columns.

Royal Horticultural Society, Meetings and Committees.—The next ordinary fortnightly meeting is fixed for Tuesday, March 28th, when all the committees are asked to meet as usual.

THE WEEK'S WORK.

SOUTHERN COUNTIES.

Border Carnations.—The planting of these having been interrupted by the spell of wintry weather, it has now been brought to a conclusion. The soil was rather wet, but by taking care not to trample it more than was necessary no ill results are likely to follow. As intimated in a previous note, the plants have to be netted to protect them from sparrows.

Lothian Stocks.—The surplus plants raised from seed sown last autumn, and which were potted off, have been put out in groups in a mixed border, where they will in due course afford a quantity of flowers for cutting in addition to brightening the border.

Mignonette.—The first lot of seed of the large or Giant flowered strain will now be sown on a border at the foot of the front wall of ainery facing south. In the course of another fortnight a sowing of the ordinary large-flowered type of Mignonette will be made on a border in the open. The flowers on the earliest batch of plants in pots are now in perfection. By preventing seed-vessels developing and feeding with stimulants in a liquid form, the plants will continue to yield flowers for some time to come. A successional batch of plants which are coming on apace has been staked and tied.

Schizanthus.—The blooms on the earliest raised plants are commencing to open, but until the flowering stage is more advanced they will remain in their present quarters. They will then be used for the decoration of the show or flowering house. Stimulative food is now being afforded, which will be continued until the plants are in full bloom. A later raised lot of plants, which will succeed the preceding, is being kept back as much as possible, and is still occupying the same position on a shelf close up to the glass.

Hydrangea hortensis.—The flower-trusses on the earliest started plants being now visible, the roots are being fed with Clay's fertiliser to ensure the production of fine heads of bloom. Another lot of plants started later is breaking well. These will be allowed to come on more slowly. The latest lot will now be overhauled, partially shaken out, and repotted. Those which give no indication of flowering will be cut back so as to break from the base. Even if they do not produce flowers this season, the new growths will certainly do so next year if the wood becomes well ripened by the autumn.

Azaleas.—More plants of *A. indica* and *A. mollis* have been placed in heat to be forced into bloom in order to keep up a succession. A number of white-flowered varieties of *A. indica* are being held in reserve for blooming at Easter.

Gloxinias.—These having started nicely into growth the tubers have been shaken out and potted in a mixture of one-half fibrous loam, one-quarter peat, one-quarter leaf-mould, and a liberal quantity of coarse silver sand. The pots, 5 inches in diameter, have been thoroughly cleaned. When sufficiently rooted, the largest of the plants will be shifted on into pots two sizes larger. For the present they will be given a suitable position in the stove, where the heat and moisture necessary for the well-being of the other inmates will promote a vigorous growth and at the same time they will receive the needful amount of shade from direct sunlight. Seedlings should now be pricked off into thumb-pots, one plant in a pot, and grown on in a moist heat, keeping the pots near the glass.

Pot Vines.—As soon as the berries have finished stoning the bunches need a final look over, when relief must be afforded by nipping out inner or misplaced berries which are at all likely to impede the swelling of those situated

on the shoulders or towards the points of the bunches. Stopping of sublaterals and the pinching of laterals allowed to extend while stoning was taking place must again have close attention. An outbreak of red-spider has to be guarded against, while spells of wintry weather are likely to be experienced, which necessitate much artificial heat being required to maintain the requisite temperatures. A moist atmosphere is a preventive, but it must not be overdone, as there is a risk of rusting of the berries occurring should the wind be in a cold quarter and the weather sunny when the admittance of cold air is unavoidable. The old-time remedy of sponging with warm soapy water directly any portion of the foliage is noticed to be infested with the insects is still one of the best antidotes when the attack is in the initial stage. To meet the extra demand on the roots which the final swelling of the berries entails feeding must be regularly attended to. To encourage the further production of surface roots, which play such an important part in the finishing of a crop of Grapes, another top-dressing of rich, warm compost must now be afforded. If well watered as soon as applied, which will settle it at once into place, the active roots beneath it will soon extend and take possession of it. For the present, routine matters, such as damping down frequently on fine days, particularly at closing time, and the maintenance of regular day and night temperatures, should be continued as before.

Celeriac.—Seed should now be sown in the same way as for Celery, and raised in mild heat. A box is a suitable receptacle for the purpose, as the seeds can then be sown more thinly, with the result that there is less risk of the plants becoming drawn. Main-crop Celery should be sown now under the same



Gladiolus Colvillei The Bride.

conditions as the preceding. The remainder of the heads of late Celery has been lifted and laid in elsewhere and the ground dug ready for the next crop, which will be Beet-root.

Seed-sowing.—More Lettuces, both of the Cos and Cabbage varieties, Radishes, Spinach, Turnips, and Shorthorn Carrots will now be sown. On a sheltered border, summer and autumn Cauliflowers, Cabbages, Brussels Sprouts, Autumn Broccoli, and Leeks will also be sown in drills 1 foot apart, and secured from bird attacks by nets. Several more rows of Broad Beans, both tall and dwarf, will be sown at the same time. A. W.

MIDLAND COUNTIES.

Calanthes are starting into growth, and must be repotted. Turn the plants carefully out of their pots, and shake away the exhausted soil, cutting off the old roots to about 1 inch, the part left helping to keep the pseudo-bulbs steady in the new soil until the plants are established. The soil should consist of one-half turfy yellow loam, one-fourth dry cow-dung or well-decayed leaf-soil, and one-fourth finely chopped Sphagnum Moss, small crocks, and coarse silver-sand. Half fill the pots with drainage, over which place a thin layer of loamy turf, with the grassy side downwards. When potting, shake the soil down moderately to firm around the base of the pseudo-bulbs—to within $\frac{1}{2}$ inch of the rim of the pot, this leaving sufficient space for a top-dressing of fibrous loam when the plants are in active growth. I prefer to plant the pseudo-bulbs singly, using pots 6 inches in diameter for the strongest and 5-inch for the remainder. The plants are given the lightest

and best position in the Melon-house. Give no water at the roots until the plants have been potted two or three weeks, merely syringing between the pots several times a day, according to the state of the weather. When the new growths have begun to grow, slightly sprinkle the soil with water. If the soil be made too wet the tips of the young roots decay and the health of the plant becomes impaired. The stock of any particular variety may be increased by taking off the old hack bulbs previous to potting and inserting them close together in pots or shallow pans filled with Sphagnum Moss, but affording no water. Place them in a light position, and when the bulbs commence to grow pot them singly, as previously advised.

Perpetual-flowering Carnations.—Plants raised from cuttings inserted early in January are making good progress, and are now ready for shifting on into 4-inch pots. Plants that have been flowering all through the autumn and winter are again developing strong growths, and, given bright weather, will produce many more fine flowers. The plants are regularly fed with suitable stimulants. Carnations generally do best in a dry atmosphere, but occasional syringing is necessary to keep down red-spider. If red-spider is present a little sulphur in the water used for syringing will prove effectual.

Clematis.—Among hardy climbers, no plants equal the Clematis in variety or beauty. They may be planted at any time from September to May, but in most localities March is the most suitable month. They are mostly gross feeders, and should be planted in well-prepared soil enriched with manure, and if naturally devoid of lime some should be added. The Clematis may be used to cover walls, but looks best when creeping over an old tree or shrub, or trained over a pergola or arch. Rough Oak branches may also be used for them, either singly or several together to form a pyramid. Clematis Jackmani varieties are effective in beds and to cover arches. These require pruning back hard this month. Clematis montana looks well if planted so as to creep up among the stems of Wistaria sinensis, and, both flowering in May, they form a pleasing contrast. C. Flammula is a vigorous grower, developing a mass of small, white, fragrant flowers in August. It should be planted where it has plenty of room to ramble. To C. lanuginosa the beauty of the garden hybrids of Clematis is due, producing lovely blooms of a wide range of colour from July to October. These varieties flower from the wood made the previous season, and only require thinning and the tying in of the younger shoots.

Eremuri are now growing strongly. E. himalaicus, E. robustus and its varieties already pushing up flower-spikes, which need protection from frost and snow. Water lodging in the crowns of the plants and becoming frozen destroys the tips of the flower-spikes, otherwise they are perfectly hardy. E. Bungei and E. Olgae being later require no protection whatever.

Viola cuttings wintered in frames are now well rooted and ready for removal to permanent quarters as soon as the weather is favourable. For best results a well-worked rich soil which will retain sufficient moisture and food for their summer requirements is desirable.

Celery.—The earliest sowings of Celery have been pricked off into boxes and are given a genial temperature. Later sowings may be safely pricked off when quite small, either into cold frames or on sheltered borders where they can be protected from cold, drying winds and frosts. The surface should be dressed with a fine, light, sandy compost to give the young seedlings a start.

French Beans.—Little difficulty should be found in keeping up a good supply of these where sufficient glass is at command. Whether grown in pots or planted out, very little fire heat will now be required during the day. I shall shortly be sowing a quantity in small pots for planting out in cold frames. These will give good returns until pickings can be made from the open ground. Canadian Wonder and Ne Plus Ultra are reliable kinds for this purpose.

Potatoes.—By the end of this month, if the ground is dry enough to bear walking upon, the planting of Potatoes should be commenced. If the ground has been thrown up in ridges during the winter, which is the best plan when possible, the easiest way of planting is to place the Potatoes at the proper distances apart in the furrows and then split the ridges with a snade and throw the earth into the furrows. This ensures loose ground around the tubers, without which a heavy crop cannot be expected. If, however, the ground has simply been dug over, trenched, or bastard-trenched, open a shallow trench about 6 inches deep, lay the Potatoes in it, and fill the trench up again. Another plan is to dibble the tubers in to about the same depth, but this should only be practised on fairly light and well-drained soils. If a quantity of wood ashes be scattered over the Potatoes the crop will be increased in quantity and the chances of disease reduced. I believe that Potato disease is often caused by a too free use of artificial manures.

Seakale.—As soon as the weather is favourable, the required number of sets for provid-

ing strong crowns for forcing next year will be planted. The sets that were prepared during winter and laid in sand are now forming several shoots at the top. These will be rubbed off with the exception of two of the strongest. The ground for this crop has been well manured and deeply dug, and when sufficiently dry will be well trodden and raked over. Draw shallow drills, 18 inches apart either way, and dibble the sets into the angles thus formed. Cover the crown of the set with about 1 inch of soil. Generally speaking, one or two shoots take the lead, and by leaving two at planting time it will soon be seen which is the better. The remaining one may be rubbed or cut off. Should rain be unlikely, a good watering should be given immediately after planting. Run the Dutch hoe frequently through the plants to destroy small weeds and aerate the soil. F. W. GALLOP.

SCOTLAND.

Greenhouses.—After bulbs, and forced stuff generally, are over, there is occasionally an interval, more especially when cutting is done to any extent. The space thus provided is welcome, for under glass there is almost always a congestion where young plants are being potted on and when seed pans and boxes of pricked-off stuff require to be accommodated. Daffodils and other spring-flowering plants and shrubs begin to be useful for cutting, and there is not now the same necessity for maintaining a regular supply indoors. At the same time, these structures are yet interesting and bright. Nothing, perhaps, is of more service than *Cineraria stellata* during the spring months. Apart altogether from its value for decoration, its light and elegant sprays are very effective when cut, lasting well when regularly attended to. The plants, more especially those of a compact and not too lanky type, are not without value for vases. A good batch of *Alonsoa incisifolia* now beginning to flower gives a very welcome and distinct touch of colour. This succeeds best in 5-inch pots, for if given too much root-run the plants are apt to grow rather straggly. *Schizanthus Wisetonensis* comes on apace, and will be useful in a short time. Arum Lilies, now blooming freely, require to be assisted with liquid stimulants. Nothing is better for this purpose than weak soot-water, this not only being of value to the roots, but making the foliage of a deep shade of green. The various kinds of Primulas are also effective. Cyclamens may be used advantageously, and Zonal Pelargoniums, of course, are always useful. One of the surprises of the present season has been a very good secondary display from a number of *Salvias*, chiefly *S. splendens* and *S. lactiflora*. These were retained principally for producing cuttings, and as they were not cut very closely back, and given a comfortable heat, the side shoots came away freely and flowered well. With more sun heat, firing is not now so heavy, and it is possible to ventilate much more freely. Watering becomes more insistent with the brighter sun, and a look out has to be kept for outbreaks of aphid among *Cinerarias* and Arum Lilies.

Stove.—All the necessary repotting meantime needed having been attended to, the work for some time will be of a routine character. Many seedlings and young plants are being given a start in the temperature of this house, and close attention to their requirements is imperative. Syringing has again been renewed, this being done early in the morning and again about 3.30 p.m. Temperature at night, 65 degs.; and top ventilation may be given for a couple of hours in the middle of the day when the sun shines.

Salvia patens.—While this fine blue *Salvia* may be readily increased from cuttings taken from tubers started in heat, it is, nevertheless, advisable to sow a few packets of seed occasionally. Seedling plants, I think, throw finer spikes, and if they do not bloom quite so early as those from cuttings, their flowers come in at a very useful time and prolong the display. During the week a quantity of seedlings was pricked off, these being given a comfortable temperature in order to give the young plants a good start before removing them to a cooler place.

Cosmos.—In view of the value of this family, seeds were sown during the week, the white and the pink varieties being used. The old *C. bipinnatus* never was really reliable owing to its late habit of blooming and its rather gross growth; but with the advent of the earlier types the popularity of *Cosmos* has been assured. Sown now in shallow pans, and given ordinary greenhouse heat, the seeds readily germinate, and the plants will be quite ready for transferring to their permanent quarters in May.

Tomatoes.—In the course of the week a large batch of Tomatoes for pots was pricked off. In order to economise time later on the seedlings were put into 8-inch pots, each pot holding four young plants. In these pots the young plants will be permitted to grow for some time, and will then be transferred straight into their fruiting pots. This will save the usual shifting on, and as Tomatoes are very accommodating, given a little care in respect of watering for a time, there appears to be no reason why they should not succeed perfectly well under this method of cultivation.

Peaches in bloom at this time must not be neglected in the matter of fertilisation. Insect life is not yet much in evidence to assist in the dispersal of pollen, and, at any rate, it always pays to assist artificially. The camel-hair brush is favoured by many; but equally good results may be attained by the use of a rabbit's tail, and a given area can be more quickly attended to when the latter is used. One very good gardener under whom I worked used to fertilise Peaches and Nectarines—as well as orchard-house trees—by means of a large fan made with turkey feathers, which he agitated in front of the trees, the breeze thus caused dispersing the pollen effectively. The plan was a good one—the work was done in a comparatively short time, and the set of fruit was always excellent. The fan was used only on bright days when the pollen was thoroughly dry.

Digging.—The weather being highly favourable for outside work, digging has been pushed on as rapidly as possible during the week. Among other pieces to be dealt with a long, narrow border devoted to herbs was taken in hand. The border has been deeply trenched. A crop of Kale or some other of the Brassica family will be taken from this quarter, the herbs, meantime, being transferred to another part. During frosty mornings manure is wheeled to such breaks as are in the course of being cleared. Winter vegetable quarters will shortly need attention, and where it is possible to do so, the manure is wheeled to and stacked on portions bared for the purpose. This permits of the work being carried out without delay when the last of the vegetables are finally cleared.

Rubbish-burning.—A beginning was made in the course of the week with the usual burning up of rubbish. The ashes thus obtained are of much manurial value. Wood ashes are rich in potash, and are, therefore, well adapted for the cultivation of Potatoes and other crops for which this substance is useful. If it is impossible to use the ashes at the time, care must be taken to store them under cover or at least to protect them from wet. If exposed to rain a great percentage of their value is lost.

Slugs, snails, and vermin generally are more active in spring than at other times. Rats and mice, driven by the growing scarcity of food in the fields, are apt to draw in to the environs of the garden. As soon as their presence is noted, they must be promptly dealt with by means of traps, snares, or poison. In the last case the substance used should be in careful hands. Slugs and snails are at times introduced into plant houses during the course of the customary repotting, and, especially in the case of Ferns, they soon make their presence visible. They may easily be taken after nightfall by using a bright light, and whenever their traces are seen regular inspection nightly until they are accounted for ought not to be omitted. W. McGRUOP.

Balmae Gardens, Kirkcudbright.

OBITUARY.

MR. EDWARD HOBDAY.

We regret to announce the death at the age of 83 of Mr. Edward Hobday, for many years gardener at Ramsey Abbey, Huntingdon. On leaving that place he started a nursery at Cambridge, the management of which, in his declining years, he handed over to his sons. One of the old school of gardeners, before the days of colleges to teach the art were thought of, his advice in all branches of gardening was practical and thoroughly reliable. He was for many years—in fact from the first issue of this journal—and even up to the day of his death, one of our most esteemed contributors, and there was no man better able to express clearly his views, and no one whose views on plant culture were more fully the result of long and careful practical study. A keen lover of hardy plants, Mr. Hobday also gave considerable attention to the once favoured hard-wooded greenhouse plants, but perhaps it would be accurate to say that his chief distinction was gained as a vegetable and fruit grower. An all-round man, genial and well informed, Mr. Hobday was one whose death is a loss to the gardening world at large.

Gardens for soldiers.—This camp has been opened for the purpose of recruiting the health of soldiers after their discharge from hospital. Many of these men are quite unable to undertake any of the usual military duties for some time after their arrival, consequently, some occupation has

to be found for them. It is proposed to make gardens round the huts. May we appeal to the generosity of your readers and the firms who advertise in your paper, for roots and seeds, as we have no money grant to spend for this purpose and our soldiers are, in most cases, in very poor circumstances. Any response to this appeal should be addressed to me as under.—M. W. HORWOOD, No. 3 Company, London Command Depot, North Camp, Scaford.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Destroying Coltsfoot (*H.*).—The only way is to keep cutting off the tops as they appear with a sharp hoe. The more you persevere in the use of this the sooner will it be exterminated.

Soil for Fuchsias and Pelargoniums (*D. G.*).—Fuchsias like a free, light, generous compost, such as equal parts leaf-mould and loam, adding thereto a good portion of silver sand. Pelargoniums like a more holding compost—say, two parts loam to one of leaf-mould and a little sand. A little well-rotted manure may be added to the Fuchsia compost, but the Pelargoniums are, as a rule, better without it. Pot the Pelargoniums firmly, but the Fuchsias somewhat lightly.

Nemesia strumosa (*Inquirer*).—This half-hardy annual may be sown in heat in March and transplanted in May, or sown in the open after the middle of May. It grows from 12 inches to 15 inches high, and produces several stems, each of which bears a head of bloom, but very little foliage. It blooms freely from midsummer to Michaelmas, and if the weather is favourable much later. The colours range from white and pale yellow to deep orange and from all shades between pink and deep crimson. It is very valuable for cutting, two or three spikes in a vase producing a fine effect.

Pot roots of Dahlias (*Dahlia*).—What are termed pot roots are plants that have been grown in the pots through the summer and which remain in them through the winter and until planting time comes. Roots thus preserved are always in excellent condition for planting, so that the term pot root is indicative of some superiority, and marks the difference between the tubers which have had a season's growth and those which were struck in heat at this time of year. Pot roots are generally obtained from the latest struck cuttings, and form the surplus stock of the florists who grow them.

Cinerarias after flowering (*E. D. Daniel*).—After your *Cinerarias* have done flowering you can cut them down to within 2 inches or 3 inches of the soil, and top-dress them with some light, rich mould, and stand them under a shady wall. Keep them moderately moist at the roots, and they will soon send up a number of suckers which can be taken off and rooted in sandy soil in any cool, shady frame, and then potted on. These will make good flowering plants for next season. As a rule, however, we think it best to raise *Cinerarias* from seed annually, except in the case of any particular sorts you may wish to increase.

Tuberous-rooted Begonias (*G.*).—One-year-old tubers make particularly good examples for growing on, and they may be potted first into 3-inch pots, shifting them into 6-inch ones later on. If yours are larger they will, of course, need an increased size of pot at first and also later on. A mixture of equal parts of loam and leaf-mould, or an increased amount of loam according to its consistency, with a good sprinkling of sand, will suit Tuberous Begonias, while, as the pots get full of roots, a little liquid-manure, etc., occasionally is very beneficial. Do not let the plants carry any seed-pods, as these are very weakening.

FRUIT.

Growing an Orange-tree (*Inquirer*).—The small Orange-tree is doubtless one of those grown on the Continent, of which great numbers studded with fruits are every year sent to this country. They are grown in a very light soil, principally composed of leaf-mould, in which they flourish for a time, but after a season or two repotting is necessary, otherwise they become too weak to flower. We should advise you to repot your plant, but before doing so take away as much of the old soil as you can without injury to the roots. When this is done you will probably find that the remaining ball of earth can without difficulty be put into the same sized pot, and if so do not use a larger one, as overpotting must be guarded against. A mixture of equal parts of loam and leaf-mould, or peat, with a liberal sprinkling of sand, will form a very suitable compost for Oranges. It may be grown altogether in a fairly light position in the conservatory, taking care to keep the soil moderately moist, but avoid overwatering. An occasional syringing during the summer is very beneficial.

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THE HORTICULTURAL COLLEGES.

THE air is full now of these words, and as a means of teaching gardening they are delusive. They are very often used by men who have no practical means of teaching it. But why a College? That is the worst place of all to teach an art depending almost wholly on practice. From hearing so much talk one might suppose there were not good means of teaching it up to our day, whereas the best means have long existed wherever there were good gardens. To learn the art in any right way one should be able to have variety in the place, and also some beauty of design. If any of these so-called colleges had the means of teaching, it would be nevertheless useless as a place for a youth to learn gardening in any thorough way. That can be only done by working in different gardens.

Gardens differ so much from each other, both as regards plan and contents, that the best way in which a young man can get knowledge of each subject is by going from one to the other and doing what is called journeyman's work. No matter how good the garden he begins in, he should make a study of a variety of other gardens afterwards, and begin at the right end by learning the actual things first, just as a boy sailor does. Books later on may help much.

An instructive example of wrong teaching is afforded by what some would call the higher art of painting. There never were so many means of learning art or so many professors, academies, and shows, and never so much bad art. Young artists have been led to think more of the Academy and the shows than of the thing itself. There must be something to account for the extraordinary difference between a head painted by Franz Hals or Rembrandt and a daub such as one sees in our picture shows, and it is due to the want of apprenticeship in the old way.

W.

NOTES OF THE WEEK.

The Taurian Scilla (*S. taurica*).—This, among the first of the Squills to bloom, has been very attractive for some weeks past. The deep blue flowers, almost as large as those of some of the *Chionodoxas*, are freely borne. It does not appear to be quite so hardy as *Scilla sibirica*, but if planted near a sheltering wall or boulder and in warm soil it will seed freely, and

in time form nice little tufts. Even at this early date seed is developing freely. The half-expanded leaves are prettily marked with bronze on the outer surface, forming a pleasing contrast to the charming flowers.—E. M.

"February Fillydye."—The late heavy rains have not been pleasant, and may be depressing to many, as well as to those who have to do outdoor work, but we think they are very good for flowers and hardy plants generally. It is much better that rain should fall in February than in March and April, when we should be busy in the garden. Nothing is worse for open-air flowers than a very dry winter and spring.

Kerria japonica fl.-pl. in bloom.—To my surprise on March 16th I found a piece of the double Jew's Mallow in fine bloom. It is planted in the basement of the mansion and against a wall facing due south. In addition, the heat from the kitchen, which adjoins the wall, may have something to do with its earliness, but, be that as it may, I have no record of *K. japonica* in bloom at such an early date. On a wall in the garden the shrub will not flower for a considerable time yet.—W. McG., *Balmac*.

Hunnemannia fumarifolia.—This is well worth growing. It is a fine autumn-flowering plant growing rarely more than 18 inches high, and often less than that, its yellow flowers being very showy in September. It comes from Mexico, so it should be given a warm place in the garden. Choose a position where it will get plenty of sun, and on this sow the seed next month, thinning out when ready. It may also be grown in the greenhouse, or raised from seed sown in heat at once and planted out in May or June. Perhaps someone will tell me if there is a simple English name for it. I cannot find one.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Planting Christmas Roses.—I, too, think Mr. Jenkins makes too much of the season of planting. I have tried his way and failed, but think it was not wholly the fault of September moving. He does not allow for the effect of a warm calcareous soil. Also in the south some shade is important. The plants never seem in stately health in cold, stiff soils. Roots of near trees and much water are also against them. I am now planting in an old lane cooled by Oak and Ash trees, where the plants will have half shade all the summer. I gave them some lime rubbish to start with. This is the only result of over twenty years' work.—W.

Viola cornuta Haslemere.—I am unaware of the origin of this variety and am inclined to consider it more of a hybrid than a true specimen of the type, because the flowers are much rounder than those of the family in general, and have not the characteristic horn which gives rise to the specific name. Nevertheless, the variety is of much merit, and when it becomes more widely known it will prove an acquisition not only for the flower garden but for the rock garden as well. The habit is compact, while the blooms are of quite a good shade of rose—a novelty in this family. The plants are very free flowering. I may have got the name wrongly, but it seems to be more allied to the miniature Tufted Pansy—Violetta—than to *V. cornuta*.—KIRK.

Forsythia intermedia var. spectabilis.—This shrub is now (February 24th) in bloom, the flower-buds having escaped the persistent attacks of small birds. Many of our best early-flowering trees and shrubs are annually almost ruined by these little pests. It is now a cloud of deep yellow flowers, each more than double the size of those of the old Golden Bell (*F. suspensa*). So freely does this variety bloom that quite half-a-dozen flowers are produced to every one of the latter species. They are also of a deeper colour, while every little sprig is literally clothed with them. It is the most beautiful of the Forsythias, useful alike for the shrubbery or planting singly. *F. suspensa*, with its loose, interlacing, and often drooping branches, looks poor in comparison with this erect and strong-growing hybrid.—E. M.

Saxifraga scardica obtusa.—A rock slope of 2 feet or more across of this good, white-flowered sort was quite one of the best items in the group arranged by Messrs. Waterer, Sons, and Crisp at the Royal Horticultural Hall on March 7th last. White-flowered Saxifrages may be said to be fairly numerous, but it does not follow that all present like effects or that one could well do duty for another. Indeed, it is not so. For example, that named above is very distinct. It also arrests attention, not because of flower superiority—the blossoms are starchy, the petals widely parted—but because of their abundance and peculiar whiteness against unusually dark green rosettes of leaves. In this way and with well-cultivated examples freely grouped the effect is good. That named above is widely removed in habit and flowering from the true *S.*

scardica, a rare and difficult plant from the Balkans, coming nearer to *S. Rocheliana*, though flowering earlier—March being its natural time in southern England. Happily, it is easy to grow and of free habit.—E. H. JENKINS.

Saxifraga Rocheliana lutea.—The varietal name is a considerable attraction, and a good yellow-flowered form of so desirable a plant as *Rocheliana* would be welcome in any collection of choice Saxifrages. The above remarks are made advisedly, inasmuch as nearly all the best of the yellow-flowered Saxifrages have a habit of growth which, while not erring on the side of generosity, are also not a little fastidious at times. *S. Rocheliana*, on the other hand, is not difficult to grow, and the growth is free. There is, however, yet room for a deeper-coloured yellow than we have so far in the variety named above. Its better side is seen during the early days of opening, when the deep primrose-yellow colour is as beautiful as it is distinct. Later the yellow colour pales somewhat and is less attractive. All the same I know nothing like it. Messrs. Tucker, of Oxford, had it quite good at the February meetings of the Royal Horticultural Society.—E. H. JENKINS.

Echeveria retusa for winter blooming.—Some well-grown pieces in good flower, shown at the Royal Horticultural Society's meeting on March 14th, recalled to mind this beautiful winter-flowering plant, which only requires to be more extensively grown for furnishing cut flowers in winter. It is a Mexican plant, and belongs to the *Crassula* family. It succeeds well in an ordinary greenhouse, in which it will begin to throw up its large spikes of beautiful flowers about Christmas, and will generally continue in bloom until the middle or end of March. The flowers remain long in good condition when cut and placed in water. They have a rich waxy appearance, the colour orange-scarlet faintly striped with yellow. The plant itself is easily increased from cuttings, which may be inserted singly in 3-inch pots filled with a mixture of sand and sifted leaf-soil and placed upon a shelf in a structure where a temperature not under 69 degs. is maintained. Such cuttings will speedily root, and may be shifted into 5-inch or 6-inch pots. During the summer they may occupy a cold pit, but they should be placed in the greenhouse early in October. Plants of this description will bloom soon after the middle of December. Any light sandy and not over rich soil will suit them.—P. T.

Hellebores as cut flowers.—The flowers of the Christmas Rose when cut last in water for two or three weeks, but we cannot always depend upon having them, as they come in midwinter, and unless protected are usually marred by the weather. The spring Hellebores, especially the lovely forms of *orientalis* and *colchicus*, having a graceful habit with several flowers borne on long stalks, are even prettier for cutting and need no special arrangement. When first we tried them for cutting, however, they proved very disappointing, and did not last fresh for as many days as the flowers of the Christmas Rose would weeks. Apparently, however, this defect arises from some inability of the flower-stems to absorb water at a sufficient rate to make up for evaporation or to sustain the freshness of the blooms. There is a simple and most effectual remedy, however, which is to split up the base of the flower-stem for an inch or so with the knife immediately before putting the flowers into water, and then the blooms keep fresh for nearly a fortnight if they are required as long.

Saxifraga Haagi.—This fine hybrid, of more than ordinary merit, resulted from the crossing of a couple of yellow-flowered species from Macedonia, viz., *saneta* and *Ferdinandi Coburgi*. In the hybrid the influence of both parents is clearly revealed, the rich, golden-yellow flowers, their shapely form, medium size, and short, sturdy stems, obviously inherited from *Ferdinandi Coburgi*, the free, dense carpet of growth—a great asset in such a case—showing the obvious influence of the free-growing *S. sancta*. Curiously, *S. Ferdinandi Coburgi* is not generally a success unless as a crevice plant or with frame culture, while the other, *S. sancta*, has but little beyond free growth and somewhat of colour to commend it. A combination of the two, however, has provided a plant of unusual beauty and merit, few, if any, so richly golden in colour—Mr. Irving, in "Saxifrages," refers to its flowers as orange-yellow—none more free in growth or more amiably disposed. Hence it is a plant to garden with, more especially when its hardiness and weather-resisting properties are taken into account. It grows freely in gritty loam with good drainage.—E. H. JENKINS.

Variation in plants.—Before a large attendance of members of the Wimbledon and District Gardeners' Mutual Improvement Society, at Queen's Hall, Professor Bateson, Director of the John Innes Horticultural Institution, lately discussed the question of variation in plants. He reminded his audience that the subject was one of great interest to the gardeners of the middle of the 19th century. Not only in connection with indoor work, but for bedding purposes in the formal gardens of that time, variegated plants were in great favour. Now that interest in these plants had declined it was very difficult to procure variegated plants to experiment with. Those procured they were using in an attempt to understand the processes of plant breeding. It was through variation that they were able to get a side-light on the process of heredity in plants, which at present they were unable to get from any other source. In horticulture there were a number of conditions spoken of as variation, but he was dealing with that class of variation which showed the change in the amount of the green matter to which the green-coloured leaves were due. This matter existed in small, round, or flattened bodies inside the cells, and was quite different from the matter surrounding it. He then proceeded to describe the arrangements obtaining in the orderly and disorderly distribution of the matter.

[A very trivial subject to occupy the time of a professor in a horticultural institution! All that variegation usually does for gardens is to disfigure them with ugly colour and often disease.—Ed.]

The Winter Aconite poisonous.—Mrs. Portman Dalton's narrative in GARDENING ILLUSTRATED of March 18th (p. 144) is tragic and also very mysterious, since the poison Aconite is the Monkshood (*Aconitum*) and not the little, so-called "Winter Aconite" (*Eranthis*), which, I believe, we may still enjoy without any danger.—D.

—If this plant has deleterious effects it is well that it should be known, but the note in your issue of March 18th is far from being convincing, and is open to grave suspicion that it is all a blunder arising from the common name of the *Eranthis hyemalis* being "Aconite." For I cannot find either in old Herbals, in Medical Botany, or in books on *Materia Medica* that there is even a trace of Aconitine in this plant. Nor does the

statement that a doctor—and a herbalist, save the mark!—who were called in considered that the patient was suffering from "acute Aconite poisoning" carry the matter any further. For the symptoms of Aconite poisoning do not differ from those met with commonly enough in the final stages of consumption, nor would "acute Aconite poisoning" take a few weeks to kill. In cases of Aconite poisoning no certain diagnosis can be made without finding and separating the poison, and the only way—an easy and certain way—of setting the question at rest would be to get a competent chemist to examine the plant for the alkaloid, which, by the way, is not volatile.—F. R. C. S.

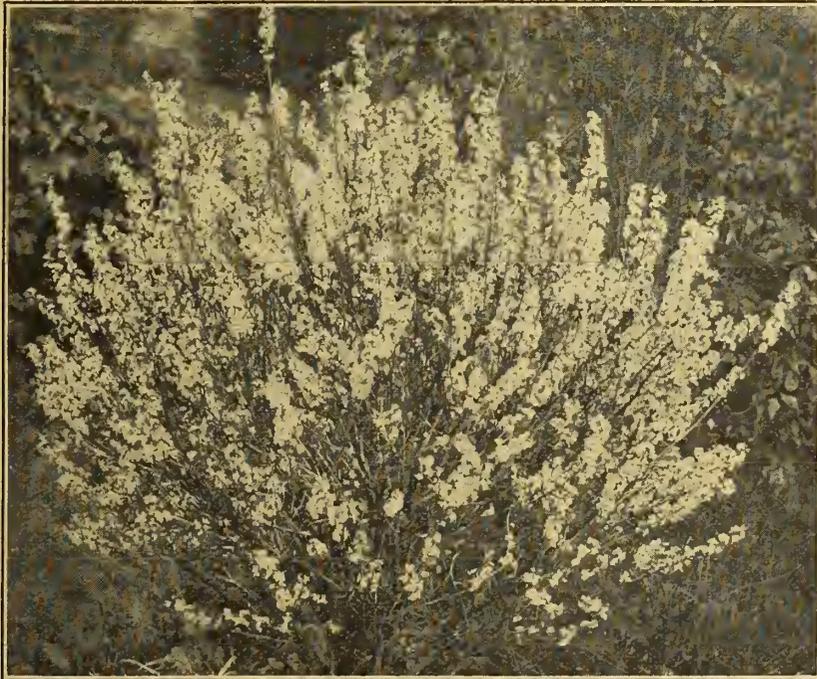
Isopyrum grandiflorum.—No novelty before the Floral Committee of the Royal Horticultural Society on March 7th last excited so much interest as this, albeit the plant obtained no award, the Committee wishing to see it again in a more established condition. Only a solitary flower was open, though even this afforded no small clue as to its beauty. The whole plant—foliage and flower, probably not more than 2 inches in height—gave one the impression at first-sight of a singularly beautiful and distinct small-growing form of *Anemone Robinsoniana* poised on almost thread-like stalk above a small, dense, miniature inch-high tuft of glaucous Meadow-Rue-like leafage. According to Mr. Farrer's description of it it occurs "in shady cliffs, gulleys, and on rock faces in the Alps of China in every shade of lavender to amethyst and turquoise," hence to lovers of alpine there is a great treat in store. The example referred to above was, therefore, doubtless but in the infant stage. It was presented by Messrs. Bees, Liverpool.—E. H. JENKINS.

Hamamelis arborea.—Your correspondent "E. M., Sussex" quotes an article in "Flora and Sylva" in substantiation of his claim for *Hamamelis arborea* as being the earliest to flower. To this my answer is that at the time the article in question was written *Hamamelis mollis* was but little known; indeed, concerning it the writer in "Flora and Sylva" states:—"The new Chinese kind, *H. mollis*, is as yet hardly known in gardens, though to all appearance a plant of value, being quite hardy, of good growth, and the brightest of all in colour." Though at the heading of the article your correspondent assigns specific rank to *H. arborea*, he speaks of it later on as a variety. One is inclined to ask whether he looks upon it as a variety of *H. japonica*? With regard to the dimensions these two Witch Hazels are likely to attain with age, I should say that *H. mollis* is likely to prove more of a shrub than the other, but that size is the only consideration I have yet to be convinced. I note that "E. M.," in his notes on plants in bloom in the open air, does not mention *H. mollis*, so conclude he does not grow it, hence his claim for *H. arborea* as being the earliest and best of the group. If "E. M." will read my short note on page 81 again he will see that I did not claim for *H. mollis* all the virtues, but stated that I should give it the preference over *H. arborea*. With regard to their relative periods of blooming, *H. mollis* is undoubtedly the earlier, as will be borne out by anyone acquainted with the two. I note that "E. M.," while quoting "Flora and Sylva" in support of his assertions, goes out of his way to accuse the author I referred to as having made a mistake. A sentence in my previous note particularly applies—"Where opinions vary so much as in the relative beauty of different plants one must not be too egotistical."—W. T.

TREES AND SHRUBS.

DAPHNE MEZEREUM.

At this season there is no more hardy shrub than the old *Daphne Mezereum*. Not only are its densely-packed flowers charming for colour, but equally so for their sweet perfume. Although it was well known 300 years ago, it cannot be said at the present time to be so plentiful as it ought to be. It is a favourite plant with cottagers, and some of the finest specimens in the country are to be found in small village gardens, where for many years they have been carefully tended. It is by many botanists considered doubtful whether it is truly indigenous to the British Isles, but if not so, it has become naturalised, and is met with wild in several parts of England. There are several varieties of it in cultivation with purple, red, or white flowers. The flowering season of the typical form is February and March, but in mild winters the first blooms may be seen in the closing days of the old year. There is also a valuable



Daphne Mezereum.

variety called *grandiflora*, which commences to flower as early as October and November.

D. Mezereum is a compact, many-branched, erect-growing shrub, attaining in very old specimens a height of 6 feet, but it is usually seen about half that height. It is deciduous, and at the time of flowering is leafless. The flowers occur in short-stalked clusters of two, three, or four together, the clusters being densely packed on those portions of the branches made during the previous summer. The colour is a reddish-purple, but in some forms the purple is scarcely noticeable. The variety *alba* has flowers of a somewhat milky-white, and is equally as desirable as the ordinary purple form. The finest variety, however, in cultivation is the one already alluded to as *grandiflora*, in which the flowers are not only larger than those of any other variety, but the colour is a rich, glowing, reddish-purple.

All the forms of the *Mezereum* are easily grown. They like a moist, moderately rich loam, and flower best in an open sunny position. In autumn the *Mezereum*

again becomes ornamental, its branches being then covered with berries, those of the purple-flowered forms being red, whilst those of the white variety are yellow. The species is readily propagated by seed, which should be sown as soon as ripe; if allowed to get dry it will take two years to germinate. The seedlings mostly follow the parent plant in colour; nevertheless, "sporting" almost invariably occurs, and a few white-flowered seedlings will appear in most sowings of the purple varieties.

FLOWERING CHERRIES.

Of flowering Cherries the Japanese recognise a hundred or more varieties with white, yellow, pure pink to rose-coloured blossoms. Some are small shrubs, others large trees with wide-spreading crowns; some have pendent and others quite erect branches. All are entrancingly beautiful. Cherry-trees grow wild in the woods and thickets throughout the length and breadth of Japan, and they are everywhere planted in vast numbers—in temple and castle grounds, in park and garden, in the streets

branchlets, the whole forming a flattened or flattened-oval crown 20 feet to 30 feet through. The flowers are silvery-pink and are produced in such profusion as to hide completely the twigs and branches. This Cherry was introduced to cultivation by the Arnold Arboretum in 1894, and has been widely distributed. The Weeping Cherry,

P. PENDULA, has flowers similar to the foregoing, to which it is very closely related, but it is a much larger tree, growing 60 feet to 70 feet with a trunk 10 feet to 12 feet in girth, and massive spreading limbs dividing into branches which curve downward and into slender, whip-like, pendent shoots. It was introduced to cultivation by Philip Franz von Siebold, who secured plants for his nursery at Leiden, Holland, from Japan about 1863. It is a long-lived tree, but I have never seen a good example in the Occident. In Japan, and especially in the temple grounds, magnificent examples are common, and there is no more graceful or beautiful tree than this Weeping Cherry. The Japanese called it *Shidare* (Hanging) or *Ito-zakura* (Thread Cherry) on account of its very slender, whip-like, pendent branchlets. The Cherry so abundantly grown in and around the city of Tokyo and whose season of blossoming is made the occasion for a national holiday is the *Yoshino-sakura*,

P. YEDOENSIS. This is a large, quick-growing tree which at its best is 45 feet to 50 feet high, with a trunk from 6 feet to 8 feet in girth and massive spreading branches forming a rounded crown from 60 feet to 75 feet through. The fragrant flowers are larger than those of the preceding two Cherries, and vary in colour from pure pink to white. If crowded together the trees grow taller, but the crowns are narrower and much less shapely. It was introduced to the Arnold Arboretum in 1902, from Tokyo, and the seedlings have grown very rapidly. The most beautiful of all the wild species of Asiatic Cherries is

P. SARGENTI. This is a native of the northern and colder parts of Japan and has large, pink to rose coloured flowers, and the young unfolding leaves are a ruddy-brown. It is a large and long-lived tree, and the avenue at Koganei mentioned previously is of this species and its varieties. Dr. Bigelow sent seeds from Japan to the Arnold Arboretum in 1889, and trees raised from these seeds are now 25 feet high, with a trunk 4 feet in girth and a crown 20 feet through. Nearly all the Japanese Cherries with double rose-coloured flowers are forms of this *P. Sargentii*, and it is the stock on which all of that class should be grafted or budded in order to make them long-lived trees in this climate.

One of the loveliest of these rose-coloured Cherries with double flowers is known in Western nurseries as

JAMES H. VEITCH. The Japanese name for it is *Fugenzo*, and there is also a white counterpart which is styled *Shirofugen*. These two are distinguished from all others of this class in having two tiny green and folded leaves in the centre of the majority of their flowers as is the case in the double-flowered form of the European *P. Cerasus*. Two other Japanese Cherries are

P. SIEBOLDI AND *P. LANNESIANA*. The former has rose-pink double or semi-double flowers, and its leaves are clothed with soft hairs. In nurseries it is sold as "Watereri" and as "Naden." The other species has many aliases, and in its different forms is sold as *P. pseudo-Cerasus* and as *P. serrulata*, names, how-

of the cities and alongside the highways, by pond and by riverside. At Koganei, there is a three-mile avenue of Cherry-trees planted in 1735, by command of the Shogun Yoshimune. Many of the trees are from 60 feet to 75 feet high, with trunks from 10 feet to 12 feet in girth and crowns from 50 feet to 60 feet through, and when in full flower the scene presented is a never-to-be-forgotten one.

As one result of its recent expedition to Japan the Arnold Arboretum has now growing a collection of more than seventy varieties of these Cherries, and in a few years the American public will have an opportunity of appreciating the attractive charms of these plants. Meanwhile the following kinds of proven merit should be grown by all who love a hardy plant. The first of these Cherries to open its blossoms is

PRUNUS SUBHIRTILLA, the *Higan-sakura* or Spring Cherry of the Japanese. This is a low bushy tree, rarely more than 18 feet to 20 feet, with thin ascending-spreading branches and a dense mass of twiggy

ever, to which it has no proper right, and which have proved a great bugbear and hindrance to our proper appreciation of the garden varieties of Japanese Cherries generally. In typical *P. Lannesiana* the flowers are pinkish, but its wild form has pure white blossoms. All the numerous forms of this Cherry have fragrant flowers, and they are mostly white or pale pink. One sort (*grandiflora* or *Ukon*) has clear yellow flowers, and in another (*Gioiko*) the colour is yellow with a green band down each petal. In both the flowers are double. *P. Sieboldi* and *P. Lannesiana*, together with their forms, are trees from 20 feet to 30 feet high, with wide-branching heads, and in Japan they grow rapidly, but are not long lived. One other species of Japanese Cherry deserves mention, and that is

P. INCISA, which is abundant on the lower slopes of Mount Fuji and the immediate vicinity, but is confined to those regions. It is a bush or small tree from 5 feet to 30 feet high, with ascending and spreading thin branches and twiggy branchlets and pale pink to pure white flowers. This Cherry blossoms profusely in a small state, and is the only kind the Japanese dwarf and grow in pots, and on this account they designate it the *Mamezakura*—Dwarf Cherry.

GRAFTED ON WRONG STOCK.—In the Occident we have not been very successful in cultivating the double-flowered forms of these Japanese Cherries, and from information gained during my recent visit to Japan I am convinced that our want of success heretofore has been due to the fact that for our climate they have always been grafted on the wrong stock. All the single-flowered sorts of these Japanese Cherries fruit freely with us and should be increased by seeds, for seedling trees of these Cherries grow more freely and more satisfactorily than those raised by other means. All the double or semi-double flowered kinds should be grafted or budded on *P. Sargentii*. If this be followed I make bold to say that these Cherries will thrive as well, grow as freely, and live as long as they do in Japan.—E. H. WILSON in *The Garden Magazine*.

NOTES AND REPLIES.

Skimmia japonica.—Intending planters of shrubs ought not to overlook the claims of the *Skimmia*. Apart from its brightly-hued fruits, the blooms, freely produced in terminal trusses, are delicately perfumed, while the shrub is, in itself, symmetrical. It should be borne in mind that in order to secure berries the different sexes of the shrub must be planted. If the female form alone is used there will be plenty of bloom but no fruits, but if planted in the proportion of one male to five or six female plants a good crop of berries is assured.—KIRK.

Pieris floribunda.—This choice evergreen shrub is now in flower. January being so mild, the first few flowers opened in that month, but the severity of February checked them, so that now (in the middle of March) they are barely at their best. Being a compact grower, it is very suitable for the rock garden or in beds of choice shrubs. It thrives best in a soil containing much sand and leaf-mould or peat. The flowers are borne in dense racemes, and last well on the plant or when cut.—C. TURNER, *Highgate, N.*

The Oso Berry (*Nuttalia cerasiformis*).—This was recently noticed in bloom in a neighbouring garden. In appearance it is not unlike the common Bird Cherry (*Prunus Padus*), but of more slender growth, and apparently not so rampant. In open winters the blooms, produced in racemes along the entire length of the shoots, are often in evidence during the early days of March. *Nuttalia cerasiformis* is quite hardy in this country, although, judging by the specimen noted, which has been planted for some years, it does not grow very fast.—W. McG., *Balmoe*.

VEGETABLES.

RHUBARB FAILING.

I SHALL be pleased if you will tell me the cause of and, if possible, a remedy for the following—Last autumn I purchased and planted in the open about twenty roots of Rhubarb. The stalks began to grow during the mild weather about the third week in January, and I was expecting an early crop, until one morning about ten days later I found two stalks bent and lying on the ground. From then until now scarcely a morning has passed on which I have not found one or more stalks similarly bent. Altogether I have lost about forty stalks in this way. On close examination, I find that the stalks apparently become weak and partially shrivelled up at a point either just above the crown or at a point 2 inches or 3 inches above it. About two days later the whole stalk shrivels up. Some are affected when 2 inches or 3 inches high, and some when 8 inches or 9 inches high. None, however, have reached a height of more than 9 inches, except on two roots. The stalks on these two roots are perfectly healthy, and, although growing among the others, none have been affected. The stalks do not break off—they only bend. It is not caused by frost or wind, as the weather was calm and very mild from the time they began to grow until after they were first affected.—W. L., *Camborne*.

[The probable cause of the Rhubarb stalks shrivelling in the manner described is that the crowns, having erroneously been transplanted in autumn, they have not, as we shall presently explain, recovered sufficiently from its effects to enable them to support growth beyond a certain period. The present is the best time in the year for lifting, dividing, and transplanting Rhubarb crowns, as new roots are then quickly emitted, which soon multiply, and by the end of the season the crowns become thoroughly established. The result of autumnal planting is that the roots, owing to their peculiar construction, invariably remain inactive until the spring or warmer weather arrives. If in the meantime a spell of mild weather occurs, such as was the case in the latter end of January and early February last, the crowns start growing, and continue, weather permitting, to do so until the stored-up nutriment contained in the crowns is exhausted. Then, when, so to speak, no further supplies are forthcoming, owing to the absence of active roots for the growths to draw upon for support, they collapse and die away. The fact of two crowns having yielded stalks in a satisfactory manner furnishes proof that since planting took place new roots in their case have been formed. There is nothing to be done but wait patiently till another season comes round, by which time the crowns will have become well established and will then doubtless yield a full complement of stalks.]

NOTES AND REPLIES.

Spring digging.—It is always advisable to get vacant ground turned over as early in the season as possible, and when this can be done the soil ought to be left as rough as possible. In the case of breaks which have to be left until spring different treatment is necessary. In the course of digging, the soil ought to be broken down as finely as possible, more particularly when the staple is clayey or heavy. If left rough the searching winds of spring rapidly dry out the surface moisture of the clods, which harden almost to the consistency of bricks. Should a portion of such a break be required during a dry spell, it is almost impossible to reduce the surface to a sufficiently friable condition, so that when spring digging is necessary this fact ought to be kept in view. If the surface of such a break is, owing to circumstances, left rather rough, the best time to break it down will be found to be immediately after a brisk shower. Then the clods may be broken up quite easily with wooden rakes.

GARDEN FOOD.

NOTES AND REPLIES.

Wholemeal bread.—I am having wholemeal bread made by Sir Henry Thompson's recipe. Do you realise how much nicer bread is broken, not cut? Of course, one breaks it at dinner, but there it is only an accessory to meat or whatever it may be; but at breakfast, with butter or honey, it has its own importance. It is easier to go on cutting it about with the knife, but broken you seem to get the whole value of the flavour and aroma. The matter came to mind when looking on a parcel of old journals and sketches of many years ago, when I was for part of a winter in the Turkish island, Rhodes. Our servants were a Jew and a Greek woman. When we asked for bread at dinner the Jew took the loaf—a flattish cake such as we make of wholemeal—and broke a piece off. They will not touch bread that has been cut.—J.

[No doubt it is best broken, but the thing to be sought most as to wholemeal, the best of breads, is to get rid of yeast in making it. It destroys the natural taste of the wheat and makes bread a source of discomfort and disease. The Americans have got over the difficulty with their white flour by the aid of their small gem pans, but how to bake wheaten meal without yeast is still to be done.—W.]

Celery Cabbage.—I notice your editorial query as to what is meant (page 134) by "The Celery Cabbage." Do you think what we know as "Seakale Beet" is referred to? It rather looks like it to me. I always use the mid-rib of the leaf in the same way as ordinary Seakale, and find it quite agreeable, the very slight Beet flavour being pleasant. The green part should be mashed very fine and served, as Spinach, with cream and butter.—C. B. R., *Bafford Grange, Charlton-Kings*.

—Although I do not recognise the name, I think there is no doubt, from the description, that this new vegetable is the Chinese Cabbage known as "Pè-Tsai." This can be used in the various ways described in the note, and the centres make an excellent salad. The growth is extremely rapid, but it is not advisable to sow it very early in the season, as there is a great tendency to run to seed if sown too soon. I grew a few rows of this vegetable last year, and the seed was not sown until July 15th. The Cabbages were ready to cut early in October, or in from eleven weeks to twelve weeks after sowing. I know of no vegetable which is so rapid in growth and produces such a large plant in so short a time. It occurred to me that it might be a valuable crop for farmers on account of its rapidity of growth and the time of sowing. Where roots have failed this might be put in from the middle to end of July, and should produce a very useful crop for dairy purposes or cattle by the middle of October. I have sent a supply of the seed to one of our Agricultural Colleges and they are testing it this year. In appearance the plant seems to lie midway between a Turnip-top and a Cabbage. It makes a large heart which, in good ground, weighs several pounds each. I have much pleasure in enclosing a small packet of seed for trial should you be interested and wish to grow it.—F. B., *Springfield, Northampton*.

Leeks.—At this date (February 26) the contrast between Leeks raised in heat and grown in trenches and those sown out-of-doors and transplanted is worth noting. The former are now bolting, while the latter, with about 10 inches of blanch and 1½ inches in diameter, are in excellent condition, and may be relied upon for quite two months still. The moral is obvious.—KIRK.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

BREADTH AND REPOSE IN LANDSCAPE.

THE most evident mistake made in design of work is the want of repose or breadth which is seen in so many parks and pleasure grounds. In the Home Counties one can scarcely see a piece of modern park land without the trees being in rings and in dots here and there spoiling all the breadth and simplicity of the scene. Such planting spoils landscape effect and does no good to the trees, as the dots are too small for shelter. The best way by far is to keep such green spaces open and plant broadly ground that is no good for Grass

The planting without thought of rampant evergreens is a common evil in British gardens. Evergreens are often planted where people do not see what they may become after years of growth. Important views are shut out by these evergreens, and even the house itself may be hidden by their ugly masses. One sees the same thing in public gardens, where it should be important to keep the scene picturesque and preserve any natural charm of the ground, instead of over planting it.

In France it has been a common practice to mar any grace of public squares and gardens by using them as a display ground for the efforts of the sculptor; but the French now begin to see this mistake,

pathways for cleaning, feeding, and various purposes that need not be named.

In the garden itself certain malformed trees are used by designers of architectural turn to give points—the Irish Yew, close-growing Juniper, and various hideous sports of the Western Arbor-Vitæ. These are often used from the fatuous idea that they are old and right in the old English garden—the fact being that they are all modern rubbish that can do no good to any garden planting.

It should be borne in mind that the garden is but a patch in many a country place. It is only when we leave it we begin to see the real opportunity for landscape pictures in field, park, or woodland. Among the most interesting landscapes



Riverhill, view into weald.

or plough. In such places trees can grow nobly. Sometimes one sees a single Pine spoiling the middle of a lawn. The lawn-like beauty of park or garden is the most precious thing we have for giving us air, sky, and space, and the grouping and massing are the right way.

How to remove the defect in park-like places is difficult, but one may occasionally unite two or three groups into one whole, and so get rid of the spotty effect, but the best way often is to remove the dotted trees altogether and replant. It is the nature of trees on mountain or steppe to grow together and protect each other, and in our wind-swept isles and in many others it is often important to plant in the teeth of the worst wind, and close planting should be the rule.

and to cry out against it. It is now proposed to remove these statues into one great statue cemetery, where those who admire them might worship.

In our own parks there is a beginning in the same direction. Close to Hyde Park Corner there is a sort of fountain out of place, which spoils a little lawn. Large memorial confectionery groups ought not to be allowed to break up the spaces in the parks. Lately, I am told—I have not seen it—the fantastic idea of a playwright has been embodied in stone in Kensington Gardens. If each succeeding decade is to see outrages of that sort committed what will eventually become of the repose and quiet grace of parks?

An effective way of destroying repose in a public garden is the caging of animals there. This leads to ugly shanties and

in Britain are those in Kent, looking from high ground into the weald, as in this view at Riverhill. W.

Lobelia Barnard's Perpetual.—Lobelias are indispensable where summer beds are to be filled, and some little attention might be directed to the choice of suitable varieties. Much depends on the type of Lobelia desired, some preferring the dwarf, erect sorts, like Blue Gem, others considering such Lobelias as *L. speciosa*, of a trailing habit, to be superior. The dwarf varieties are too stiff and formal, while the spreading sorts are apt to overrun Grass edges and suffer mutilation when the lawn-mower is being used. On the whole, therefore, it would seem better to employ an intermediate type of Lobelia for edging. Such a variety may be found in Barnard's Perpetual, perhaps one of the best Lobelias for the purpose, while it is

equally useful for vases or for window-boxes. The colour is a pleasant shade of blue, the plant is very free flowering, and while it does not encroach unduly it never has the stiff, artificial look of the dwarf Lobelias.—KIRK.

NOTES FROM ASHBOURNE.

OLEARIA AVICENNIFOLIA.—Hook f. Hand-book N.Z. Fl. 127. Kirk, Forest Fl. I., iii.; Students Fl. 274. Eurybia avicenniaefolia, Hook f. Fl. November 2nd, 1, 120. Shawia avicenniaefolia, Raoul, Chron., 19. After reciting the above list of authorities I may say that I obtained the shrub under the above name from Sir Frederick Moore, of Glasnevin. It is abundant throughout the south of Stewart Island up to 3,000 feet.

THE SERBIAN SPRUCE (Picea Omorika).—This is one of the beautiful, rare, and disappearing Spruces now dying out and very difficult to obtain. In the "Manual of Coniferæ" it is stated that it has a very restricted habitat on the mountains of south-west Serbia and their prolongation into the neighbouring States of Bosnia and Montenegro. Willkomm is of opinion that P. Omorika had formerly a more extensive distribution, but became exterminated for the sake of its timber, and that it has been preserved within its present narrow limits by their greater inaccessibility. It is a fine-shaped, close-growing conifer and a decided acquisition, at all events, in the south of Ireland, where it thrives well. I have obtained three more good specimens from Messrs. Cheal, of Crawley.

A NEW PRIMULA.—A lovely Primula has flowered here. It was raised from *Primula viscosa* crossed with *Primula marginata*. Its colour is aniline-blue margined with a clear, delicate, white line slightly dotted with white tomentum; clear white eye. The flowers, sometimes seven upon each whorl, are carried on stalks 3 inches high, and are each $\frac{3}{4}$ inch in diameter, with the white eye 3-16 inch diameter, five petals to each flower, rounded, with a small dentation at the centre of each edge. The leaves are each 2 inches long and $\frac{3}{4}$ inch wide, box-green in colour, covered with tomentum and margin white, upper half of the leaf serrated. It is a remarkable plant, and I trust will be shown next spring at the Royal Horticultural Society's show.

NARCISSUS R. II. BEAMISH.—I have also a Daffodil raised here which may be useful. It is described as follows in the Daffodil Year Book, 1914:—

"Royal Horticultural Society of Ireland Exhibition, April 15-16, 1914.

"They had, however, one new seedling which far and away eclipsed aught else in the show, and this was a bunch of N. R. II. Beamish (bearing the name of the raiser), a giant of the big trumpet tribe, with a solid-looking white perianth and pale sulphur trumpet, a grand flower, and, judging by the robust foliage, as well as by the big, stiff stems, of ultra-vigorous habit."

Since then I have obtained one or two more good things of which we have hopes.

The weather has been unusually cold here, but as soon as spring really breaks there is much to be done in the rock garden, a new moraine of limestone to receive various treasures, including that delightful and rare sun-lover *Cyananthus incanus*, easy, comparatively, to propagate in a cold house, but difficult to preserve over the winter out of doors on account of the damp. It is worthy of trouble when one sees it covered with its deep blue flowers in the summer and autumn.

R. II. BEAMISH.

ECONOMY IN THE FLOWER GARDEN.

WHERE, under existing conditions, it is not deemed advisable to spend anything on plants or seeds, it will be well to have a look through the flower garden as soon as the ground is workable to see what can be found to fill gaps. Where, for instance, Cornflowers and Antirrhinums were flowering in the summer of 1915 it is probable that batches of seedlings may be found, and these, being sturdy and hardy, will come away quickly when transplanted to other quarters. Also, later, many seedlings will appear where tall and dwarf *Nasturtiums* were grown. These may require the shelter of a cold-frame for a time, but will make good stuff for late planting. Seedlings of the dark-foliaged variety with scarlet flowers, as represented by a sort known as Empress of India, can be reserved for the front of borders, where they can be associated with Pinks and plants with foliage of a similar hue. In addition to the seedlings there are many favourite hardy plants that produce offsets with great freedom, notably some of the tall Campanulas, both white and in many shades of blue, *Chrysanthemum latifolium*, Phloxes, Starworts, and the like, such offsets being strong and producing fine flowers. If the division is left till March it is worth going to a little extra trouble with the process in the way of careful removal of the soil and severance from the parent plant; also quick and careful replanting, especially if at the time the weather is very dry, with cold, biting winds. This, also, should be specially noted in the case of border Carnations which have remained hitherto where they were layered, the tiny rootlets are very tender and resent, alike, rough handling and long exposure. Where there are a few nice clumps of Funkias inspection will probably furnish some nice side pieces that can be removed without injury. *F. ovata* and its variegated form give something in the way of flower and foliage quite unique in hardy flowers. They also make capital tub plants, and may remain undisturbed for several seasons if they are given an annual top-dressing and liberal supplies of liquid manure during the growing season. E. B. S.

Hardwick.

NOTES AND REPLIES.

Helenium Bollanderi.—Many hardy plants may now be lifted, divided, and replanted, and among them the *Heleniums*. One of the most showy is *H. Bollanderi*. Quite small pieces in a season or two will make good clumps, and being of an intermediate height the variety is useful for the foreground of a border. The flowers are large, of a clear yellow, and, having long stems are well adapted for cutting.—W. MCG.

The value of Grass from the lawn for manure.—For many things there can be no better manure than the cut Grass from the lawn, deposited in a heap and kept until spring. One of the best growers of Asters I know uses nothing else and obtains results not easily equalled. He keeps the mowings in a heap, adding no other material, and in spring this is in the best possible condition for applying to the beds of Asters.—Ess.

Our readers will greatly oblige by ordering their weekly copy of GARDENING ILLUSTRATED in advance from their newsagent, as this will prevent wastage in printing. Moreover, the Government is reducing the supply of paper, and, hence, the utmost economy is necessary in this particular. Persons who experience difficulty in getting the paper locally are advised to write to the publishing offices, 63, Lincoln's Inn Fields, London, W.C. The postal subscription is 6s. 6d. for the year, 3s. 3d. for the half-year. The paper is posted on Tuesday night regularly to all postal subscribers, and should reach them on Wednesday morning.

INDOOR PLANTS.

PERPETUAL-FLOWERING CARNATIONS.

THESE are gaining in favour with the public every year. There are, however, many who regard them as being beyond their skill. It is possible to treat them too well—that is, keep them in a very warm structure, unduly restrict the ventilation, pot them in too rich soil, and over-feed them. I use ordinary turf, lifted when a long garden path was to be formed. This turf was stacked and at the end of a few months it was fit to use. There was scarcely any fibre in it. Furthermore, very little leaf-soil was used, only coarse road-grit. From the rooted-cutting stage to the season of flowering, the plants grew and rooted in it like Couch Grass. A gardener I knew who made up fancy mixtures had trouble with the plants throughout the summer, and in the autumn, when there should have been abundance of roots in the pots, there were very few. The soil had been poisoned with artificial and liquid manures. He could not understand how it was that my plants were so large and robust. I do not give any artificial manure till the plants are well rooted in their flowering-pots.

They are still grown each year in the same kind of soil, but are improved by the addition to it of old mortar-rubble, broken bricks—pounded—and wood ashes, used at every potting as follows. To a bushel of loam a 5-inch potful of wood ashes, a 6-inch potful of old mortar-rubble, and a similar quantity of pounded bricks are added. Broken bricks and small lumps of old mortar are put in for drainage. In this mixture the plants root very freely.

The present is a good time for a beginner to start with a collection of plants. I root the cuttings, taken off the flowering-stems about half-way up, in pure sand, in a box 9 inches deep covered with glass. Those who cannot do this should purchase young stock in small pots ready for re-potting into 3½-inch ones. When they are well established in these pots break out the stem from the axils of the leaves about six joints above the base of the plant, then the resultant side shoots will form the base of a sturdy plant. The final potting should be made into 6-inch and 7-inch pots. Never allow the soil to get very dry. Keep near the light and ventilate freely when the weather is suitable, placing in cold frames about the middle of May and in the open air on a firm bed of ashes during July and August. Transfer them to their winter quarters early in September.

An amateur who has never grown these plants before may begin with the following varieties:—**PINK:** May Day, Baroness de Brien, Enchantress, and Lady Northcliffe. **WHITE:** White Perfection and White Wonder. **RED:** Britannia and Beacon. **CRIMSON:** British Triumph and Princess Dagmar. **YELLOW:** Yellow Stone. **FANCY:** Benora, Cinnabar, and Royal Purple. As success comes and experience is gained, the list can be easily added to.

BOURNE VALE.

Begonia manicata.—After the various winter-flowering Begonias are past their best the blossoms of this old Mexican species are much appreciated. In size they cannot be compared with those of many of the newer garden forms, yet being borne very freely they make a goodly show. The flowers, borne in large branching panicles, on scapes each 2 feet to 3 feet high, are of a pleasing shade of light pink. There are two varieties—

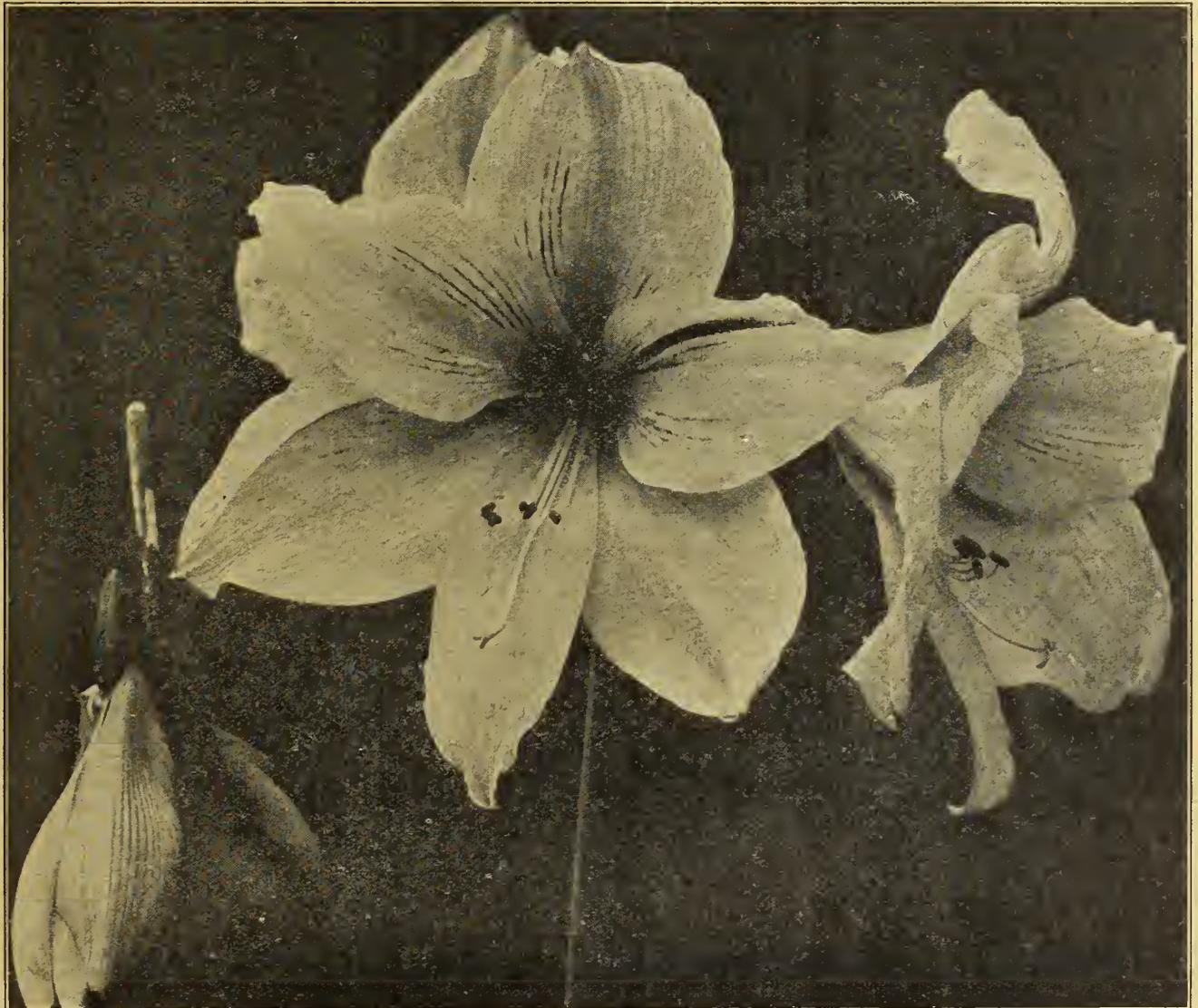
nureo-maculata, in which the leaves are blotched with creamy-yellow, and crispa, or cristata, whose foliage is crisped in the way of some of the Kales. This Begonia needs a temperature above that of an ordinary greenhouse, indeed that which is generally referred to as intermediate. It may be increased by division, from cuttings of the stems, or from leaf cuttings.—W. T.

HIPPEASTRUMS FROM SEED.

AMARYLLISES are readily increased by means of seed, and large numbers are obtained in this way. Crossing is easily carried out and the seed does not take long to ripen, while if sown at once

added a fair sprinkling of rough silver-sand, which should be thoroughly incorporated with the rest of the soil. The pots or pans must be well drained and filled to within half-an-inch or less of their rim with this compost. It is best to insert each seed edgewise into the soil. By some the seed is sown pretty thickly, the seedlings being pricked off as soon as the young plants are large enough to handle; but where room is available the better way is to place the seeds in the pans at a sufficient distance from each other to allow the young plants to develop a couple of leaves or so before it is necessary to disturb them, and then they may be potted off into thumb pots—that is to say, small

6 inches in diameter. They may be rested altogether in a cooler structure than that in which they have been grown previously, and if dry and in good condition a minimum temperature of 50 degs. will suit them well. If the plants have made satisfactory progress the strongest may be expected to flower in about two and a-half years from the sowing of the seed, but most of them will be a year later than this; in fact, those that flower early will often improve as they gain strength. By some the seedlings are planted out in a prepared bed in a house or warm pit, and where large quantities are grown a good deal of trouble is saved by treating them in this manner; but in many places there are no facilities for this, when, of course,



A seedling Hippeastrum.

thrifty little plants quickly make their appearance. But for flowering it is necessary to wait for years. As with the raising of other plants, there is always the pleasure of anticipation, and though the seedlings may not be superior to existing varieties, yet they are all good decorative plants, none the less useful because they do not exactly conform to an ideal flower.

The seed ripens about the latter part of July or in August, and if sown at once it quickly germinates, whereas if kept till the spring, the results are by no means so certain. The seed may be sown in pots or shallow pans. A suitable compost consists of equal parts of good yellow loam and well-decayed leaf-mould. To this must be

pots about 2½ inches in diameter. For this potting the same kind of compost may be used as that in which the seeds have been sown. If the seed is sown as soon as ripe, and placed in the stove, the young plants will be sufficiently advanced to pot them off early in the autumn, when they should be again returned to a light position in the same structure and kept in a growing state throughout the winter, for it is not necessary to rest them at that period, as is done in the case of old-established plants, and indeed it is now pretty generally agreed that the best way is not to rest them till the autumn of the second year, by which time they will be good established plants in pots 5 inches and

pot culture is the more convenient. Pot culture also possesses this advantage, that any particularly choice forms can receive special attention.

Saving seed of Chinese Primula (T. G).—To obtain seed of the Primulas stand the plants on a shelf close to the glass in a cool greenhouse by themselves to prevent insects fertilising the blooms that it is desired to preserve true to character. Do not give the plants an excess of moisture at the roots, and, of course, none overhead, keeping the blooms perfectly dry. With a camel's-hair pencil touch the pistil or stigma in the centre with pollen from the stamens, thus producing artificial fertilisation. Limit the number of seed pods on each plant to a dozen, removing, of course, the smaller with a view of adding strength to the remainder. The seed should not be gathered until thoroughly ripe, and may then be sown when desirable.

ROSES.

THE PRUNING OF ROSES.

Most Rose growers agree that to obtain the best results it is necessary to prune. In pruning, the first thing to do is to entirely remove all shoots that are either too old or too weak to produce a fair quantity of blossom, leaving nothing but really strong young growths. It is particularly desirable to keep the centre of the plant open, so that there may be a free circulation of air and light about the shoots that remain. An unpruned tree may give a greater number of flowers or sprays, but a properly-pruned plant will give, not only finer individual blooms, but a better effect also in the mass. This preliminary thinning out will be very beneficial even in the case of the various summer-flowering Roses, such as the Austrian and Persian Briars, Scotch Roses, Moss, Rugosa, Damask, Hybrid Briars, and Rose species, but no further pruning is necessary. The perpetual-flowering Roses need different treatment according to their habit, vigour, and the purpose for which they are grown. The Hybrid Teas and Hybrid Perpetuals are treated similarly, excepting that the latter, being hardier, should be pruned a week or a fortnight before the H.T.'s, the middle of March being about the best time to make a start, or towards the end of March in the Midlands and North. The more rampant of these classes, such as Hugh Dickson, J. B. Clark, Frau Karl Druschki, Florence H. Veitch, Chas. Lefebvre, and George Dickson, after having been thinned out need only have the remaining growths tipped if for garden decoration, or if grown for exhibition the young shoots should be cut down to within eight eyes or ten eyes of the base. Varieties of medium growth, such as Fisher Holmes, Gen. McArthur, Victor Hugo, Lady Ashtown, Betty, Mme. Abel Chatenay, and others, if pruned lightly, will develop into good-sized shrubs and be very effective in the flowering season. In most cases, however, it is advisable to cut these more severely, say to four eyes or five eyes from the base of the shoots. This will encourage the plants to send up fine young basal growths, resulting in more youthful, healthy bushes and a more compact display of blooms. The weakest of the H.T.'s and H.P.'s will need even closer pruning to encourage the production of new and stronger shoots, two or three eyes only being allowed to remain in the case of such sorts as A. K. Williams, Chateau de Clos Vougeot, Horace Vernet, and Edward Mawley. No definite rule can be made, for a variety may grow far more vigorously in one district than in another, and must be pruned accordingly.

The pruning of Teas and Chinas is delayed until April to escape the late frosts. Varieties like Mrs. H. Stevens, Harry Kirk, Peace, and William R. Smith, which produce fairly stout shoots, may be pruned like the medium-growing H.T.'s. The small-wooded, branching growers, such as Betty Berkeley, Corallina, Souvenir de C. Guillot, Comtesse du Cayla, etc., are lightly pruned, the lateral shoots only being cut in to three eyes or four eyes. Maman Cochet, The Bride, Mrs. E. Mawley, and other purely exhibition Teas are cut in hard if one expects to obtain first-class show blooms. Climbing Roses of all classes should have been well thinned out after flowering, and where this has been neglected it should be done at once, before the young growths are long enough to be damaged in handling. A well-thinned climber, whether H.T. Noisette, Wichuraiana, or multiflora, will be more

effective when in bloom than one that has been neglected. After pruning, collect and burn all the trimmings, especially in gardens that have been troubled with any of the numerous pests that attack the Rose. It is also most important to use sharp cutting tools, but if secateurs are preferred use those which have two cutting jaws.

NOTES AND REPLIES.

Rose-beds.—The use of any light-rooting plants for surfacing the Rose-beds during the summer months is in no way inimical to the Rose. Many Rose gardens lose much by the beds being too thinly planted, and the display of flowers marred by the unsightly manure and bare ground below them. Pansies are very suitable for covering the surface, and with that idea in view I am raising a quantity of seedlings in distinct colours. The seedlings, though a little later in coming into flower than plants raised from cuttings, will be in bloom by the end of June or early in July. To be successful in raising seedlings the seed should be sown thinly and evenly in boxes filled with light soil. When strong enough prick the seedlings out into a frame of rich, moist, sandy soil, giving each plant plenty of room to develop, and plant out as soon as large enough. The plants should be gone over frequently during the summer, removing all decayed flowers and seed-pods. Afford water during dry weather and the plants will continue to bloom throughout the summer.—F. W. GALLOP.

ORCHIDS.

CALANTHES.

For the last few weeks the bulbs have been resting, and when growth begins the annual repotting should be attended to. If not already done the bulbs should be turned carefully out of their pots, all the old soil removed, and the roots cut back to within $\frac{1}{2}$ inch of the bulb. This little tuft will hold them in position in the new compost. Ordinary flower-pots are filled to one-third of their depth with drainage material, over which is placed a thin layer of Sphagnum Moss or rough loam to secure perfect drainage. The bulbs are graded, the largest examples being given a pot 6 inches in diameter, and the smaller ones pots in proportion to their requirements. Some advocate putting several bulbs into one pot or pan, but where the space can be afforded the best plan is undoubtedly one bulb one pot. The rooting medium should consist of three parts of the best fibrous loam, with most of the fine particles removed, and one part Osmunda fibre cut up tolerably fine. If the loam is deficient of fibre a little more Osmunda fibre may be added, and where the former is poor in quality some dried cow-manure will be helpful, but it must be broken up fine. Thoroughly mix the ingredients and make the soil warm before the repotting begins, or the new shoots may receive a chill. The growing point is arranged in the centre of the pot, and the soil is made moderately firm. When the potting is completed the new growth will rest on the compost, which should be just below the rim of the pot, to allow space for watering.

For Calanthes the orthodox Orchid-house is not necessary; the plant stove, if not too lofty, a Cucumber-house, or any similar structure, sufficing if the requisite temperature can be maintained. This, during the growing period, should never be lower than 60 degs. Fahr., but as the season advances and the sun increases in power so may the temperature rise

10 degs. or 20 degs. When the repotting is finished the plants are arranged near the roof glass, placing them upon inverted flower-pots if necessary. For several weeks very little water is required; in fact, the soil must be kept on the dry side until the roots are fairly active, but the atmosphere should be moist, and an occasional syringing between the pots may be practised. When growth is well advanced, and the young leaves begin to unfold, copious supplies of water can be afforded, this treatment being continued until the pseudo-bulbs are fully developed. In the early stages of growth a thin shade will be needed to protect the tender foliage from the direct rays of the sun, but later on the plants will benefit from more sunlight if due attention is paid to ventilation. When the weather is hot a light spraying overhead may be given, but it must be done sufficiently early for the leaves to dry before sunset. Each afternoon the house must be closed early, according to the weather, giving the stages and floor a thorough sprinkling with water. As the bulbs approach maturity the amount of atmospheric moisture is gradually lessened, and a little more air may be admitted, especially from the top ventilators. To secure the best results Calanthes must be given generous treatment throughout their growing period, and when at rest they ought not to be placed in a house where the temperature falls below 50 degs. or 55 degs. F. Calanthes are useful for cutting, when they can be utilised in a variety of ways.

The most popular varieties are C. Veitchi (with rose-coloured flowers), C. Harrisii (pure white), C. vestita rubro-oculata, C. Wm. Murray, and C. Regnierii, which flowers a few weeks later than the others mentioned. B.

TRICHOPILIAS.

(REPLY TO ORCHID LOVER.)

THESE do well in the intermediate-house or where the average temperature is 60 degs. F. There are about fifteen species, but those mentioned below are the best from the garden standpoint.

T. SUAVIS.—Discovered in 1848, bloomed for the first time in this country in 1851. The flowers are large and fragrant, with creamy-white sepals and petals spotted with pale rose, while the showy funnel-shaped lip is more or less spotted and blotched with rose-pink. It is the best of the genus.

T. FRAGRANS has white flowers with the exception of a pale yellow spot near the base of the lip. The variety *T. f. nobilior* is a little larger than the type, the flowers purer white, and the yellow spot is also enlarged. Other desirable kinds are *T. sanguinolenta* and *T. coccinea*, of which there are several varieties.

CULTURE.—Trichopilias are not difficult to grow provided the repotting is carried out when roots appear at the base of the new growth. The compost is made up of good fibrous peat and Sphagnum Moss, but if the former is scarce a suitable substitute is Osmunda or Polypodium fibre. Pans without side holes are excellent receptacles, and if a wire handle is fixed they may be suspended from the roof glass and the plants will benefit by the extra light, especially during the autumn and winter. Good drainage is needed, and care should be taken when repotting so that the pseudo bulbs are not buried in the soil. During active growth a moist position is needed, and the rooting medium must be kept damp, but directly the pseudo bulbs are fully developed a less quantity of water will suffice.

FRUIT.

PEAR MME. DU PUIS.

This is a fine Pear of medium size. The colour is a smooth russet brown, seamed with golden-yellow towards the stalk, and the shape is well shown in the illustration. The flesh is melting, very juicy, and refreshing—equal to any Comice I have ever tasted, but not quite so large. It is usually at its best from the end of November till Christmas. The trees, which are five-branched cordons, are growing on a wall facing south, in which position they are moderately vigorous, very fertile, and clean in growth.

E. M.

PREPARATIONS FOR GRAFTING.

WHERE the re-grafting of Apple and Pear trees is contemplated it is high time the preparatory measure of heading back the trees was carried out before the sap becomes too active. The practice of re-grafting is an excellent way of renovating

of Pear-trees to the test. Second and third rate varieties of Pears, such as Beurré Clairgeau, B. Boss, B. Bachelier, and others, will be excellent mediums on which to operate, as they are strong growers and impart a more vigorous constitution to some of the finer-flavoured but slower-growing Pears. Should any of the trees to be operated on be cordons, cut them down to within a few inches of the stock, leaving just sufficient wood above the latter that the scion may be conveniently grafted on and be just clear of the stock. Pyramids and bushes of both Apples and Pears should have the branches reduced to six or eight. Leave these about 6 inches long; they will then quickly make good heads again. Fan and horizontal trained trees may have their branches cut back to within a few inches of the stems, leaving sufficient wood to enable the grafting to be properly performed. Standards may have their heads reduced to the like number of branches recommended for bushes and pyramids, according to size and age. When these details have re-

will result. The tying or binding on of the scions is also another important matter, as they must be bound on firmly, but not to such an extent that the ligatures will cut into the bark. Broad strands of Cuba bast or raffia are the best materials to employ for this purpose. The final operation is, of course, the smearing over of the point of union with grafting wax or clay. The former is now generally used, and it saves no end of trouble. Claying, however well it may be done, will, and does, crack, and requires a deal of attention if air is to be excluded. Grafting-wax is much more portable than clay, it is more easily applied, can be bought ready for use, and has the great recommendation of being cheap.

NOTES AND REPLIES.

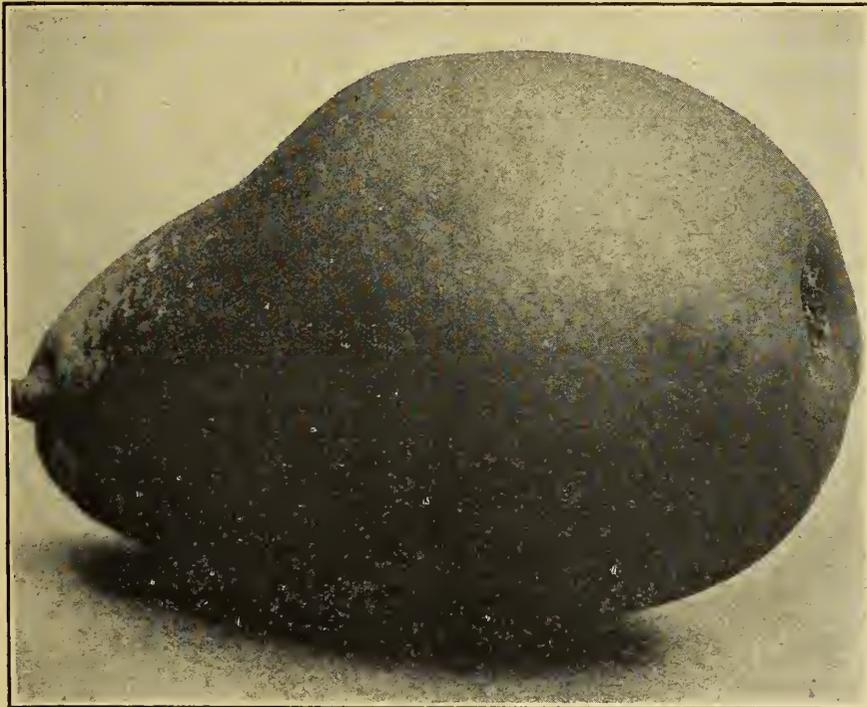
Peaches and Nectarines in cold-house.—I have some Peaches and Nectarines under glass, but no heat. They are now in full blossom, and I shall be much obliged if you will advise me as to what watering and spraying should be done from now on. Roots reach to outside.—E. A. Cox.

[Peaches under glass need constant attention from the time of flowering until the end of the season, beside watering, which is governed in its extent and frequency by the nature of the soil and the house. Some soils of an open or light character would require twice as much water as that of a heavy or clayey nature. A watering should be thorough when given, and if a covering of straw litter be spread over the surface less water will be needed. Plenty of air should be given the house while the trees are in bloom, and at about midday give each tree a gentle shake so as to disperse the pollen grains. When a good set of fruit has been obtained syringe the trees daily in bright weather through the hottest part of the spring and summer, or your trees will become infested with red-spider, one of the smallest, but the most destructive, of garden insects. You should open the ventilators in the morning before the sun affects the temperature, and close again as soon as the sun passes off the house. At closing time is when syringing is the most beneficial to the trees.]

Gooseberry Lancer.—I do not say that Lancer, an early and very large Gooseberry, is the best flavoured Gooseberry, as most growers know that if one seeks for flavour alone the smaller berried kinds, such as the Gage and others, must be relied on. Lancer is a very heavy cropper and one of the earliest and largest Gooseberries I have grown for early picking. It is a grand market variety. The berries are greenish-white, oval, smooth, and when allowed to ripen on the tree of good quality. Its true worth undoubtedly lies in its fine fruit early in the season, its heavy cropping and well-doing in most soils. It has received a first-class certificate from the Royal Horticultural Society for its cropping qualities.—K.

Fruit-trees in pots.—Growth is now active, and the pots have been plunged to half their depth in the border, which was prepared for this purpose. When this plunging can be followed, it is perhaps preferable to top-dressing the plants. In the latter case there is a reduced space for watering, whereas when plunging is resorted to, not only can ample supplies of moisture be given, but the roots may push through the bottoms of the pots in search of nourishment, while, in addition, the roots in the pots are kept cooler during the hot summer days. As these trees are not required particularly early, the house is yet fully ventilated both by day and by night, even if a few degrees of frost are anticipated.

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Pear Mme. du Puis. Gravetye, Sussex.

fruit-trees in gardens and orchards, always provided the trees to be grafted are not too old and that they are perfectly healthy. It is a sheer waste of time and labour to re-graft very old trees, the heading back seeming to paralyse them, and if the scions take and growth is made they never form good heads, and as a natural sequence fail to bear good fruit. Much has been done within the last ten years in the way of orchard renovation. Thousands of young trees of good market varieties have been planted, but yet there are numbers of old trees still standing that are only fit to be grubbed. Among the healthy ones will be found many that bear indifferent or worthless fruit, and instead of allowing these to yield year after year crops of unsaleable fruit, it is far better to head them back and graft them with a well-proved variety or one suited to the district.

Turning to garden trees, the same remarks apply with regard to the re-grafting of inferior kinds of Apples and Pears, and an opportunity will thus be provided for anyone wishing to put the double grafting

received attention, a sufficient number of scions must be cut or procured, and to keep them as dormant as possible heel them in under a north wall or hedge, or where the sun cannot reach them. When large numbers of scions are required it is not always possible to obtain a sufficiency of young wood for the purpose, but this does not matter, as the older wood may be used, provided there are dormant buds upon it. With regard to the

METHOD OF GRAFTING, that called whip grafting generally obtains in gardens. Crown and saddle grafting may also be found necessary in some cases, and for orchard trees whip and cleft grafting are unquestionably the best methods. Success in grafting does not depend so much on the method adopted as on the manner in which it is performed, and the work is always best entrusted to an experienced person, especially when a number of trees is to be grafted. There must be a perfect union of scion and stock, and to this end the scions should be so cut that they fit to a nicety, if not on both sides certainly on the one side, and if this is not done failure

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MARCH 17TH.—The *Cornelian Cherry*, *Forsythia intermedia spectabilis*, *Cydonias* (in various colours), *Andromedas* (various), *Skimmias*, *Alnus cordifolia*, *Box* (various), *Yew*, *Berberis* (in variety), *Daphnes* (in variety), *Periwinkles* (various), *Osoberry* (*Nuttalia cerasiformis*), *Purple Plum* (*Prunus pissardi*), *Milkwort* (*Polygala Chamæbus purpurea*), *Ericas* (in great variety), *Azara microphylla*, *Arbutus canariensis*, the *Gout Willow* (*Salix caprea*), *Ribes sanguineum*, *Saxifrages* (in variety), *Scilla sibirica*, *S. taurica*, *Puschkinia scilloides*, *Crocus* (in great variety), *Hepaticas* (in various colours), the *Poppy Anemone* (*A. coronaria*), the *Greek Anemone* (*A. blanda*) (various colours), the *White Wood Anemone*, the *Scarlet Windflower*, *Violet Cross*, *Arabis*, *Aubrietias*, the *Bitter Vetch* (*Orobis vernus*), *Candytuft*, *Violets* (in variety), *Snowdrops* (in variety), *Narcissus* (several kinds), the *Corsican Hellebore*, *Lenten Roses* (in variety), *Polyanthuses*, *Grape Hyacinths*, *Chionodoxas* (in variety), *Dog's-tooth Violets*, the *Algerian Iris* (*I. stylosa*), *Netted Iris* (*I. reticulata*), *Triteleia uniflora*, *Hyacinthus azureus*, the *Great Pilewort*, *Spring Snowflakes*, *Veronica filiformis*, *Polemonium sacharatum pictum*, *Blue-eyed Mary* (*Ornithodes verna*), *Eranthis hyemalis*, *E. ciliatus*.

WORK OF THE WEEK.—The weather of the past week has been all against outside gardening, as the land is in such a sodden state. When heavy land gets into such a condition as it is in this district at the present time it is best to leave it alone until the surface water has had time to get away—at least, this applies to ground which is under cultivation. A retaining wall has been built to support a rather steep bank, which was continually slipping, and, although the first consideration is to support and keep the bank in place, we intend to plant Violets on the top, and a few other alpine plants between the sandstone blocks. A group of the *New Zealand Reed* (*Arundo conspicua*) has been cut well over, after the manner of the *Pampas Grasses*, as by this means the appearance of the plants in summer is improved and the full strength of the plant goes into the leaves and flowers. A large group of *Skimmias*, which had occupied the same spot for a number of years and were too large to transplant with safety, has been destroyed as the ground is required for more important things later on. A rough piece of land, which had been an eyesore for a long time, has been levelled ready for future planting. A *Thorn hedge* has been cut off to within 3 feet 6 inches of the ground to encourage the growth at the base. From a number of *Corsican Pines* the lower branches, which overhung the road, excluding both light and air, have been removed. A piece of ground near the waterside, occupied chiefly by *Thorns* of the *Cocks spur variety*, *Berberis*, *Cydonias*, *Viburnums*, *Purple Plum*, and various other subjects, has been cleared of undergrowth, which had become almost impregnable. A large colony of late *Daffodils* near the same spot had become congested, therefore the opportunity was taken to lift the greater part of them, split up the clumps, and transplant in long, broken lines by the sides of the walks. It is late for such work, but I have no doubt of the result. A plot of ground has been prepared near the shade of a Holly for a few plants of a large-flowered variety of the *Hungarian Hepatica*, which had recently come to hand. *Dahlias* have been put into boxes and placed in gentle heat, *Fuchsias* and *Hydrangeas* for the flower garden have been top-dressed. With the pruning of the *Winter Sweet*, *yellow Jasmine*, and *Chinese Quince*, this work has been brought to a conclusion.

Sussex. E. M.

SOUTHERN COUNTIES.

Orchards.—Another spell of wintry weather has afforded an opportunity for giving fruit-trees in orchards a look over. In regard to bush-grown trees the pruning is carried out on much the same principle as that accorded to trees grown in the garden, only a little more latitude is allowed in respect to the extension of the main branches. In the case of standards the pruning consists more of a general overhauling of the trees, such as cutting out of dead wood, thinning the heads little or much where necessary, and in thinning, regulating, and tipping the extension growths on young trees in need of such treatment. When necessary to remove branches of any size, the wounds should be dressed directly afterwards either with lead coloured paint or Stockholm tar. This keeps out wet and prevents fungus germs and resulting decay of wood. The heads of *Plums* and *Damsons* must not, if they require it, be too severely thinned, especially in districts where hullfinches and other birds which destroy fruit-hulls abound, otherwise there is just the possibility of the crop proving a very scanty one. The only way to put a stop to the depredations of these birds when they attack the trees is to shoot them. Standard *Morellos* require the same treatment as the preceding. As regards dessert *Cherries*, the season is too far advanced to do more than cut out any dead wood which may be present. Restaking and

the tying anew of young trees are other matters requiring attention, while the wire-netting used for protecting the stems from ground game should be examined to see there is no possible chance of damage being done. Where rabbits are numerous, the best way of affording protection is to affix rabbit-proof netting to the boundary fence, letting the lower edge of it into the ground some 5 inches or 6 inches in depth.

Cauliflowers.—The young plants raised from the January sowing, and which were subsequently pricked off into boxes, are now well rooted and of a size to warrant their being transferred to a frame on a bed of fermenting material, where they will be planted out in some good holding soil. Here they will be grown as cool as circumstances permit, so that when lifted and finally planted outdoors they will suffer no check. *Brussels Sprouts* are now sufficiently forward in regard to growth to allow of their being treated in a similar manner.

Chilies and Capsicums.—Where these are in request both for ornamental as well as an adjunct for home-made pickles, the present is a good time to sow seed in heat and raise the necessary number of plants.

French Beans.—To keep up a regular supply sowing should take place every ten days or twelve days. There now being greater conveniences available in the way of suitably heated houses, their forcing does not present so many difficulties as was the case earlier in the year. The great thing is to see that the plants never want for water at the roots and to keep the foliage well syringed, except, of course, when the plants are in flower. This prevents attacks of red-spider, which is the chief thing to guard against when the forcing of French Beans is conducted in fruit-houses.

Tomatoes.—Plants raised from the January sowing are being placed in their fruiting pots, 10 inches in diameter. The pots are well drained and two-thirds filled with a mixture of good fibrous loam, a little leaf-mould, and old Mushroom dung, a sprinkling of wood ashes, and a little bone-meal. The plants are put as low down in the compost as possible, and a stake used to support each until they reach the first wire of the trellis. As the method of training adopted is that of confining them to single stems, the latter being able to reach a length of 8 feet to 9 feet before the limit of the trellis is reached, the pots have been stood rim to rim in a single row on a stage close up to the front ventilators of the house. When the roots are in need of further assistance a layer of compost is then placed on the stage close up to the pots, the roots soon finding their way into it through the crock holes or outlets round the sides of the pots at the base.

Late Vines.—The starting of these will be no longer delayed, as the buds are already in an advanced stage of development. Preliminary work, such as the manuring and pricking up of the surface of the border, afterwards mulching it with horse-droppings and short litter, and soaking the soil with tepid water will follow the closing of the houses. To avoid having Grape thinning to carry out in both houses at the same time, the one will be slightly forced on in advance of the other, the most being made of sunheat in the meantime to help bring about that end. The starting of the vineries necessitates the clearing out of late batches of a miscellaneous lot of flowering plants, such as *Eupatoriums*, late-flowering *Pelargoniums*, *Schizanthus*, etc., for which accommodation has to be found elsewhere.

Chrysanthemums.—The potting of these into 60-sized pots is being proceeded with, and the plants are being placed in a cold pit, which will be kept close until they commence to form new roots.

Cyclamens.—These are getting past their best after having been in flower for nearly six months. With the exception of a few of the best, the plants have been put in another house for a time to rest before being placed in a pit outside. The space vacated by the *Cyclamens* has been filled up with late *Cinerarias*, *Lothian Stocks*, *Schizanthus*, *Pelargoniums*, the latest-flowering lot of *Primula sinensis* in variety, and a big batch of *Mignonette* in bloom. This has relieved the pressure in other directions and made room for the plants mentioned which have to be moved from late vineries for young *Cyclamens* which are now in need for a shift into 4½-inch pots, *Tomatoes*, and other things.

Bedding plants.—These have made excellent growth, and, with a view to having them as bushy and of as large a size as possible by the time they are required for the filling of the beds, *Pelargoniums* of the *Zonal*, *Ivy*, and *Scented varieties*, *Verbenas*, *Cupheas*, and *Lobelias* of the spreading type have been well stopped. With the exception of a compact-growing variety of *Lobelia*, the propagating of bedding plants has been brought to a close.

Seed sowing.—The seed of intermediate varieties of *Phlox Drummondii* will now be sown, also of *Papaver nudicaule* (*Island Poppies*) in variety, sweet-scented *Tobacco*, and *Sanders' red-flowered variety*, and *Nemesia*.

Annual Delphinium Blue Butterfly.—The plants are now ready for potting off. Small 60's are a suitable size for this purpose, as the

balls when turned out of the pots are then of a convenient size for planting about mid-May, when large groups of the plants are to be formed in the borders.

Cinerarias.—Seed of the dwarf-growing stellate-flowering kinds, such as *C. s. polyantha* or *C. s. Feltham Beauty*, should now be sown to provide plants for flowering at the end of the year. Germination is quickly effected in the moist warmth of a vinery being forced.

Primula sinensis and **P. stellata.**—As these are very useful for indoor decoration and other purposes in the depth of winter, a batch of plants of each type and in variety should be raised now for that purpose. The white, crimson, pink, mauve (or so-called blue), and the attractive variety named *The Duchess* are the most popular in both classes. A small pan sown with seed of each kind will provide an ample number of plants for early blooming. The raising should be carried out in heat, as for *Cinerarias*.

Rose and creeper pruning.—This has again been resumed after a suspension of near upon three weeks owing to bad weather. *Jessamines* and *Honeysuckles* have been thinned out in some cases, cleaned, and spurred back, and where necessary tied in afresh. *Clematises* of the *Jackmani* type have been pruned back to within a few buds of the base, and the same with *C. Flammula* and *C. paniculata*. These require to be well nourished at the roots. *Chimonanthus fragrans* has had all young wood spurred back to one or two buds with the intention of securing a good supply of flowering shoots for winter display. *Tea and Hybrid Tea Roses* on walls are being relieved of weak and useless wood, and such of the medium-sized shoots as are deemed worth keeping are spurred back. The strong or more robust wood is either tipped or partly shortened, according to circumstances. *Noisettes* had all weak wood cut away and the long shoots, which produce the flowers, tipped. *Banksian Roses*, which start so early, have suffered severely from recent frosts. The pruning in their case is a modification of the above-named methods. A. W.

MIDLAND COUNTIES.

Strawberries.—Plants carrying ripe fruit should be given plenty of air, and if the fruit is not wanted for a few days remove the plants to a cool, dry house and shade from strong sunshine. The fruit will not keep longer than a week when ripe. After the earliest fruits are picked the plants should be removed to a pit or any sheltered place. If they receive proper attention and are planted out as soon as hardened off good fruits can be obtained in September, if the weather is favourable. Later plants for succession require attention almost daily in thinning, leaving six or eight fruits on each. Place a small forked stick to support the fruits and prevent the stalks bending over. On bright days, and with drying winds, plants want looking over twice daily for water, as if once allowed to get dry they seldom recover. Give liquid manure water liberally until the fruits change colour.

Early Peaches started in December will now be stoning, and for a time no apparent progress will be made. Care must be taken to avoid a check to the growth by careless ventilation, remembering that, although the sun is getting daily more powerful, a too free admission of air causes cold draughts to circulate round the trees. The fruits should be finally thinned as soon as the seed-vessels become quite hard. If the trees have been established for some years and are in robust health, one fruit to every square foot covered by the branches and young wood constitutes a good crop. *Nectarines* may be left about 10 inches apart on the trees. The shoots will require to be tied into their places on the trellis, removing all but those actually required for next season's crop and the necessary extension of the trees. In tying or nailing the shoots give sufficient room for the free development of the young growths. Syringe the trees freely both morning and early afternoon on bright days with water heated to the same temperature as the house, and attend to the watering at the roots. From now until the fruit begins to ripen liquid manure should be afforded as often as necessary. If the borders are well drained they will require it frequently. If liquid manure cannot be obtained, an occasional dressing of an approved concentrated fruit manure should be afforded, well watering it in. Successional houses require attention in the matter of regulating and tying in the young shoots and thinning the fruits. In the late house the trees have set a good crop of fruit and disbudding is in progress, also rubbing off surplus fruits on the under side of the wood and slightly reducing those on the upper side.

Primulas and Cinerarias.—A small sowing of Chinese *Primulas* and *Cinerarias* will now be made for early flowering. The seed should be sown thinly in well drained pots or pans, which have been previously filled with finely sifted soil and well watered. The *Primula* seed should only be slightly covered with fine sand, and that of the *Cineraria* may have a sufficient quantity of the compost sifted over it through a fine sieve to just cover it. The pans should be placed in an intermediate temperature or on a mild hotbed, and covered with a sheet of glass, shading carefully, or preferably affording the pans a position where they will not be exposed to direct sunshine. Great

care must be exercised in watering Primulas both before germination and while the seedlings are small. A batch of seedlings might easily be ruined by one careless watering.

Flower beds.—It is necessary to stake many bulbous and other spring-blooming plants, or a storm of wind or even heavy rain will snap off some of the flower-stems. I find that stiff, plain fencing-wire, cut into lengths suitable for the various plants, and painted green, makes a good and inconspicuous stake for Hyacinths, Tulips, etc.

Tender shrubs.—The temporary protection afforded these during the winter on walls and in the open may now be removed.

Roses.—As recommended in a former calendar, the pruning of Roses, if not actually done, should no longer be delayed. As the pruning is completed clear away and burn all prunings. Where Tufted Pansies are used as carpeting plants for Rose beds the surface should be loosened and the plants put out that they may get well established before hot weather sets in. Some of the dwarf hardy annuals may be used for this purpose. Sweet Alyssum, Leptosiphon in variety, Phacelia campanularia, and many others being suitable.

Violets.—The propagation of Violets should begin now, either from cuttings or layers. Cuttings can be taken off, dibbled into boxes, and placed in the shade, where they will soon root. Increasing them by layers is the easier plan. There is usually plenty of rooted side growths, which can be planted direct into the nursery beds, where they may remain until

of the resulting plants will be best for planting in permanent quarters, and as the seed beds take up but little room, I consider it is good policy to adopt the system generally.

Cauliflowers.—A part of the plants wintered in cold frames will be put out on a warm border at the first opportunity. Drills will be drawn a few inches deep to afford as much shelter to the plants as possible, and twigs of Spruce placed round each plant. In the event of severe frost it may be necessary to cover the plants with flower-pots for a few nights. Those from early sowings in boxes have been placed in a sheltered position to harden off.

Onions that have been brought forward under glass must now be thoroughly hardened off prior to planting out. The site on which they are to be grown, having been deeply trenched and manured, advantage will be taken of fine days to prick it over with a fork, after scattering over the surface a good dressing of soot and wood ashes.

F. W. GALLOP.

SCOTLAND.

Vegetable garden.—Full sowings of all the various Brassicas were made, with the exception of Broccoli, which will be deferred yet awhile. Rather fuller sowings of these things were made than is customary, with a view to supplying surplus plants to the neighbouring cottagers in order that their gardens may be more fully utilised at this time. Onion sowing

state over winter, the action of the weather has reduced the surface to a fine tilth, which really requires no further working than a scuffle with a flat hoe and a run over with wooden rakes previous to sowing. It never pays to crowd Peas, the usual rule followed being to allow the height of the variety to rule the distance at which to sow the lines—that is to say, if a variety is 6 feet high, the distance between the lines ought to be no less than 6 feet, and so on. It is, perhaps, better to put the Peas apart in breaks in different positions, but this practice cannot always be followed. Early Cabbages are coming away nicely, and in the course of the week they were given a sprinkling of chemical manure, which was well hoed in. The winter has not, on the whole, been unsuited to their requirements. It has never been too cold to stunt, nor too open to unduly hurry on growth. The result is that heads will, in all probability be ready for cutting slightly in advance of the average time.

Asparagus beds.—A beginning has been made with the spring cleaning of Asparagus beds. The soil on the top is lightly worked up and well raked, while the alleys are similarly treated. From the latter any soil necessary for top-dressing can be taken. It is intended shortly to give these beds a liberal allowance of a fertiliser and a certain amount of soot. When the dressing is applied it will be well raked in. This is by way of a change from the customary manure of the farmyard.

Globe Artichokes.—The manure round the stools of the Artichokes was in the course of the week lightly forked in. If it is necessary to increase the stock offsets may be taken and replanted at this time. In some districts it may be advisable to give such offsets a start in pots in a frame for a time, but here it is quite unnecessary. These young plants may give a welcome head or two late in the season; but in any case they will bear freely during the following year if they are at all well done to.

Potatoes.—During the week the stock of Potatoes was inspected, and as growths were beginning to be prominent, some time was devoted to the picking over and cleaning of the tubers. Potatoes in this district have been abundant over the winter, and the price, considering the rise in value of other commodities, has been very reasonable.

Seed Potatoes.—At the same time the tubers intended for the main crop and late plantings were given a look over, and laid out thinly on shelves in order to induce the growth of stocky eyes. So far as possible, whole sets are used, these being from medium to small in size, but which were selected from roots which gave a good proportion of large tubers. A considerable area will be planted with King Edward VII., a Potato which always gives very excellent returns in these gardens, and of which I am a great admirer.

Hardy annuals.—If the best results are to be obtained early sowing must be done. Rarely has the soil at this time been in such fine condition for sowing these showy, if at times fleeting, things. To attain success, two things are essential in the cultivation of annuals. These are—sow thinly, and, after the seeds germinate, thin out rigorously. Dwarf annuals, when finally singled, ought to stand at least 8 inches apart, those of a taller habit correspondingly more. A wrong impression is sometimes arrived at as to the value of annuals, more especially when they are overcrowded. Naturally, the display under such circumstances is poor and brief; but no class of flowers will give such a fine display under intelligent culture as the at times despised annual.

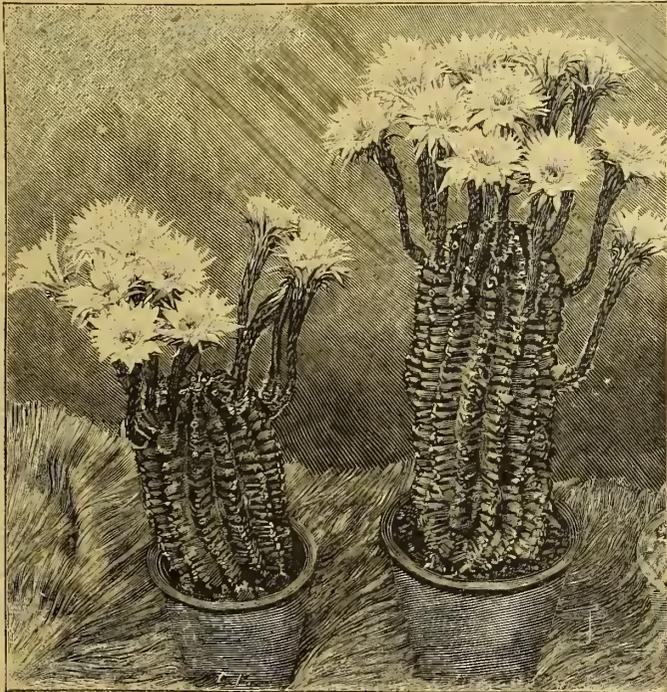
Pentstemons.—In the course of the week Pentstemons from autumn-struck cuttings, and now showing signs of growth, were removed from the heated pits in which they passed the winter, and were transferred to cold frames. For a time the sashes will be matted up at night, but as the nights get warmer the sashes will be ultimately removed. Few of the florist varieties of Pentstemons are included in this lot, the Gem varieties being considered much more useful for general work, and are in bloom throughout the summer and autumn. Opinions differ as to the advisability of pinching the shoots at this time. There is not much in it, but if pinched now the plants may be a trifle dwarfer than would otherwise be the case.

Antirrhinums.—Equally as valuable as Pentstemons, full sowings have been made during the week. Intermediate varieties of distinct colours are preferred. So much improvement has been made during late years in the case of Antirrhinums that it is no wonder they grow increasingly popular. They are much to be preferred for summer beds than the usual stereotyped Pelargonium or Calceolaria. As is the case with Pentstemons, florist varieties of Antirrhinums find little favour, although there are certainly some good colours and combinations of colour among them.

Under glass the work was during the week reduced to the barest necessary minimum. The usual attention in the way of watering and ventilation was, of course, seen to, but the important work of getting out the crops during suitable weather took precedence.

W. MCGUFFOG.

Balmac Gardens, Kirkcudbright.



Echinopsis Decaisneana.

they are required for the frames next September. Single varieties may be planted into their permanent quarters.

Erythroniums (Dog's-tooth Violets) are delightful at the present time in leaf and blossom. The usual practice is to drill the little bulbs into lines for edgings, but every garden that has Grass about it which it is not necessary to mow until summer should certainly have a large colony of these planted therein. One great advantage in planting these in the Grass is that the flowers do not get spoiled by the heavy rains, and the effect is much better than when grown in beds and borders.

The weather.—The unusual fall of snow and heavy rains experienced of late have delayed seed sowing and general cropping in most gardens, especially where the soil is of a retentive nature. It is of the utmost importance that every opportunity should now be taken advantage of to bring up all arrears as fast as the state of the ground will allow. The damage done to the ground by working on it when in a moist and soft condition can hardly be over-estimated.

Asparagus beds should be neatly raked over and a dressing of some reliable artificial manure afforded.

Broccoli, Kales, etc.—A plot of fairly rich ground should be prepared on which to sow seed of the main crop and late Broccoli, Kale, and other green vegetables for winter and spring use. I prefer to make two sowings of these, one in the first week of April, and the other a fortnight later. Everything depends upon the weather and the locality as to which

and transplanting were completed under the most favourable conditions. Autumn-sown varieties are yet extensively planted, and if well harvested their keeping qualities are almost equal to those of bulbs from plants raised in heat during spring. Another point in their favour is that they can be used at an early date, and Onions are always in request. Pricking out has been finished in the case of plants raised in heat. These were put on a bed upon a declining hotbed, where they will make speedy progress. Leek seed for the main crop was also sown. A good bed of Parsley was sown, and plants raised in heat were also put out. Parsnips were sown. A considerable area has been planted with Potatoes, and although the soil may be a little cold, the excellent condition of the ground did not appear to permit of delay. The varieties at present planted include May Queen, Midlothian Early, and Beauty of Hebron. These form a useful trio, and make a very good succession. In a general way it is too early yet in our climate to sow Turnip seed; but in the present exceptional circumstances a few drills were risked. If failure follows, the loss is not great. Broad Beans will be sown from time to time as required. These are favourites here, and more space is devoted to their cultivation than is the case in the majority of gardens. To hasten the season of French Beans from outside, sowings can be made in pots. Like the Broad Bean, French Beans transplant well, and if raised in pots now in cold frames the crop is appreciably earlier. Peas, too, require attention at intervals. The ground allotted during the present season was deeply trenched and heavily manured. Being left in a rough

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Shifting plants (A. R.).—If a freshly-rooted cutting or seedling is shifted from a small pot into, say, a 6-inch one, the chances are against the plant thriving, the body of soil being too large for the small quantity of roots. The idea of small shifts is to get the roots to touch the sides of the pots again as soon as possible, when another small shift may be given. If this is carefully done in the growing season the check is very small.

Oleanders (Oleander).—To induce these plants to flower freely they should be encouraged to make a vigorous growth during the spring and early summer, by giving them one or two liberal shifts, using rich, loamy soil, and when well rooted giving plenty of water and weak liquid-manure. At the same time they should have a light position, with little or no shade, and free ventilation. Towards the autumn ripen the growth by full exposure to sun and air.

Moving Crocuses (G. W. Evans).—The best time to transplant Crocuses is when the foliage has been thoroughly ripened off and the corms are at rest in the summer. Many people, on the score of tidiness, cut off the foliage of Crocuses before it has decayed. This is a great mistake, as in the following year the blooms in the case of the corms which have been denuded of their foliage while still green will be poor and not so numerous as when the foliage has been allowed to decay naturally.

Treatment of frozen plants (B. B.).—The proper course to adopt would have been to syringe the plants well overhead with nearly ice-cold water as soon as they were seen to have been frozen, shading them from sun or strong light, and gradually increasing the temperature. All that can be done now is to keep the plants fairly dry at the root, with a nice genial temperature of 55 degs. to 60 degs., and a moderate amount of atmospheric moisture on all fine days. Unless severely frozen most of them will probably break again.

Fuchsias starting (E. D. Daniel).—Yes, you may cut down your Fuchsias. After having done this leave them until they have begun to grow again, when you may turn them out of the pots, shake off nearly all the old soil, and repot in a mixture of equal parts of loam and leaf-soil with a little sand. Care should be taken not to over-water, yet at the same time the soil should be kept moderately moist, while a syringing overhead two or three times a day will be of great service. They will then grow away freely, and when they have well filled the pots with roots they may be given a shift into larger-sized pots.

Plants in bloom at Christmas (Inquirer).—In a well-kept conservatory there ought to be in bloom at Christmas, Chinese Primroses, single and double flowered, also *P. obconica*, Persian Cyclamens, Cinerarias, Zonal Pelargoniums, Heaths (*Erica*) of several kinds, Epacris, Bouvardias, Abutilons, Heliotrope, late Chrysanthemums, and Salvia; also Roman and Italian Hyacinths, early Narcissi (Paper-white, N. Stella, etc.), and perhaps some pots or pans of Scillas, Snowdrops, Crocus, etc.; also Violets, Christmas Roses, Camellias, Correas, and perhaps a few Tea

Roses, Cytisus, and others. With the aid of a stove or forcing-house there ought also to be Dutch Hyacinths in plenty, with Tulips, Narcissi, Azaleas, Roses, Lily of the Valley, Epiphyllums, Linum (Reinwardtia) trigynum, Plumbago rosea, Arum Lilies, Poinsettias, Eucharis, etc.

Fuchsias, pruning (P.).—We presume your plants are in pots, and that they are underneath the stage and getting but little water. Leave them thus until early in April, when they may be pruned hard back, and after standing a few days to heal be placed in a temperature of 55 degs. Here, with an occasional overhead dewing, growth will soon move, when the supply of root moisture may be slightly increased. They may be potted on when growing strongly, taking care not to over-water until the roots have begun to run freely.

Hyacinths failing (C. Speck).—We cannot say how the disease was created, though if you have cultivated others satisfactorily in the same soil it would point to the bulbs being to some extent faulty. The example you sent was large and firm enough and of good flowering size. The reddish colour of the skin is peculiar to some varieties, others are whitish, and so on. If you observed nothing wrong at planting time after your twenty years' experience in growing these bulbs you can hardly blame the bulb-merchant, though if he is a specialist—i.e., the actual grower of the bulbs—he may throw light on the cause, and may probably meet you in the matter.

Cineraria leaves, insects in (M. B.).—Your Cineraria leaves have been attacked by the Marguerite Daisy-fly, which burrows in the leaves of these Daisies, Cinerarias, and other composite plants, and feeds on the inner surface. When many leaves are attacked in this way the plants are not only rendered unsightly, but they also suffer in health. The best way of destroying this pest is to cut off the infested leaves and burn them, or, if the attack has only just commenced, to pinch the leaves where the grubs are. Syringing with an insecticide avails little, as this would not reach the grubs, but if done at the right time it might probably prevent the flies laying their eggs.

Sweet-scented Rhododendron not flowering (G. T.).—The Hybrid or sweet-scented Rhododendron flower freely if properly managed, and the plants placed where the wood can be ripened. Your plants fail from want of this ripening. We should like to ask what condition the roots are in. There must be something wrong when the buds drop off without opening. If the roots are unhealthy or if the soil is in a bad, sour condition that may explain why the buds drop. If the plants have ever suffered from want of water when standing outside, that might account for the failure. If, on the other hand, the plants are much pot-bound, a little liquid-manure, weak and clear, during the progress of bud formation would be a help. Clean soot-water is always beneficial to this class of plants, but keep lime in all shapes and forms away from them.

Growing Lapageria alba (T. F.).—This is one of the most beautiful of greenhouse climbers. It too often bears the name of being a slow and uncertain grower compared with the red variety. We have grown the red and white forms alongside and found that the white kind grew more strongly than the red one, and also flowered, if anything, more freely. The two forms are valuable when in bloom in the autumn when other climbers have done flowering. The leaves of the white kind are more cordate in shape than those of the red, and they do not taper so gradually towards the apex, a circumstance that may help purchasers to distinguish the one from the other when both are out of bloom. A good compost for growing the Lapageria is a mixture of very rough peat and silver-sand, adding, when filling in the hole, pieces of clinker, round which the roots seem to cling freely. Care must be taken to have good drainage, as water in plenty must be given while growing. Slugs, too, are very partial to the young growths as they appear through the soil, a good plan for preserving these being to envelop them in lamp-glasses, these effectually checking their inroads.

TREES AND SHRUBS.

Forsythia viridissima (Shrub Lover).—This is different in aspect from the better-known *F. suspensa*. It is more compact, erect, and bushy, and better fitted to use as a shrub for pots in the conservatory than its near ally. A good specimen of it when in full bloom is very rich, and a relief to the monotonous series of spring-flowering bulbs, Deutzias, and such things. The flowers are golden-yellow in colour, and wreath the stiff-growing shoots. A good group or specimen of it on the outskirts of the lawn is pleasing at this season.

FRUIT.

Peach buds dropping (L. B.).—You have been keeping the house too warm when the trees were at rest, while we have strong suspicions that the border has been allowed to get very dry after the fruit was gathered last year, and it has remained so all the winter. There is no more fruitful cause of bud-dropping than dryness at the roots, this being more frequent in the case of the American varieties. Watering a dry spot so as to thoroughly moisten it is a difficult matter.

The only way to find out whether our surmise as to dryness is the cause is to examine the border, and if you find that such is the case, then thoroughly soak the border, though we may tell you that this will not save the buds from falling, as the injury has already been done. Another season keep a watchful eye on the border, and do not wait until starting-time before watering should it be necessary. Another word of advice is that whenever necessary to water always give enough to thoroughly moisten the border down to the drainage.

MISCELLANEOUS.

Top-dressing a lawn (A. H.).—A good dressing for applying to a lawn at the present time is made as follows: One half of the quantity of compost required should be loam, one quarter thoroughly decayed manure, and one quarter road-sweepings, etc. Mix all together, then pass it through a fine sieve to rid it of stones and other substances, and spread it evenly over the lawn, afterwards working it in by sweeping the surface with a birch broom, doing this first lengthwise and afterwards in the opposite direction. When finished roll thoroughly. If the lawn is mossy or weedy, rid the turf of both before spreading the compost, loosening and removing the Moss with an iron rake, and rooting out the weeds with the aid of a Daisy grubber.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*R. W. J.*—1, *Adiantum tenerum*; 2, *Pteris longifolia*; 3, *Adiantum Capillus-Veneris*; 4, *Davallia canariensis*.—*E. M. A.*—1, *Centaurea ragusina*; 2, *Habrothamnus elegans*; 3, *Sparmannia africana*; 4, *Asplenium bulbiferum*.—*A. B.*—The Spring Crocus (*C. vernus*). Very possibly Messrs. Barr and Sons, King-street, Covent Garden, could supply corms.—*E. Murphy*.—1, *Solanum* sp., kindly send flowers; 2, kindly send more complete specimen; 3, *Pulmonaria officinalis*; 4, *Doodia lunulata*.—*A. V. Brickendon*.—*Cassia Fistula* (the Purging Cassia). See also note in coming issue.—*J. White, Yeovil*.—1, Lungwort (*Pulmonaria officinalis*); 2, *Libonia floribunda*; 3, *Primula floribunda*.

Names of fruits.—*Fish*.—Apples: 1, Not recognised; 2, Lewis's Incomparable; 3, Blenheim Orange; 4, Not recognised.—*A. G.*—Your Apple is Cellini Pippin, a dessert variety in use during November.

CATALOGUES RECEIVED.

M. M. VILMORIN ET CIE., Paris.—List of Hardy Plants, Shrubs, Cannas, Chrysanthemums, Dahlias, etc., 1916.

E. P. DIXON AND SONS, LTD., Hull.—List of Farm Seeds, 1916.

Books received.—"Landscape Gardening as Applied to Home Decoration," Samuel T. Maynard. New York: John Wiley and Sons, Inc. London: Chapman and Hall, Ltd., 1915.—"The British Fern Gazette," March, 1916. The British Pteridological Society, Kendal, Westmorland.—"Practical Hints on Garden Culture and Garden Pests and How to Eradicate Them," by Howard Clements. The Colston Publishing Co., Ltd., 4, Colston-street, Bristol.

Chelsea and Holland House Shows.—At the meeting of the Council of the Royal Horticultural Society, on March 7th, the question was raised whether, in view of the urgent need for the practice of economy on the part both of individuals and corporate bodies, the Chelsea and Holland House Shows should be suspended this year. In the course of the discussion it was agreed that to suspend these exhibitions would be to deal a severe blow to the horticultural trade of the country. The members of the Council, in coming to the decision to hold the show as usual, expressed their strong conviction that it is the duty of the Council to continue to do all in its power to maintain the prosperity of the horticultural industry; for not only is it to the national interest that horticulture should not suffer more than is inevitable during the war, but, also, it is of the utmost importance that this trade should be in a position at the conclusion of peace to meet successfully the strong competition with which it is bound to be confronted. At the same time it is the intention of the Council to loyally meet the call from the Government for the exercise of economy, and steps have been taken to reduce as far as possible the demand for labour and all avoidable expenditure. — W. WILKS, Secretary.

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APRIL 8, 1916.

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NOTES OF THE WEEK.

Lonicera fragrantissima on a north wall has always hitherto flowered from January onwards. Scarcely a flower has appeared this season. To-day (March 16th) I see quantities. Why is this?—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

Spring flowers.—The comparatively late date at which Snowdrops bloomed is answerable for the fact that now (March 18th) these flowers, Crocuses, and Daffodils are all in bloom together. The Snowdrops are quite fit for picking still, and in the Grass below trees the combination of these three spring favourites is very striking.—W. McG., *Balmae.*

Rhododendron Silberaad has been particularly good this season. The first flowers opened in January. At first they are of a beautiful rose colour. In ten days or a fortnight the colour fades, and they become pure white. As the flowers are so very early the best plan is to pick good pieces when the buds are fully developed and put them into a pan of water. In this way they last many weeks.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

The season and the Daffodils.—The effects of the inclement weather we have had for some time are very apparent here in the flowering of the Daffodils. To-day (March 14th) there are but few in bloom. *N. cyclamineus* is not yet in flower, and with the exception of *N. pallidus præcox* the Saragossa Daffodil is the only one in bloom in the open. My garden is fully exposed to the winds, and a cold east one which has been blowing for a considerable time has retarded many things. The Saragossa Daffodil is not large, it is true, but it is neat and of a good yellow. As one of the Ajax varieties it is specially welcome early in the open. I have often had it in bloom in February.—Ess.

Cuphea strigillosa.—Owing, I suppose, to their lack of showiness, the Cupheas, as a whole, have never appealed very strongly to the popular taste, and yet they have a beauty all their own. *C. strigillosa* is one of the more showy of the genus, and can be highly recommended as a bedding plant, its subdued red and yellow tubular flowers, borne in great profusion, producing an effect hard to obtain in any other plant. It attains a height of about 15 inches and can be readily raised from seed in spring, or by cuttings either in spring or autumn. If

spring propagation is adopted a few plants potted up at the end of the season will furnish an abundance of cuttings.—ALBION.

Veronica laudiana.—For three years I have been trying to grow *Veronica laudiana* without success. Two fine plants are now covered with buds, which look as if they will open early in April. The buds were formed about the middle of February.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

White Glories of the Snow.—While I am especially fond of the blue *Glory of the Snow*, some of the white varieties are very chaste. Some of these have been found growing wild, but others have been raised from seeds in this country. I have here white *Chionodoxas* which were sent me by the late Max Leichtlin and seedlings from them. With me the *Chionodoxas* do not increase very rapidly, and seedlings do not always come true to colour. Max Leichtlin's white varieties were all seedlings of *C. Lucilia*. Some are pure white but others are faintly flushed with blue or blush. A proportion of these has apparently come from the pink varieties sent me by Max Leichtlin. The white varieties of *C. sardensis* and *C. gigantea* are handsome also.—Ess.

Polypodium vulgare.—A recent note by "E. M." reminds me that this Fern is one of the commonest in Kirkcudbright, and perhaps owing to that it is not quite so much appreciated as it deserves were it rarer. Every wood, burnside, and hedgerow provide suitable soil for its modest wants, and not only so, but it is found also upon the Moss-grown trunks of trees. Variations, however, are rarely found, this being rather remarkable where the Fern grows so freely. One point I have noticed in connection with *P. vulgare* is that it is impatient of removal, rarely succeeding for a year or two after transplanting. Nevertheless, it is worth attention, although it is not so popular as the *Scelopendrium*—also quite plentiful in the Stewartry.—W. McG., *Balmae, Kirkcudbright.*

Primula malacoides.—This deserves to be grown by all who need plants for rooms in winter. Last autumn a friend gave me a few plants in 3-inch pots. In October I potted these into 5-inch pots, keeping them in a house from which the frost was just excluded. Early in February some of the plants were brought into a warm sitting-room, giving them a

light position. They began to bloom, and now, at the close of March, they are a mass of flowers from 1 foot to 18 inches high and 1 foot across, and needing no support. I noticed in autumn that damp affected the foliage. To check this give abundance of air. It is unwise to sow the seed too early, early June being time enough, growing the seedlings on vigorously from the first.—J. C. F. C.

Osmanthus Delavayi.—This shrub was just coming into bloom at the end of February, when a sharp frost of 17 degs. destroyed the majority of the flowers in a single night. It is considered by many one of the best Chinese shrubs of recent introduction, but the present abnormal season has shown its weak point. The shrub itself appears quite hardy, and when the pure white, fragrant flowers, which are produced from the axils of the leaves and at the ends of the young shoots, come through safely it is very beautiful. It is quite distinct from the well-known *C. Aquifolium* group in its tiny, narrow, dark-green leaves and its stiff habit of growth.—E. M.

Scilla bifolia præcox.—I have here a considerable number of varieties of *Scilla bifolia*, and it is interesting to note the differences between the various types, both in appearance and in their time of flowering. A few years ago I was given some bulbs of *S. bifolia præcox*. I have a few clumps of other forms of *S. bifolia* which are a little earlier, and so contest its right to the name of *præcox*, but it is really an early form. It is a handsome *Scilla*, with from ten to fifteen rich blue flowers on a scape. *S. b. præcox* is said to be the parent of the handsome *S. bifolia rubra* (not to be confounded, as it often is, with *S. b. carnea*, a vastly inferior thing). The red variety is later and not quite so fine in some respects, though its colour makes it appreciated. In a low corner at the base of the rock garden *S. b. præcox* is now in fine bloom.—Ess.

Galanthus nivalis virescens.—The Green Snowdrop, as it is generally called, *Galanthus nivalis virescens*, is one of the latest of all. The outer segments are striped with green at the base, and the petals almost all green with the exception of the margins, which are white. It is not a very vigorous grower, but thrives quite well in a light loam. Its history, so far as is known, is that it was grown in the Vienna Botanic Gardens by the late Professor Fenzl, then director. The late Herr

Max Leichtlin obtained two bulbs from him and sent one to the Rev. Harpur Crewe and another to Mr. James Allen, whence its introduction to British gardens. I have grown it for a good many years and always look with pleasure to its reappearance. A curious double Green Snowdrop, more like a *Fritillaria* than a Snowdrop, grew in the garden of the late Miss Russell at Ashiestiel.—S. ARNOTT.

Christmas Roses.—I have been very interested in reading the articles in *GARDENING ILLUSTRATED* on the subject of repotting and transplanting Christmas Roses, and perhaps a little experience of mine near Manchester may interest some of your readers. I have in 6-inch and 7-inch pots Christmas Roses of the large, pure white kind, which flower splendidly every year from November to after Christmas. I repot these every three or four years. After flowering I keep them in a cold frame until May, and then partly plunge the pots in the garden border until October and give them weak liquid-manure now and again. I have one in a 4-inch pot—and this is the item which may interest you—that has not been repotted for twenty years. The plant produces from eight to twelve splendid, large, pure white flowers at the same time as the others, and never fails to do so.—HOLLIES.

Notes from Bettws-y-Cced.—The last fortnight of cold east winds and almost incessant snow storms up to March 11th, instead of retarding vegetation, seems to have had the contrary effect. About twenty years ago Mr. P. Neill Fraser, of Edinburgh, brought some bulbs of *Anemone trifoliata*. They have increased rapidly and have only once been transplanted. I never before saw them above ground before the last days of April—generally during the first week of May. To-day (March 14th) I see a number above ground with the flowers showing. I sent you a note about *Rhododendron Silberaad*. I wonder if you know it? The very bright rosy flowers fade in about a fortnight. After that, when kept in water, they become, if possible, still more beautiful—a pure white, against which the stamens are charming. *Tulipa Kauffmanniana* is in full flower. There are quantities of buds, and even flowers, on *Gaultheria trichophylla*. The end of April is the usual time. *Epigea* repens, which ought now to be in bloom, shows no signs of any flowers.—E. CHARLES BUNTON.

Saxifraga Griesbachi.—This Saxifrage is quite hardy here. Given a well-drained ledge in the rock garden, and planted in gritty soil with an admixture of limestone chippings, it goes on making fresh rosettes. This year it began blooming in January, and the flowers are still in good condition (March 23rd), and look like lasting several weeks longer. Its singular appearance makes this plant most attractive, with its nodding spikes of closely-set flowers. The stout, wiry peduncles, as well as the bract-like leaves which clothe them, are of a clear, bright rosy-pink, while the flowers at the end are almost blood-red with yellow stamens. With age the colour of the stem fades and the bracts become more leaf-like, while the stem lengthens out, eventually reaching a height of 8 inches to 9 inches. The imbricated silvery rosettes of encrusted leaves are ornamental all the year round.—F. W. G., *Lilford Gardens, Northants.*

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FRUIT.

MULCHING NEWLY-PLANTED FRUIT TREES.

So much depends upon the start that a young fruit tree makes the first year of planting that every care should be taken to ensure free growth. In damp, sunless summers newly-planted trees get enough, and oftentimes more than enough, of moisture at the roots, but seasons are uncertain, and sometimes we get a hot, dry summer. Trees planted in the autumn, and which before winter set in have got good hold of the soil, are not so likely to suffer, but where planting was deferred until spring some means should be taken to protect the roots. With all the care that may be bestowed upon them in the way of watering, progress will never be so good, and the trees will never exhibit that thrifty vigour as when the soil around the roots is preserved in a more or less uniformly moist state. By the middle of March a good coat of litter, some 4 inches thick, should be applied, for the drying winds of early spring are apt to unduly parch the soil before watering is thought of. Watering, indeed, in the case of newly-planted trees must be considered as a necessary evil, to be avoided if possible, for if the roots can be kept cool and moist without drenching them with cold water so much the better for the trees, the health of which in a great measure depends upon the soil in which they are planted remaining at a more or less even temperature.

With a good mulch of long manure, or some such non-conducting material, there will be but little need to water until the summer arrives, and then an occasional soaking if the weather should prove exceptionally dry will ensure to the roots the necessary amount of moisture, any deficiency of which during the first year of growth will exercise a most prejudicial effect upon the future welfare of the tree. In Normandy and in other parts of the Continent, where all that relates to the Apple is regarded as of the highest interest, mulching is considered one of the most important operations connected with the planting of fruit trees. Few planters there would consider that they had carried out the work in a thorough and workmanlike manner did they omit covering the soil over the roots with a thick layer of non-conducting material. Mulching not only acts beneficially in preserving the tree against the effects of the sun's scorching rays, but it lessens labour to a considerable extent, and where the trees are set upon slightly raised mounds it must be regarded as an absolute necessity. Drought is by no means the only enemy that fresh-planted trees have to contend with, as hard frost and continued easterly winds, drying out the soil and arresting the flow of sap, exercise an equally inimical effect upon their health. In many cases where new plantations have failed to do well the cause might be traced to the effects of a hard winter. When a severe winter is succeeded by a harsh, dry, early spring, newly-planted trees are apt to get their vitality so lowered that no amount of care afterwards will restore the lost vital energy.

NOTES AND REPLIES.

Autumn Raspberries (H. B.).—Raspberry Superlative is not a true autumn-fruiting variety, and my previous note referred to its usefulness as a catch crop (say for August or early September), when cut down lower than is usually done—that is, for the summer-bearing sorts. During the last few years some new autumn-

fruiting varieties which fruit earlier have been introduced. My practice was to cut down the last year's canes of Superlative for the purpose named to within 18 inches or so of the base, and the late fruits were produced from the growths on the canes cut back. This cutting back was done in February or March, according to the season, if early or late. "H. B." will know that the usual practice is to leave the growths (last season's) 4 feet to 5 feet long for summer fruiting. The treatment in the case of the true autumn-fruiting varieties is quite the reverse. In their case the fruits are borne upon the current year's growth, and not on the canes made the previous year. The growths of last year are cut down to within a few inches of the ground and the late autumn fruits are produced on the new wood. Only allow a few canes—two to four to each stool—and give them plenty of room and food.—F. K.

Grafting.—This, where contemplated, can now be undertaken, as the sap is on the rise. If clay is intended to be used for enclosing the scions after being worked on the stocks, this must be prepared in advance. It should be well kneaded and chopped hay mixed with it while this is being done, with the object of rendering it more binding and less liable to crack and fall off as it dries. Grafting wax is, however, the more satisfactory in every respect, and should be used in preference if much grafting has to be done. The partial heading back of the stocks having already had attention, they should now be cut at the point whereon the scions are to be worked, and the wounds pared quite smooth with a sharp knife. The preparation of the stocks should immediately precede the operation of grafting. For ordinary garden purposes whip-grafting is the best method to pursue. After the perfect fitting of each scion to the stock, on one side if it cannot be done on both, it should be securely tied and then waxed or clayed over.—A. W.

Strawberries in frames.—My first experience of frame-grown Strawberries was in the north. I required a considerable quantity of fruit the last week in May and till the first fruits were ready from the open ground. I readily secured these from plants given frame protection. The plants were grown in boxes, six plants in a box. They were housed early in April and soon responded to the increased warmth. I was careful to air them, retaining as much heat as possible by closing early and covering the glass with mats on cold nights. Grown thus the plants gave fruits equal in quality to the best from the open ground. To get a catch crop to follow the forced ones I have frequently placed frames over young plants on a south border. The boxes, 6 inches deep, 2 feet long, and 12 inches in width, were home made from strong Pine boards. The plants were put into the boxes early in August. Some growers plant in frames in the late summer for this work, but I do not think this is a profitable way, as the frames cannot be used for other purposes. Much better plant good runners early on a raised south border and leave room for placing the frames in position over the plants in the spring.—M.

Vine buds not breaking (A.).—Strong young Vine rods often break irregularly—the top buds starting first. Especially is this the case if the canes are allowed to remain quite straight. They should be carefully bent round, so that the topmost buds are on a level with the lowest as nearly as possible. If this is done, and the Vines were well ripened in the autumn, but little difficulty should be experienced in the matter. Frequent syringing of the canes with soft tepid water is a great assistance in inducing the buds of Vines to break regularly when forced.

PLANTS AND FLOWERS.

INDOOR PLANTS.

COCOS AUSTRALIS.

This distinct and graceful Palm, from Paraguay, has been growing out of doors for the past six years in the south of Ireland, where it has even developed its curious long, green flower-sheaths, which occasionally open and disclose the tuft of white flowers. The sheath opens late in the autumn, and the cold which then prevails tends to minimise the extension of the flowers. Where the plant succeeds it is ornamental, but it probably demands greater damp-heat than is obtainable in the British Isles. R. H. B.

FERNS FROM SPORES.

W. McGuffog (page 101) refers to the present time as being very suitable for sowing the spores of Ferns. With this I quite agree, despite the advice that one sometimes hears to sow in the autumn.

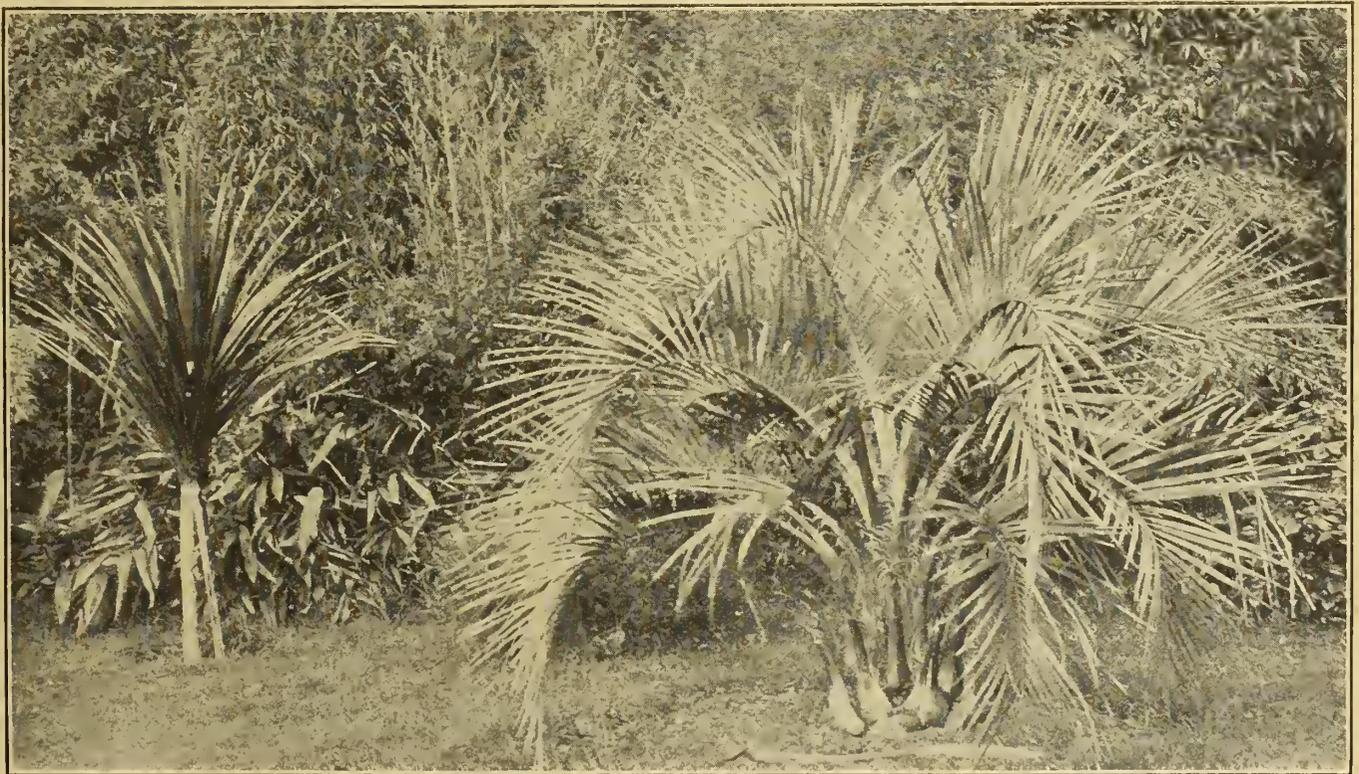
thinly on the wet surface of the soil. Then placed in a close propagating-case or with a pane of glass laid over the pot or pan they will soon germinate. In sowing, care is necessary not to get the spores mixed, for they are so minute as to float about in the air. A good plan is to stand the prepared pots at one end of the propagating-house or in a shed, taking just as many as are required for one kind to the other end of the same structure. When these are sown they should be removed to the case away from the others and the hands thoroughly wiped. In this way Ferns may be raised true to the spores sown, which is not the case if some precaution is not taken. However careful one may be, there is a tendency to sow too thickly, so that when the spores germinate there is a dense, unbroken mass of green. Decay is liable to set in then, and in order to prevent it the tiny sporlings may be pricked off. For this purpose the topmost layer of soil should be

is also wanting in the brightness of that kind. The tufted habit of *C. argyrites* readily admits of division being carried out in early spring, when the plants are started into growth. In this way a large number can be propagated from a few old plants. As far as my experience goes this *Caladium* does not flower. Though so generally known by the specific name of *argyrites*, according to the latest botanical dictum it should be *Humboldtii*.—K. R. W.

SOWING VERY SMALL SEEDS.

We are continually being reminded not to sow seeds too thickly. In the case of minute seeds, such as those of *Begonias* and *Gloxinias*, this is especially necessary, as not only are the delicate seedlings liable to perish from overcrowding, but if purchased from a trustworthy source the seeds are expensive.

For the sowing of minute seeds the pots or pans must be clean and effectually drained. A suitable compost for most sub-



Cocos australis at Ashbourne, Glounthame, Co. Cork.

The spores should be obtained by gathering a few fronds just as the spore cases commence to open. Then, placed in a piece of paper and kept in a moderately dry place the spores will soon be discharged, when they may be at once sown, although they will retain their germinating powers for some time. The soil is not of very great moment, though for general purposes a mixture of loam, peat, and sand is desirable. The pots or pans should be well drained, and I prefer the top layer of soil to be sifted fine, as this facilitates the operation of pricking off when growth takes place. Frequently a worrying little Moss makes its appearance about the same time as the Ferns, and chokes the more delicate kinds. To obviate this it is an advantage to sterilise the compost before it is used, as not only the Moss, but other pests are thereby destroyed. The prepared pots having been well watered, either through a very fine rose or by standing in a receptacle of water nearly to the rim, all is then ready for sowing the spores. They should be sprinkled very

very fine and light, so that when tiny tufts of growing spores are lifted with a pointed piece of stick they may, when placed in position, be pressed by the finger into the soil without injury. When the pot is filled, watering through a fine rose will complete the work. The pot must then be returned to the propagating-case. W. T.

Caladium argyrites.—This is one of the most distinct of all *Caladiums*, and one of the most useful. Its dwarf, tufted habit and profusion of small leaves, remarkable for their clear markings of vivid green and white, render it of great service for decoration. A drawback to the large-leaved varieties is that they are so readily injured by exposure, but *C. argyrites* is not nearly so delicate. For edging groups it is well suited, while well-balanced plants in small pots are of great service in table-decoration. There is another dwarf form—*C. minus erubescens*, with red leaves, but it does not possess the graceful character of *argyrites*, while it

jects may be made up of one part each of loam and good leaf-mould or peat to half a part of sand. The soil should be sterilised before using, in order to destroy both insects and undesirable vegetable matter. Then pass a portion of the soil through a sieve with $\frac{1}{4}$ inch mesh, but do not rub it. The rough parts should be put on one side and the fine on another. In filling the receptacles the coarse portion must be put immediately over the crocks, and then, if required, a little of the unsifted soil. It will be necessary to leave space for about $\frac{1}{2}$ inch of the finely-sifted compost, as this will facilitate pricking off later on. The soil must be pressed down moderately firm and made quite level. Before sowing the seeds the soil should be thoroughly watered. This may be done through a very fine rose, or the pots or pans should be stood in a receptacle containing water of sufficient depth to reach up nearly to the rim of the pot or pan. The water will then enter through the hole at the bottom and percolate through the whole of the soil, thoroughly wetting it without disturb-

ing the surface in any way. This is a very safe system to follow in watering the soil after the seeds have been sown, as, if a rose is employed, unless great care is taken, the small seeds are sometimes liable to be washed together. The sowing needs, in the case of minute seeds, to be very carefully done. Some cultivators prefer to mix a little very fine and dry silver sand with the seeds in order to prevent crowding, while others sow them without this mixture. I prefer the latter method, but in the case of those who have not had much experience it is safer to use the dry sand. Sprinkled on while the surface is still wet, the seeds will adhere thereto, and in the case of very small seeds no covering will be necessary. A good plan is to lay a pane of glass over each pot or pan, a uniform state of moisture being thus ensured. A sheet of brown paper may be laid over the glass till germination takes place, when it must be removed. On no account, however, must the sun be allowed to shine on the glass, even for a few minutes, as the tiny seedlings will be quickly roasted. Newspapers may be used for shading after the removal of the brown paper. In a fairly warm, moist, and shaded structure the young plants will make progress, and before long be ready for pricking off into pans or boxes. For the carrying out of this operation the receptacles should be prepared as for the sowing of seeds. The fine soil on the surface then allows of the tiny plants being dibbled therein, while the coarser portion below will be readily penetrated by the tender roots. W. T.

Habrothamnus elegans.—Considering the number of inquiries there are for plants to cover the back walls of greenhouses, it is surprising that a plant so suitable as the *Habrothamnus* receives no attention. If grown in a pot or planted out it does equally well, and furnishes during the duldest days of winter a profusion of its coral-coloured flowers, which are extremely useful for cutting. It may be planted to cover the back walls of vinerias with perfect success, as the shade from the Vines does not appear to interfere with the wood ripening sufficiently to prevent the plants blooming at the appointed time. Unless required to extend, the plants may be cut back after flowering to within a few inches of the previous year's breaks, when the shoots made will bloom almost their entire length. The terminal flowers will open first on a shoot, then the side shoots next towards the base, and so on. The *Habrothamnus* will do in any good soil such as is used for potting, but prefers rather a strong loam. Frequent applications of the syringe to keep down red spider will be necessary.

Under glass.—Stove heat may now be maintained round about 65 degs., while other plant-houses may be correspondingly lower. With the advance of the season more time is required for watering, and in all cases ventilation requires to be carefully attended to now.

Primula obconica grandiflora for cutting.—Despite the fact that some people are affected by handling this, there can be no doubt as to its usefulness when cut. Few things are so enduring, especially in the dull winter months. I have a nice batch of plants in a house from which the frost is just excluded, and here they have bloomed continuously. A few spikes which have been cut three weeks are still fresh. The stems have been shortened twice. The giant forms are much the best for tall glasses, many having stems 18 inches long.—J. C. F. C.

The Swan River Daisy (Brachycome iberidifolia).—A good sowing of this was made in the course of the week. Many find this fine blue-flowering plant succeed when the seed is sown in the open. Here, however, it is sown in heat, and afterwards pricked off for a time into a bed in a cold frame.—W. McGuffog, Kirkcudbright.

GARDEN FOOD.

NOTES AND REPLIES.

The D'Arcy Apple.—I am amused at Mr. Strudwick's remark in *Gardeners' Chronicle* of February 26th (p. 119) about this Apple not being in favour owing to its dull appearance. Let us not add the word "Spice" to the Apple. It has no meaning, and if it had, one name is best, and that the name of its place of origin. I was pleased to hear of its tree bearing in Norfolk, as I so often heard the contrary from nurserymen. I doubt if they have tried the Apple fairly. Few nurseries have room to allow trees to mature.—W.

Potato Langworthy.—This Potato deserves all the praise bestowed upon it (page 110), for although of quite medium size—which is rather against it for baking—it is floury when cooked and of fine flavour, qualities lacking in many of the larger varieties this season. Cooked in their skins and peeled just before serving, the excellent flavour is retained. This method of using them I much prefer to the common practice of mashing all into a pulp. It is a very good cropper, too, the tubers fairly plentiful, if not so large as those of many others.—E. M., *Sussex*.

Rhubarb Hawke's Champagne.—This is worth extended cultivation on account of its superiority over older kinds, and is specially valuable for preserving. For early forcing it is one of the best, being only a little behind what may be termed the first earlies. The stalks are red all through, so that when cooked it preserves its bright pink colour, and is of a brisk flavour. This variety is one of the best for the open ground, as, being a late grower, it may be had in season for a long time, and does not run to seed so much as the early varieties. It is of vigorous growth, and the stalks are very solid and heavy.

Potato King Edward VII.—Last season I formed a high opinion of King Edward VII., which was all that could be desired from an eating and cropping point of view, and highly valued for baking. This season this variety, grown on adjoining ground from the same seed, is not worth baking or boiling. In this district, after a rather long spell of hot weather, rain fell incessantly for three or four days, this being followed by a considerable drop in temperature, especially at night, after which the foliage disappeared as if by magic, filling the air with its unpleasant odour. Although the stored tubers have kept remarkably well, my opinion is that they were more or less diseased.—E. M., *Sussex*.

Quality in new sorts of Potatoes.—Quality in some sorts of Potatoes improves by cultivation. One of the most striking instances has just come to my notice in Evergood. Needing a supply I asked a greengrocer to send me a couple of sorts. He sent Evergood and King Edward. I was surprised to find the former nealy, of good quality, and equal to King Edward. When Evergood was first sent out I grew it on a heavy soil. The crop was enormous, but no one would eat it, and I discontinued growing it. Now, after a dozen years, I am pleased to find it so good. Growers tell me the crop is much smaller than when first sent out. I have found the same thing with most new kinds. Magnum Bonum now seems to have almost gone out of cultivation. Unfortunately the vigour that is in these seedlings causes them to be so productive, but as time goes on the tubers are firmer and the quality improves.

When the American kinds were first sent out they were close, and I always found them more suited for dry, sandy soils.—W. SURREY.

Celery (green) for stewing, etc.—Many are under the impression that Celery has no value unless it is blanched, but this is a mistake. This season I had a long row which did not get earthed up. At the close of the year it occurred to me that this would make good food if stewed. I lifted a portion, trimming off the roots and the ends of the green leaves and any rotted portions. The remainder was boiled in clear water with a little salt, using as little water as possible. This made a delicious dish. Some time ago I told a lady friend about this way of using unblanched Celery, and after trying it she told me it surpassed Seakale. Many people think that Celery is not hardy and must be earthed up. When green, few things are more hardy. If the stems are large and soft they suffer by bursting from frost. Green Celery I also find useful for flavouring. When that in trenches is over nothing is so serviceable as some plants to take leaves from.—WEST SURREY.

Sorrel.—Having grown most of the Sorrels I have not found one superior to the large De Belleville, so much grown for the Paris markets, and introduced some years ago by the Messrs. Vilmorin. Sorrel is not what one would term an every-day vegetable, but in the spring it is excellent for salads, as the young growths are produced at a season of the year when there is a limited supply of material. There is no gain in sowing too early. For years, having selected a good variety, I found it advantageous to divide just before the new growth started. This done, I usually had plenty of cutting material, as the plants soon respond if planted in good land. For cooking, a large-leaved variety such as De Belleville is a great gain. A plantation from divided roots lasts three years, and will give good cutting material for the time named. By lifting a number of roots and placing in cold frames on just a little warmth a much earlier supply is obtained. There are other good varieties, such as the Broad-leaved French and the Green Mountain, but the one noted above is one of the best, as it does not run to seed quickly. In all cases it is important to have the leaves quite fresh.—F. K.

Celeriac Paris Ameliore.—This is an excellent sort, the root solid, shapely, and of the best quality. I am aware it does not approach the well-known Giant Prague, the one so much grown (also at one time largely imported from Germany), as regards size, but the French variety is ideal for the private garden, and owing to its compact growth can be grown with less trouble, and is readily prepared for table. We do not make sufficient use of the Celeriac as a winter vegetable, as it can be grown with little trouble and at small cost. Many growers advise sowing in a pan or box in heat, like Celery, but if sown too thickly, allowed to remain too long in the seed-pan, or given too much warmth, the seedlings get much weakened. My best plants were always obtained from thin sowings in April in cold frames, planting out before the seedlings got at all large. This done, there was no check. Though some may think this would mean late planting, such is not the case, as there is a saving of labour and ample time for the plants to make their growth if sown early in April.—F. K.

Bottling Tomatoes.—I shall be glad if any reader can tell me the best way to bottle Tomatoes for winter use?—L. C. D.

OUTDOOR PLANTS.

PLANTS IN WATER GARDENS.

THE illustration shows the beauty one can have by the waterside, which in our country occurs so often. The number of plants that can now be grown in or near water is very great, many of them plants of extreme grace even when out of flower. Many of them, too, require very little attention, and give a far prettier result than the old arrangements used to give. It would not be an exaggeration to say that there are many places in every county where such advantages from water occur that are never seized as they have been in the case of this garden.

HARDY FLOWER NOTES.

MYOSOTIS DISSITIFLORA.—G. Algar Temple's note on this Forget-me-not (p. 93) affords one more instance of the

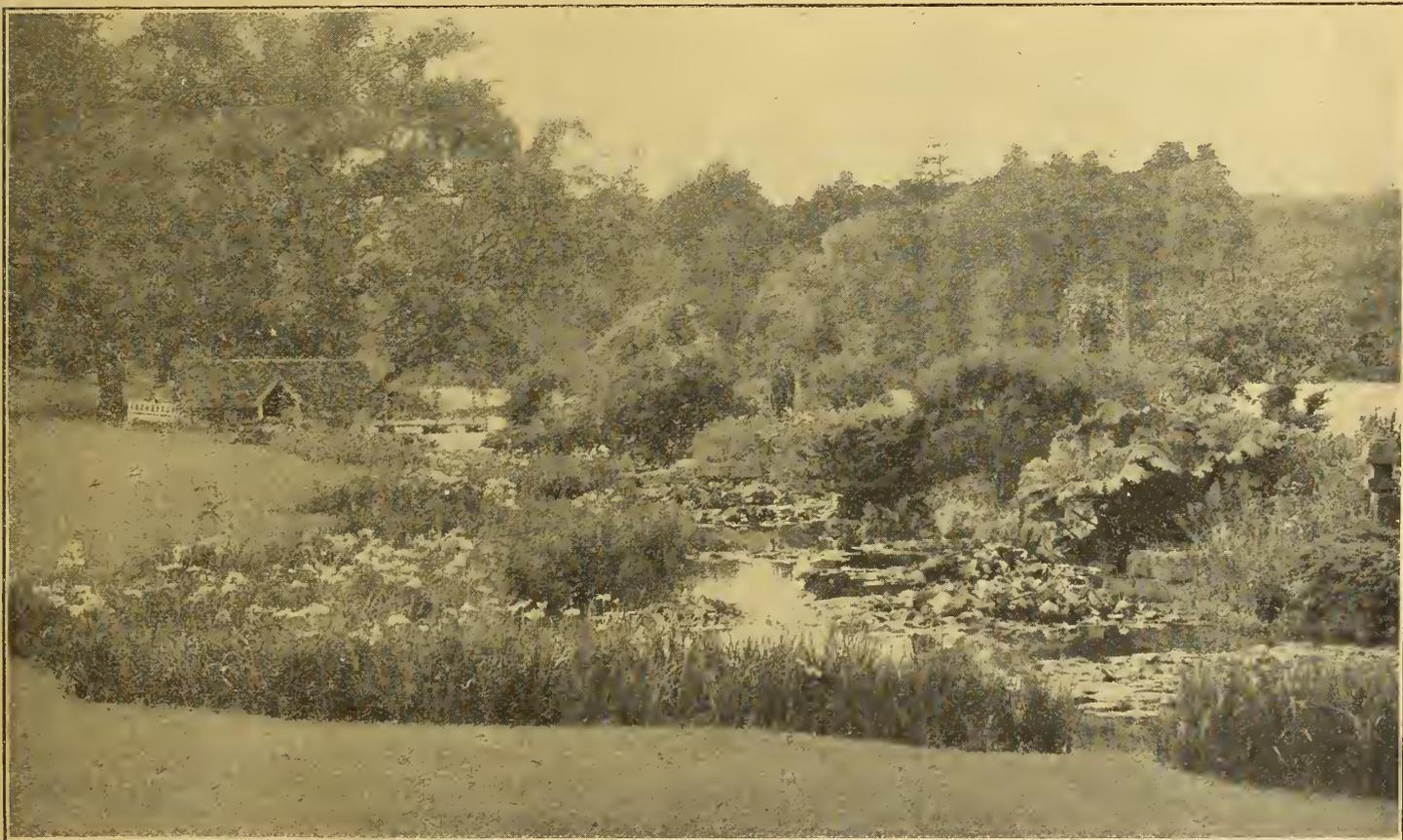
influence the productive powers of some things.

CHRISTMAS ROSES.—I am engaged in a struggle with these, but fear that I may be worsted. I have been growing them for many years past, have raised thousands of seedlings, not only from the old niger, but also from major, maximus, altifolius, Mme. Foucade, and others. I cannot say that the culture of Christmas Roses has been quite a labour of love with me. My soil is not bad for them, but I am not so well furnished with natural shade as I could wish, and as I wanted to grow them by the hundred the greater portion of the stock has had to be in open positions. Artificial shade and shelter are not like those afforded by a superior vegetation, and a certain amount of watering is needed, without which there can be no flowers worth speaking of. By attending to these cultural details I obtained

plant on fresh ground, but some of my plants are ten years old and I do not want to lose them.

NARCISSUS NANUS is now (February 16th) blooming freely in sheltered positions. Those who do not possess this little Daffodil should make note of it for autumn planting. It is so early and so easy to grow.

CAMASSIA LEICHTLINI.—I am pleased to be reminded of this species. Not having seen it for some years I had forgotten it, and I am not acquainted with the newer forms mentioned by Mr. Arnott, and which, being improvements in colour, should certainly be worth growing. Although this species has not the quaint beauty and nobility of aspect of its relative, Cusicki, it only needed the improvement in colour to make it a really good garden plant, and worthy of extensive culture. It is one of those things that would



Water garden at Buckhurst Park, Sussex.

varying influence of soil or climate on hardy plants, and of how impossible it is to lay down any hard and fast rules with respect to their culture. I do not know Cornwall, but it is a fact that many things that flourish there will not take on perennial vigour here in Surrey, and some would be killed in a winter above the average in severity. It may be that spring frosts, which are apt to cause much damage here, affect the seeding powers of this species, but I am inclined to the belief that it is a matter of soil or climate, or perhaps both. Anyway, it is with me as I have stated. Some things display considerable eccentricity in this way, as, for instance, Daffodils. My soil suits these, but only the Tenby and Emperor bear seeds, and, strange to say, they do so abundantly. Horsfield and Sir Watkin, which maintain their blooming powers for years when not lifted, have never produced a seed, which shows how curiously and unaccountably soil and climate

really good flowering plants, and could annually cut thousands of blooms. The disease which in some places plays havoc with this plant has, however, put an end to this happy state of affairs. It came on in earnest some five years ago, and for the past two years I have had scarcely any blooms. The plants start into growth freely enough, and look well until about the middle of August, when they gradually decay, and by October there is scarcely a bit of green left. I am now trying syringing with sulphide of potassium twice in the season—early in June and a month later. I also thoroughly dressed the surface soil and crowns with fresh lime. I shall do so again this year, and if a cure more or less complete is not effected I shall do away with them. Should I have any success I will report the result, for I know that in late years this disease has been very destructive. Perhaps the best way would be to burn the plants, also the surface soil, procure fresh stock, and

best display its value when planted in groups.

DAY LILIES IN THE GRASS.—I am transplanting some roots of these, which, by long residence in one spot, have become too crowded, for although the *Hemerocallis* are very accommodating, and will remain in a fairly good flowering condition much longer than most things without division, there comes a time when they give more leaves than flowers and division of the crowns is necessary. When I have set out what I need for stock I shall plant some in the Grass, and as they are big clumps, with twenty or more crowns, I fancy they will hold their own. Many of the disappointments experienced in establishing things in the wild garden are due to the employment of small plants. Only big clumps have any chance to live and thrive.
J. CORNHILL.

Phacelia campanularia.—If readers are on the lookout for a really good blue-

flowered annual let them try *Phacelia campanularia*. I had a nice patch of it last year. It only grows about 9 inches high, but the plants are covered with blue flowers from June to September. It is useful in any dry, sunny border, or may be sown broadcast in the rock garden. Sow in April, and when the plants come up, thin out freely, for if they are crowded they will grow spindly and will only bloom for a month. The best results are obtained when the plants are sown where they are to bloom, but they may also be transplanted if care is taken.—E. T. ELLIS, *Westwood, Ecclesall, Sheffield.*

NOTES FROM LONGFORD.

CROCUSES.—I now, owing to the war, do all the flower garden work myself, and see that there are hosts of Crocuses in the two-leaf stage, so next year I hope there will be a still larger crop. Then the year following ought to see this garden really well stocked with Dutch Crocuses. The newer kinds of these are lovely and an immense improvement on the old ones. Maximilian, Margot, and purpureus grandiflorus, growing in thick clumps, each about 2 feet across, and touching each other, make a glorious show in one bed. The two former are china-blue and lilac; the latter, of course, royal purple, or rather, democratic purple, since I believe the true purple of Coronation robes is on the red rather than the blue side. This being a comparatively new garden I have as yet very few *Crocus* species, since one must lay foundations before proceeding to refinements, but red marl evidently suits this family, for the few groups of such as *C. Tommasinianns* are increasing both by seed and offsets in a very gratifying way.

On the whole I agree with the correspondent who prefers his Crocuses neat, and not diluted with under-planting. Besides slugs, there is a loss of the delight of their upspring from the ground, the exquisite vase form of the taller ones, and the shading up from semi-transparent pallor to fuller colour above. If they must be on a carpet, *Frankenia laevis* makes a pretty one, while the tiny pale pink flowers it bears later on are rather fascinating. One also gets a good purple and gold effect from the gold variegated *Aubrietia*, which is flowering early this year, and out of which stand some rich lilac Crocuses, a few shades darker than the *Aubrietia* blossoms.

MEGASEA STRACHEYI.—"E. M." speaks of this as being among the hardy ones, but here I find each year for three seasons past its flowers have been quite spoilt by cold, turning brown before more than a very few of them had expanded. I put a hand-light over it this spring, but even that did not give satisfaction. It was planted for some time in a sheltered but not over sunny spot close to a Holly hedge, where *Hepaticas*, some *Primulas*, *Lilies*, and *Hellebores* do well; but has now been transferred to a south border under a wall to see if that will suit it any better. *Megasea* are extremely easy to raise from seed, but in my experience very slow to flower. A large batch I planted on a bank in my old garden was still there when I left, sizeable, but unbloomed, after at least four years of existence. I have just divided a box full of seedlings from last year's sowing with various friends, after setting many in divers parts of the garden, and hope I may live long enough to see some of them blossom. They appear quite indifferent to situation, for all, in sun or shade, rich soil or poor, are equally advanced in growth.

CLEMATISES.—Is there any advantage in

layering Clematisses to get them on their own roots? If not I do not see why it need be done, for it is a troublesome operation, slow, and there are so many risks for the layers, usually of necessity in an awkward position. Cuttings of the young shoots, taken with a bit of the wood from which they spring in March, strike quite easily. I do not even trouble to put them into a propagating case, or even a box with glass over it, but merely stick them into pots of, sandy soil and stand these on the greenhouse stage over the moderate heat of pipes that keep the place up to about 60 degs. as a maximum. They must be syringed daily. I should be most grateful if anybody would tell me the name of a Clematis I once had and cannot now identify. It was in all ways ideal for an arch, of Jackmani type, but a very compact grower, extremely free flowering, and possessing that special charm some few have of young flowers opening either paler or deeper in shade than the older ones. Its colour was a rich, lilac-purple, not nearly so blue in tone as the type Jackmani, while the flowers were a trifle smaller. No bar or marking; dense masses of rich rosy-plum-purple flowers in two shades, completely covering the top of an arch, and lasting a very long time. In those days I did not know about cuttings, and tried to layer it without success owing to a very bad season. I now wish to plant it here, but although I have sent for all I could find that seemed to answer the description it has not turned up.

PRIMULA WINTERI.—How is it that this, one of the loveliest plants ever shown, does not get into commerce? I have been looking in vain to see it offered in catalogues. Is it difficult or what? Some of these new *Primulas* are, I should think, very disappointing to the amateur grower, and some of them have curious ways. Last summer I had a box full of fine, healthy-looking seedlings of *P. Littoniana*, some with leaves 3 inches long, others smaller. In early October, thinking them too crowded in the seed-box to remain in it all winter, and, of course, fearing to trust them to the mercies of our wet west-country winter outside, I pricked them off into small pots and placed these in the greenhouse—heat not exceeding 55 degs. at any time. Instantly they all lay down and apparently died. I nevertheless hoped, and having been kept just moist, and in the same situation ever since, they are now (March 17th) each putting up a minute pair of leaves scarcely bigger than the original seed-leaves. M. L. W.

HOME SEED SAVING.

THE opening of Polyanthus buds reminds one of the advisability of picking out the best of these, and many hardy and half-hardy annuals, as the flowers appear, for the purpose of seed saving, for it seems likely, if the majority of growers are to have a display in the garden, they will have to depend mainly on hardy flowers and annuals, and if the best blooms from various standpoints are picked out and seed saved from them there is a decided chance of still better results. The favourite colours in Polyanthuses are white, clear golden-yellow, and a rich maroon, and if to the colour are added depth, length, and strength of stem, size of fruss, and thick, fleshy foliage, one is fairly sure of a satisfactory batch of seedlings. One of the earliest summer annuals is the *Corulfower*, and here again considerable improvement can be made by careful selection alike in size and colour of flower, also a somewhat dwarfer, sturdier race can be perpetuated that would be useful for

small borders, as for a similar purpose a race of dwarf, very free *Nasturtiums* can be acquired. The very free seeding of things like *Antirrhinums*, *Pentstemons*, and *Starworts* is well known; also the fact that quite a plenitude of good things is obtainable from a batch of seedlings, so that it is rather a difficult matter to know which to save and which to discard.

The above families, too, possess the merit of growing and flowering satisfactorily at a minimum of trouble and expense.

Another interesting class of plants on which to experiment with home seed saving is the Tufted Pansies, if one wants to cover bare spaces of ground between taller things easily and cheaply. *Pencailand* is a good white to save from, as although not one of the largest flowers, it combines purity with quite an agreeable perfume. *Klondyke* (yellow) and *Councillor Waters* (crimson-purple) are very good. Among the flowers much appreciated for cut bloom, single *Pyrethrums* take a prominent place, and it is well to have a few seedlings on hand in white, pink, and scarlet. E. B. S.

Hardwick.

NOTES AND REPLIES.

Polemonium Richardsoni.—This forms a neat clump 1½ feet to 2 feet high, and produces a wealth of beautiful light blue flowers, which are very suitable for cutting. Last year I sent a lot of flowers to the military hospitals, and heard that they lasted a considerable time in water. The plant blooms for a long period. In my garden last year it started blooming during the first week in June, and continued to flower till August. It should be placed near the front of the border and needs very little staking. Plant now, letting the site be well manured. It will thrive in light shade. In the summer cut the flowers regularly, for it is only by doing this that the plants keep on blooming.—E. T. ELLIS, *Westwood, Ecclesall, Sheffield.*

Grass smothering Ivy (*Cornelius B. Fox*).—You may in time, by persistently pulling out the Grass as it shows through the Ivy, be able to check its growth, but if it has got a good hold this is doubtful. The only way is to dig up the whole of the Ivy and thoroughly trench the ground, removing as the work proceeds every bit of Grass you can find. Then, we think, you may, with some hope of success, replant the Ivy.

Leaf-mould.—In your note on leaf-mould in your issue of March 4, page 130, I note you advocate the mixing of lime with the leaves. I entirely disagree with this. Lime should always be kept separate as it frees ammonia from all manures, which is lost in consequence. Nor do I consider Oak leaves as best of all for leaf-mould. They contain tannin, which retards growth. All leaves have to be collected together, naturally, when gathering up such refuse, but I think it will be found that leaf-mould composed of any but that of the Oak family is best. I have found that soil thrown among or on top of the leaves hastens decomposition.—W. C. PAED, *Jersey.*

Crocus Tommasinianus Bowles's White.—Among the numerous varieties of the pretty *Crocus Tommasinianus* raised or selected by Mr. E. A. Bowles is a charming pure white variety, which has been nicely in flower with me for some time. It is smaller than some of the other forms of *C. Tommasinianus*, but is an exquisite companion to the darker varieties, such as *azureus*, *purpureus*, and *lilacinus*. Mr. Bowles has, in addition to others, secured a handsome deep purple one, which has also been in bloom here and is much deeper than the ordinary *purpureus* sold by the dealers.—S. ARNOTT.

Crocus biflorus Weldeni Sulphur variety.—Mr. Bowles has raised an exquisite variety of *Crocus biflorus Weldeni* which I have in flower at present. The exterior of the flower is a pretty lilac, but the great charm of the flower lies in the interior of the segments, which is of a charming sulphur, much prettier than the mere term of "sulphur" would indicate.—S. ARNOTT.

TREES AND SHRUBS.

FLOWERING DOGWOOD (CORNUS FLORIDA) OF NORTH AMERICA.

This is the name which is in use in America for the Dogwood that makes such a splendid show of bloom in the Eastern States. It is quite a hardy plant and was introduced to us many years ago, but in some way it has never come into the place it deserves. It may be that it misses the splendid sun of Eastern America. I was afraid to plant it, seeing how seldom it is seen in a good state, but having tried a few of it I have been rewarded by its beautiful leaves in the autumn, and even the flowers of the red form, but I am not sure that this form is not a distorted variety in some respects, though a beautiful thing. In our country



The Red-flowering Dogwood (Cornus florida rubra).

a sunny position and sandy soil will suit it best, with a full southern exposure.

Attractive as the plant is, one much more beautiful and stately is Nuttall's Dogwood (*Cornus Nuttalli*), which abounds in some parts of the north-western coast of America, where it attains to the stature of a forest tree. It is quite hardy and fit to take its place among our choicest trees. It has also flowered with me in Sussex. The only trouble is to get a stock of it, but our nurserymen ought to be able to secure this. A certain elevation, as at Grayswood and with me, may get it out of the winter frost, and there must be many situations which enjoy this advantage.

W.

Soil and manure for Rhododendrons (G. S.).—The best soil for Rhododendrons is peat, but the common varieties will do very well in a compost consisting of leaf-mould, decayed vegetable matter, and chopped turf, with a little cow-manure for a top-dressing after planting. Of course, there are some soils not peaty in which Rhododendrons grow very

freely. It is not difficult to make up a soil in which they will grow freely where there is no excess of lime in the natural soil of the place. They will generally grow freely in woods, where the surface soil is full of vegetable matter from the decay of leaves, etc. They are also quite at home on the banks of ponds and lakes, where the soil is of an alluvial character. They must have shelter from keen, cutting winds, and moisture must be given in dry summers.

SOME NEW TREES AND SHRUBS FOR MILD DISTRICTS.

EVERGREEN HONEYSUCKLES.—One of the most charming of recently introduced evergreen shrubs is *Lonicera nitida*, which is lovely as a lawn shrub, of unique value for making low hedges, and may be trimmed and used in the manner of Box for edging garden paths and flower beds. It grows 3 feet to 6 feet high, and has innumerable rigid, twiggly, ascending, and spreading branches densely furnished with small glossy green leaves; the flowers are

toothed leaves. Both are large growing, sparsely branched shrubs with white, fragrant flowers, and relatively large scarlet fruits. Very distinct, too, is *I. yunnanensis*, with its compact columnar habit, small, rounded, spineless leaves, and pink, fragrant flowers, which are followed by small red fruits. Another good Holly is *I. corallina*, with oblong, lance-shaped leaves 2 inches or 3 inches long, undulate along the margins and sessile clusters of small, vivid scarlet fruits. This grows 6 feet to 12 feet high, with slender spreading and more or less pendent branches.

CHINESE BARBERIES.—From China, which is the headquarters of the Berberis family, there has been recently introduced a large number of new species, and among them several of quite exceptional merit. In the front rank of these is *B. Gagnepaini*, with masses of clear yellow flowers followed by black fruits. This is a compact shrub, 5 feet to 8 feet high, columnar in outline, with narrow-pointed, dull green persistent leaves. Other valuable species are *B. laevis*, *B. Juliana*, and *B. Sargentiana*, which differ one from another in size and shape of leaves and fruits, but agree in being much-branched, upright-growing shrubs, 5 feet to 8 feet high, with thick, dark evergreen leaves, yellow flowers, and black fruits. The sparingly-branched *B. Veitchi* (known in gardens as *B. acuminata*) is very distinct, and so is *B. triacanthophora*, a twiggy shrub, 3 feet to 5 feet high, and as much broad, with yellow flowers stained with red and black fruits. For rockeries and rocky places the semi-prostrate *B. candidula* and *B. verruculosa*, with small, evergreen, Holly-like leaves, lustrous above and white beneath, are most delightful plants.

WHITE AND PINK BUDDLEIAS.—For the Pacific slope two species which produce their flowers in January and February are strongly recommended. One of these (*B. asiatica*) has pure white, deliciously-scented flowers arranged on long, slender, cylindrical tails, grey Willow-like leaves, and slender arching and spreading branches. The other (*B. officinalis*) is a more sturdy shrub with broader leaves, stouter branches and broader branching heads of rose-pink flowers each with an orange eye.

SEMI-EVERGREEN BRAMBLES.—Among semi-evergreen species with attractive foliage and pleasing habit I may mention *Rubus chroosepalus*, with leaves like those of *Tilia petiolaris*; *R. bambusarum*, with tripartite leaves, dark green above and dun-coloured below; the closely allied *R. Henryi*, with lobed leaves; *R. flagelliflorus*, with entire leaves marbled with metallic green and brownish-purple above; *R. Swinhoi*, with narrow, oblong, pointed leaves, grey on the underside; and *R. ichangensis*, with vivid green, nearly heart-shaped, pointed leaves and large, elongated clusters of bright red fruits. All these Brambles have slender whip-like shoots, and when trained to poles or to a pergola are very attractive.

DEUTZIAS.—China has given us quite recently a number of, very distinct and lovely species, such as the rosy-lilac flowered *D. longifolia* and its more deeply-coloured variety, *D. Veitchi*; *D. Wilsoni*, with glistening white flowers larger than those of any of its allies; *D. discolor*, with large masses of white flowers; *D. Schneideriana* and its variety *laxiflora*, with pyramidal trusses of white flowers, and the curious *D. mollis*, with soft, hairy leaves and flattened heads of small white flowers.

CORYLOPSIS.—From China this genus has recently been considerably augmented, and such species as *C. sinensis*, *C. Veitchiana*,

yellowish-white, small but very fragrant, and the fruits are bluish-purple. This shrub roots readily from cuttings and grows freely and rapidly in any ordinary garden soil. Akin to the preceding is *L. pileata*, which has similar flowers and fruits but larger leaves, not shining, and low spreading and prostrate in habit.

HOLLIES.—China is very rich in species of Holly and a number of valuable and distinct kinds have been added to our gardens. The best of its class is *Ilex Pernyi*, a shrub 6 feet to 18 feet high, narrow pyramidal in outline, with rigid branches and small, very spinous, dark-green leaves and red fruits. Either for specimens or for hedges this Holly is invaluable. Closely allied to the above is *I. Veitchi*, which is similar in habit but has very much larger leaves. Quite unlike one's conception of a Holly are *I. Fargesii* and *I. Franchetiana*, with their long, narrow, Willow-like entire or slightly

C. Willmottiana, and *C. platypetala* are decided acquisitions. Like the Japanese species, they are spring-flowering shrubs and have pendent, short racemes of yellow, fragrant flowers, which are produced in great profusion before the leaves unfold. The leaves are grey-green, and either in flower or foliage these shrubs are of pleasing appearance. Another new spring-flowering shrub is *Stachyurus chinensis*, with pendulous racemes of yellow, scented flowers. This forms a bush 5 feet to 8 feet high, and has spreading branches, deep-green leaves, and purplish-brown shoots.

WILLOWS.—Lastly, I may mention *Salix Bockii* and *S. magnifica*, two most extraordinary Willows. The former is an upright-growing, much-branched, twiggy shrub with small grey-green leaves, and is worth growing as an autumn flowering plant. The catkins are white and are borne in great profusion on the current season's shoots in the late summer and autumn—a character almost unique in Willows. The other is a magnificent, fine foliaged plant. It is a large bush, 10 feet to 20 feet high, with grey-green leaves on red stalks, and I have measured the leaf-blade 8 inches long and 5½ inches wide. The leaves rather suggest those of the Yulan (*Magnolia conspicua*), so much so in fact that when I discovered the plant I momentarily took it for a species of *Magnolia*.

FLOWERING TREES.—An ornamental flowering tree is *Carriera calycina*, with pyramidal heads of ivory-white waxy flowers. It is a much-branched, flat-headed tree of medium height, and the flowers are borne conspicuously at the ends of the shoots. One of the most beautiful of small trees is *Staphylea holocarpa*, with large pendent clusters of pure white to pink flowers borne in profusion before the leaves unfold. The variety *rosea* has rose-coloured flowers, and the leaves are downy on the underside. Both form slender trees 15 feet to 30 feet high, with spreading branches, bright green leaves, and pale green twigs. The flowers are rich in honey and deliciously fragrant.

FOR DRY REGIONS.—A tree which thrives in dry regions is *Pistacia chinensis*. This is one of the largest of Chinese trees and has a very thick trunk, massive wide-spreading branches, which form a flattened or rounded crown; the leaves are dark green, pinnately divided, and in the fall assume wondrous tints of orange and crimson. The flowers are inconspicuous, but the bunches of small fruits, which are rich in oil, are showy, and as they ripen change to scarlet and are finally blue. The wood is valuable, and the young shoots with half-grown leaves are eaten as a vegetable by the Chinese after the manner of Spinach. The Chinese Hog-plum (*Spondias axillaris*) is another drought-resisting tree worthy of extended cultivation. It grows 45 feet to 80 feet high, and has thick branches forming an oval or flattened crown. The leaves are pinnately divided and the oval to ellipsoid yellow fruit is edible, but lacks flavour. In eastern and central China the people consider *Xylosma racemosum* and its variety *pubescens* the most beautiful of all their evergreen trees, and apply to it a name which signifies "Wintergreen." It is commonly planted over shrines and graves and in temple grounds, and has dark, lustrous, green leaves, inconspicuous flowers, and black, pea-like fruits. The branching is dense and the crown wide-spreading, oval, rounded, or flattened, and the short inner branches are spiny.

POPLARS.—A handsome new Poplar is *P. Wilsoni*, with its large, rounded, and slightly-pointed leaves, dark green above and pale on the underside. Other valuable

Poplars suitable for the cooler parts of the Pacific slope, but quite hardy in the coldest parts of this country, are *P. suaveolens* and *P. Simoni*, both quick-growing trees useful for street or park planting.—E. H. WILSON, in *Garden Magazine*.

Euptelea polyandra.—This, in the forests of Central Japan, grows into a tree up to 30 feet high. Here it may eventually grow as tall, for it develops fast and is of free habit, with a generous branch system. The slender and twiggy branches bear light green leaves during the summer, these being of a pretty reddish-brown when developing, and yellow and red in autumn before they fall. Male and female flowers are borne on different plants, the conspicuous part of the male flowers being the bright red stamens. These appear on the leafless branches during March and early April, and, as a tuft of flowers is borne from almost every bud on the previous year's shoots, the effect is very pleasing on a sunny day and is very much like that of *Acer rubrum* and *Parrotia persica*, although the habit of the *Euptelea* is much lighter than that of either of those trees. It should be given a position sheltered from cold winds, for, although quite hardy so far as winter frost is concerned, cold nights and east winds during late spring sometimes injure the young shoots and leaves.—D.

The Downy Manzanita (*Arctostaphylos tomentosa*).—The family of shrubs known as *Arctostaphylos* is represented in the British Isles by two species—*A. alpina*, the Black Bearberry, and *A. Uva-ursi*, the Red Bearberry—both trailing plants found on the Scottish mountains. They are, however, very different plants from the subject of the present note, which is one of several species natives of Western North America, where they are known under the common name of Manzanita. Perhaps the best known species from that region is the common Manzanita (*A. Manzanita*), although it is not widely grown here. *A. tomentosa* is found wild in California and Washington, where it occurs as a bush from a few inches to 5 feet or 6 inches in height, of stunted habit, with extraordinarily twisted and contorted branches. The young wood is hairy, as also are the evergreen leaves, and by that it is easily distinguished from *A. Manzanita*, which is almost, if not quite, glabrous. The urn-shaped flowers, white, slightly flushed with pink, are borne in clusters from the points of the branches during March and early April. Although originally discovered about 120 years ago, it is rarely seen in cultivation, but is represented in the Kew collection, where it succeeds in a mixture of sandy loam and peat. For a sheltered position on the higher parts of the rock garden this shrub is well adapted, and it might be introduced to many gardens in the South of England.—D.

* THE ELM AND THE VINE.

"Uphold my feeble branches
By thy strong arms, I pray."
Thus to the Elm her neighbour
The Vine was heard to say.
"Else, lying low and helpless,
A wretched lot is mine,
Crawled o'er by every reptile,
And browsed by hungry kine."
The Elm was moved to pity,
Then spoke the generous tree:
"My hapless friend, come hither,
And find support in me."
The kindly Elm, receiving
The grateful Vine's embrace,
Became, with that adornment,
The garden's pride and grace;
Became the chosen covert
In which the wild birds sing;
Became the love of shepherds,
And glory of the spring.

—From the Spanish of José Rosas. Translated by William Cullen Bryant.

CHRYSANTHEMUMS.

SEASONABLE NOTES.

Pot plants grown for the production of cut flowers should be placed by themselves so that they may receive suitable treatment. Where many blooms are required from a limited number of plants stopping must be closely attended to. In no case must the plants be left to grow tall with weakly stems before the ends are pinched off to induce a free growth of side-shoots. The latter must not be stopped in their turn too soon, but be allowed to grow 6 inches or a little more. Such treatment applies to the majority of varieties grown for cut blooms. There are two very valuable white-flowered varieties that need special treatment if the best returns are to be obtained. *Mme. R. Oberthur* should be cut back more severely than any other sort, whether the plants be retained in pots throughout the season or planted out for lifting again in the autumn. From plants so treated I have been able to cut nice blooms during this month (March). The other variety is *Mrs. J. Thompson*, and its sports *Buff Thompson* and *Yellow Thompson*. The general habit is much taller than that of *Mme. R. Oberthur*, and any attempt to unduly dwarf it will result in failure. When stopping the plants only remove the extreme point of the shoot, and do not finally stop later than the first week in July. Frequently this variety is over-potted; 9-inch pots are large enough, and I would prefer 8-inch. If larger pots are used put two, or even three, plants into each one.

Plants to bear large blooms must be carefully staked as the stems grow, be freely ventilated in the frames, and kept quite clean. Green-fly and black-fly are troublesome at this stage, and if left undisturbed for several days they cripple the growth of the young shoots. Sprinkle Tobacco-powder on the shoots affected and then forcibly syringe off both the fly and the powder. This should be done every week.

The leaf-mining grub is very troublesome in many collections this season. Very badly-affected leaves must be picked off and burned, but its spread can be arrested if the beginner will closely examine the leaves regularly and press all grubs found between the thumb and finger.

Mildew is found, generally, on the under-sides of the lower leaves, and is a frequent cause of loss of foliage. The best remedy for this is sulphur.

G. G. B.

NOTES AND REPLIES.

Chrysanthemums.—The earliest-rooted lot of Chrysanthemums is now in 5-inch pots. A fairly good compost with a small allowance of soot was made use of for this potting. These plants will all be grown in bush form, and in a short time, after they take hold of the fresh soil, the tips will be pinched out. Meantime they are in a light and airy house, with a night temperature of about 55 degs. Other young plants are making good progress and will shortly be ready for a shift.

Single Chrysanthemum Charles Kingsley.—Many of the single Chrysanthemums are much more effective when grown in a natural way and allowed to bloom in sprays. The fine yellow *Charles Kingsley* is an exception to this rule, for unless the sprays are severely disbudded the full beauty of the flower is, to a great extent, lost. When disbudding is practised the blooms are large, and the variety is one of the very finest of the yellow single Chrysanthemums.—KIRK.

VEGETABLES.

THE POTATO ONION.

This variety more frequently forms a cluster of underground bulbs of irregular shape than a single round bulb. It produces neither seeds nor bulbils, and is increased only from the bulbs which are formed underground. If fairly strong bulbs are planted as early in the spring as the ground can be had in working condition, well-grown bulbs may be had from them in the following June. If, however, the bulbs are allowed to attain full maturity, instead of a single bulb from each, seven or eight of various sizes will be produced. The strongest of these will in their turn produce a number of bulbs, the weaker ones only growing into a single bulb. The flesh of the Potato

large tubers is a mistake. A healthy, clean crop is better than a diseased one of twice the bulk. Raw manure should never be applied to land intended for the growth of Potatoes, but rather induce a medium-sized, hard-wooded haulm than a coarse, succulent one. The freedom from disease of certain kinds arises from the fact that the haulm is of a firm, fibrous nature; and if such kinds be grown in soil of but moderate quality, and free from raw manure, a sound crop may be secured.

Profitable work in cool-houses.—Fuel has become so dear that it has been deemed advisable to give up forcing for a time and use the cool-houses to grow food. At the present there is a demand for good Lettuces. When the Lettuces are cleared off, the Tomato plants may be ready to plant. Tomatoes and Lettuces are only one arrangement, but so far as my ex-

and placed in heat. As soon as the seedlings appear place near the roof glass of a warm pit or house, afterwards removing to a cold frame to harden off preparatory to pricking out into rough frames. Celeriac (Turnip-rooted Celery) is easily grown, and deserves extended cultivation. The roots are excellent when properly cooked, and, as they may be stored in sand in the root-shed for the winter, they form a welcome change in the dull season when vegetables are scarce.

Asparagus-beds.—When necessary the stakes at each corner of the beds will be removed, after which the sides will be made up with soil taken from the alleys. The surface of the beds will also be covered from 2 inches to 3 inches with the finest of the soil, which is levelled down with a rake after a dressing of fish guano has been applied. The alleys will then be



The Potato or Underground Onion.

Onion being milder than that of the ordinary Onion, it is preferred by many people. We have found it a good plan when the bulbs are growing freely to draw some soil up to them. When it is seen that the bulbs are ripening off this soil may be removed in order that sun and air may reach them. This Onion likes good, deep, well-manured soil, and single sets should be planted about 9 inches asunder and 9 inches between the rows. If the ground is soft the bulbs may be simply pressed into the soil, but if firm then it is well to draw out a shallow drill and set the bulbs in this.

Potato culture.—Those who have to purchase their stock of seed tubers should obtain it at once, to make sure of good samples. As regards planting, gross culture for the production of heavy crops and

perience goes it is a profitable one, because they follow each other naturally. When the Tomatoes are finished in the autumn, say at the end of October or later, plant the Lettuces and other salad plants if required. These can be cleared off in March for Tomatoes again after a dressing of wood-ashes and a good treading, as Tomatoes do best in firm soil. Of course, there are other plans which may be adopted for spring and early crops generally, especially if the means are available for making hotbeds on the borders of the house with leaves and a small quantity of stable manure to hold the leaves together and start the warmth in them. On the hotbeds many useful early vegetables may be grown.—E. H.

Celery and Celeriac.—For the main batch of plants seed should be sown about the middle of this month in pans or boxes

repointed and left ready for the planting of a single row of early Cauliflowers later on in each. These will turn in and be out of the way before the Asparagus tops develop to any great extent. Where the practice of dressing the beds with manure in spring instead of autumn finds favour the same should be put on at once, covering afterwards with a little fine soil. With many the difficulty will be in obtaining a supply of manure. Fortunately good substitutes are to be found in salt, or the more valuable fertiliser already alluded to.—G. P. K.

Beet.—Last season a few lines of that old variety Nutting's Dwarf were grown after it had been discarded for several years. Although the season was not, as a whole, quite satisfactory for root crops, this particular Beet gave a good return. The medium-sized, well-coloured roots have been in greater request than those of larger proportions, and Nutting's Dwarf has again been included in the seed order.—KIRK.

ROYAL HORTICULTURAL SOCIETY.

MARCH 28TH, 1916.

THE fortnightly meeting held on this date was smaller than some of those immediately preceding it, albeit there was no lack of interest or variety. Alpines were strongly in evidence and a never-failing source of attraction. Roses, too, were in excellent form, and, like the Carnations, which were also good, are much favoured by visitors. A great bank of *Chionodoxas* revealed the beauty of one of the most precious of blue spring flowers. Orchids were good; the hybrid *Odontiodas* particularly striking and plentiful. Several important novelties received recognition.

ALPINE AND HARDY PLANTS.

In this department the collection of Houseleeks (*Sempervivum*) arranged by

Messrs. R. Tueker and Son, Oxford, was of exceptional interest, albeit the plants would have appeared in better character a few weeks hence. The collection was large, some 168 species and varieties being on view, though but few of the cob-web (*S. arachnoideum*) sorts were noted. In addition, the new *Saxifraga Irvingi* and the rare Italian *S. Borji* (white) were on view.

Messrs. John Waterer, Sons, and Crisp, Twyford and Bagshot, showed many good things, notably the new *Primula Crispi*, said to be a seedling from *P. Julke*, though apparently widely removed from it in general appearance. *Anemone Pulsatilla alba* was both good and abundant, and far better than is usually seen. *Saxifraga apiculata*, *S. a. alba*, and *S. marginata* gave patches of colour. *Narcissus moschatus* was very good.

Messrs. W. Cutbush and Son, Highgate, N., had many beautiful things, the dainty white-flowered *Thalietrum anemonoides*, double blue *Hepatiens*, *Chionodoxas*, *Erythronium giganteum*, and many of the choicer *Saxifragas* being noted. The Winter Heath (*Erica carnea*) gave colour and a beauty of its own.

Messrs. T. S. Ware, Limited, Feltham, had a pan of the exquisite white-flowered *Silene pusilla*, an inch-high alpine of rare beauty. *Trillium erectum* and others were also well shown. *Pulmonaria azurea* (rich blue) merits wider cultivation, being early, dwarf, vigorous, and free-flowering. *Morisia hypogæa* was a carpet of golden flowers.

The best thing in a group from

Messrs. Bakers, Wolverhampton, was *Primula denticulata alba magnifica*, a variety of much merit.

Messrs. G. Jackman and Son, Woking, showed a good lot of *Androsæe Laggeri alba* in flower, its somewhat drawn condition robbing it of not a little of its true character. *Euphorbia Wulfeni*, *Iris pumila*, *I. stylosa*, and Heavenly Blue *Muscari* were also noted.

Messrs. Blackmore and Langdon, Bath, staged a particularly good batch of *Polyanthuses* in white, crimson, golden, and yellow. Obviously a good and vigorous strain. Miss C. M. Dixon, Edenbridge, also showed these easily-grown flowers well, in company with *Auriculas*.

Mr. M. Prichard, Christchurch, showed well-grown alpines in pots, the choicer *Saxifragas*, *Irvingi*, *Faldonside*, *Burseriana macrantha*, *Paulinae*, *latina*, and *Ferdinand-Coburgi* (golden) among them. *Aubrieta Lloyd Edwards* (rich purple) is very handsome. *Orobis vernus albus-roseus* revealed the charm of an old plant too little known or grown.

Messrs. Barr and Sons, Covent Garden, W.C., showed many hardy flowers, notably *Crocuses* and the smaller-growing *Daffodils* as *minimus*, *Queen of Spain*, *cyclamineus*,

mosehatus, and *triandrus* in variety. *Iris tingitana* was among showy things, *Fritillaria armena rubra* and *Helionopsis grandiflora* being not the least interesting.

Mr. Clarence Elliott, Stevenage, had the dainty white-flowered *Soldanella pusilla alba* in degrees of whiteness; also *Saxifraga Irvingi*, *S. oppositifolia latina* (rich red), *S. marginata* (white, very good), *Anemone vernalis*, and *Androsæe Laggeri*, all in good form. Hybrid alpine *Primulas* were also shown.

Mr. Amos Perry, Enfield, again showed some fine varieties of *Shortia uniflora grandiflora*, those named *magnifica* and *rosea superba* being of exceptional merit. A group of *Saxifraga retusa* (rich red) was very fine.

Messrs. Whitelegg and Page, Chislehurst, contributed, among other things, *Arabis aubrietioides* (rose), *Aubrieta The Queen* (rich reddish-lilac, very large), and *Viola gracilis*. *Wistarias* and *Magnolia stellata* were excellent.

Mr. G. W. Miller, Wisbech, showed the more attractive spring flowers, largely *Daisies*, *Polyanthuses*, Tufted *Pansies*, *Primula Juliae*, and *P. denticulata*. *Hepaticas* were very beautiful.

ROSES.

Mr. Elisha J. Hicks, Twyford, showed plants in pots, grouping colonies of the single crimson *Princess Mary* and Mrs. George Norwood (pink, very fragrant) most effectively. Mrs. Elisha Hicks is a novelty, flesh-pink, and highly fragrant. Mrs. John Foster, Mrs. Charles Reed, and Mme. Edouard Herriot were all good.

Mr. George Prince, Oxford, had a splendid stand of Mme. E. Herriot, very rich in colour, as was also the apricot-coloured Mrs. A. R. Waddell. Old Gold was particularly good.

CARNATIONS.

Messrs. Allwood Brothers, Haywards Heath, had an extensive group, the four dozen or so of vases being most effectively staged. The finest things in the lot, however, were the great vases of *Mary Allwood* and *Salmon Enchantress*; the latter, indeed, we have never seen better. White May Day was among newer sorts.

Messrs. W. Cutbush and Sons, Highgate, N., had a particularly good group of *Lady Ingestre*, one of the best pinks, *Marmion* and R. F. Felton being also of special merit.

Misses Price and Fyfe, Birch Grove, East Grinstead, had a novelty in *Grisel*, which gained an Award of Merit. It is of rich reddish-purple colour, fragrant, and of good petal quality. *Pink Sensation* was also very good from this source.

Messrs. Stuart Low and Co., Enfield, also showed these flowers well, *Pink Sensation*, *Gorgeous*, *White Wonder*, *Champion*, and Mrs. C. F. Raphael being excellent.

GREENHOUSE FLOWERS.

In this department we selected the exhibit of *Clematises* by

Messrs. H. B. May and Sons, Edmonton, as the most useful and suggestive of the occasion. Greenhouse-grown, without appreciable loss of colour, their utility was at once demonstrated. That fine white *Miss Bateman* was in striking contrast with the red-barred *Nellie Moser*, and the twain are indispensable indoors or out. *Lady* and *Lord Londesborough* and *The Queen* (all mauve or lavender shades) were very good.

Messrs. R. and G. Cuthbert, Southgate, N., showed *Hyacinths* in pans, many of the best sorts appearing in perfection. *Corregio* (white), *Perle Brilliant* (porcelain and pale blue), *Schotel* and *Grand Maître* (light and deep blue respectively),

and *Jacques* and *Moreno* (pink) were some of them.

Messrs. H. Cannell and Sons, Eynsford, Kent, had two or three dozen vases of winter-flowering *Pelargoniums*, their brilliant shades attracting many. *George Costerline* (lilac-pink), *Gemini* (orange-crimson, white centre), *Louis Chauvin* (salmon); *Firefly* (one of the most striking), *John Stares* (orange-scarlet), and *Golden Lion* were a few of the more striking.

Messrs. Sutton and Sons, Reading, had an instructive exhibit of *Lachenalia Nelsoni*, staging some hundreds of exceptionally well-coloured spikes of flowers. The value of the exhibit lay in the fact that the plants had received only cold-frame culture, hence, doubtless, the sturdiness of the spikes and the richer flower-colour.

Messrs. R. H. Bath, Limited, Wisbech, contributed a large collection of Darwin *Tulips* grown in bowls of fibre. Nothing could have been finer or more suggestive of the possibilities of this phase of indoor gardening. *Narcissus Centurion* (Award of Merit) (a bicolor *incomparabilis*) was with others similarly grown. It is excellent. The end of the exhibit was a bank of the gorgeous blue *Chionodoxa sardensis* and others.

FLOWERING SHRUBS.

Messrs. J. Cheal and Son, Crawley, showed several good things, *Cytisus Dalimorei*, *Osmanthus Delavayi* (white), *Pieris floribunda*, *Daphne Cneorum*, and *Erica australis* being noted. Alpines in flower were used at the margin.

Mr. L. R. Russell, Richmond, showed freely of *Indian Azaleas* in variety, *Anthony Koster* (of the *mollis* section) making a big show with its trusses of rich yellow flowers. *Lilacs*, *Wistarias*, and others were also good.

NARCISSI.

Messrs. Carter and Co., Raynes Park, S.W., contributed a sumptuous group of *King Alfred Daffodil*, than which nothing so fine has ever been staged. There were approximately 800 flowers of this unique yellow *Ajax* set out in an undulating bank, flowers at once brilliant in colour and of refined beauty.

Messrs. Barr and Sons, Covent Garden, W.C., staged a collection rich in beauty and novelty. A few dozens of *King-Alfred* were of superb colour, very telling even amid the surrounding wealth of these flowers. *Sunrise* (a notable *Barri*), *Mermoid* (an exquisite *Leeds*), *Peter Barr* (still unequalled among white *Ajax* sorts), *Vivian Gosnell* (creamy-white *Ajax*), *Golden Comet*, and *Golden Sun* (very richly-coloured trumpet sort), and *Battle-axe* (*incomparabilis*) (golden-orange, almost cylindrical crown, and pale-yellow perianth) were among the best.

Rev. G. H. Engleheart had half-a-dozen flowers, of an *Ajax* sort, with clear, full, salmon-coloured trumpet. The variety was not on exhibition, but we were privileged to get a glimpse of it. Obviously, it is a good stepping-stone to greater things.

ORCHIDS.

Messrs. Sander and Sons, St. Albans, showed a group of rare species, including *Cœlogyne Lawrenceana*, *C. ochracea*, with some pretty *Maxillarias*.

Messrs. Charlesworth and Co., Haywards Heath, contributed a superb lot of *Odontiodas*, notably *Zenobia*, *Brunette*, *Charlesworthi*, and many others. Amid white *Miltonias* and *Odontoglossums*, the reds and crimsons of the *Odontiodas* were very telling.

Messrs. J. and A. MacBean, Cooks-

bridge, Sussex, had excellent *Odontoglossum crispum* (spotted varieties), also *Laelio-Cattleya The Pearl*, and *Odontioda Bradshawae* and *O. Charlesworthi* among others.

Messrs. Stuart Low and Co., Enfield, showed the yellow-flowered *Dendrobium Brymerianum*, and the white-flowered *D. Jamesianum*, also *Brasso-Cattleya Queen Alexandra*.

FRUIT AND VEGETABLES.

Mr. G. W. Miller, Wisbech, staged a superbly-grown lot of *The Sutton Rhubarb*, quite remarkable for its brilliant colouring.

Messrs. J. Cheal and Sons, Crawley, showed Apples *Encore* and *Crawley Beauty* (both cooking sorts) in a fine state of preservation.

Mr. E. Beckett, Elstree, showed bulbs of *Onion Autumn Triumph* from a sowing made in August, 1914. They were of medium size and very firm.

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MARCH 23RD.—*Berberis* (in variety), *Cydonias* (in variety), *Andromedas* (various), *Daphnes* (in variety), *Rhododendron venustum*, *Skimmias*, *Almond*, *Periwinkles*, *Osmanthus Delavayi*, *Forsythia spectabilis*, the *Goat Willow* (*Salix caprea*), the *Cornelian Cherry*, *Ericas* (in variety), *Laurustinus* (various), *Azara microphylla*, *Ribes sanguineum*, *Alnus* (various), single pink *Camellia*, *Scilla taurica*, *S. sibirica*, *S. campanulata*, *Puschkinia scilloides*, *Muscari botryoides*, *Hyacinthus azureus*, *Anemone Hepatica* (in various colours), *Anemone angulosa* (in variety), the *Greek Anemone* (*A. blanda*) (various colours), the *Poppy Anemone* (*A. coronaria*), *White Wood Anemone*, the *Pasque-flower* (*A. Pulsatilla*), the *Scarlet Windflower* (*A. fulgens*), *Chionodoxa Luciliae*, *C. sardensis*, *C. gigantea*, *Snowdrops* (in variety), *Violets* (in variety), *Polyanthuses*, *Violet Cress*, the *Netted Iris* (*I. reticulata*), the *Algerian Iris* (*I. stylosa*), *Crocus* (in great variety), *Arabis* (single and double), *Saxifrages* (various), *Narcissus minimus*, *N. maximus*, *N. pallidus praecox*, *N. Grand Monarch*, *N. Tazetta*, *N. Telamonius plenus*, *N. odoratus* (*Campernelle*), the *Tenby Daffodil* and others, *Snowflakes*, *Dog's-tooth Violets*, *Forget-me-nots*, *Lenten Roses* (various colours), the *Corsican Hellebore*, *Corydalis cheilanthisifolia*, *C. cava*, *Candytuft*, *Winter Aconites*, *Wallflowers*, *Lithospermum rosmarinifolium*, the *Bardfield Oxlip* (*Primula elatior*).

WORK OF THE WEEK.—A start has been made with the pruning of dwarf *Roses*, those occupying beds facing south and protected from north and east by high walls being dealt with first. There is usually much hair-splitting about pruning, but if the *Roses* are in a healthy condition the work is quite easy. As the pruning proceeds attention should be given to the clearing and forking up of the beds. In some beds *Tufted Pansies* have been planted as a groundwork, while in others will be sown next month choice dwarf annuals, and in suitable positions dwarf plants of various kinds will be used. A bed of pink *Roses* has for some years been carpeted with *Tropæolum polyphyllum*. As this is permanent, and has made considerable growth, the forking over required much care, otherwise the young shoots would have been badly damaged. The same applies to a bed of *Rose Edith Giffard*, which is carpeted with the *Greek Anemone* and *Chionodoxa gigantea*. A further supply of *Erica mediterranea hybrida* has been planted at the base of a group of *Lawson's Cypress* and *Snowdrop-tree* (*Halesia tetraetra*). Another batch of the *New Zealand Reed* (*Arundo conspicua*) and *Gynerium Rendatleri* has been relieved of their old foliage, and the ground among the plants well exposed to the weather by deep digging. A start has also been made with the forking over and freshening up of the mixed border as most of the plants can now be seen. At the same time great care is necessary, especially where recent additions have been made. A number of *Pinus ponderosa* and *Cupressus macrocarpa* has been put out. The former is intended for the woods, but as the position is not yet ready the trees have been planted 2 feet apart in the reserve garden. The latter being small seedlings have been put out in lines 6 inches apart. A few bulbs of the *Taurian Scilla* have been given a favoured place at the foot of a sunny wall. A bed has been edged with the dwarf silvery *Santolina Chamæcyparissus squarrosa*, and another with *Wahlenbergia vinæiflora*. The beds are 6 inches above the ground level, with an edging of paving-stone, over which the plants are

intended to fall. The autumn-sown *Sweet Peas* have been staked with small *Birch* sprays; the larger stakes will be added later. *Sweet Peas* sown early in February have been transferred to cold frames. In a large bed planted last year with the *Scarlet Sword Lily* (*Gladiolus Brencleyensis*) the bulbs appear to be in excellent condition. These will be given a carpet of some blue-flowered plant later on. E. M. Sussex.

SOUTHERN COUNTIES.

Outdoor Figs.—Where necessary to protect trees grown against walls outside from frost with *Bracken* held in place by mats or by some other means, part of the same should now be dispensed with and the remainder in the course of another week or ten days. The trees should then receive whatever attention they require in respect to the thinning out of almost fruitless branches—i.e., those which carry fruit at their extremities only—and in carefully pruning away surplus young wood when more than was necessary was laid in during last season. When doing this, care must be taken to see that the most fruitful of it is retained, evidence of which is plainly visible if an examination of the shoots is made. The embryo fruits will be found situated at the joints on the shoots throughout their entire length if the roots of the tree are under control and the wood thoroughly ripened. Many err in leaving partly developed fruits on the branches under the impression that such will in due course swell to maturity, whereas they do but drop as soon as the tree gets into full growth. All fruits found in this stage of development should, therefore, be pulled off at pruning time. The removal of a branch here and there as suggested will leave more space vacant for the training in of young bearing wood in the lower part of the trees. Advantage should be taken of this fact during the coming season to get such space properly clothed with suitable growths. Re-fastening of the branches to the wall should succeed the pruning, using stout tar-twine for the largest, and the same kind of twine of a less size for the remainder. A top-dressing of fibrous loam containing a plentiful supply of lime-rubble and a small quantity of bone-meal may be afforded the border if deemed necessary, but any other kind of stimulant must be held over until the fruits commence swelling again after the flowering period is past.

Main crop Peas.—A good sowing of these, consisting of several varieties to ensure a continuous supply has been made, and another will take place in a fortnight.

Main crop Carrots.—Although sowing cannot, owing to the wet state of the soil which this crop is to occupy, be done, the surface, as a preparatory measure, has been forked over, so that air can freely penetrate and dry it. Sowing in former years has usually been done about the second week in April, but this season it will take place directly the soil can be caught in the desired condition—i.e., when it has dried sufficiently so that it can be broken down easily. A good seed bed will then result.

Shorthorn Carrots.—Another good sowing of *Early Gem* and *Model* will now be made between the rows of main crop *Peas*. These will be drawn and used when young, and will not, therefore, occupy the ground for any great length of time or interfere with autumn cropping arrangements. Later sowings will be made on a border facing west.

Broad Beans.—A further sowing of the *Longpod* and *Green Windsor* varieties will be made on firm ground. These later sowings have to be netted over to prevent rooks destroying the young plants just as they peep above ground.

Cucumbers.—A hotbed was made up in a brick pit some weeks ago, but planting was deferred until milder weather set in owing to the difficulty of maintaining a suitable temperature while the cold spell lasted. The plants—to prevent them becoming pot-bound—were shifted into larger pots, and have accordingly made a good deal of growth, but they will now be planted out. Mounds of loam enriched with leaf-mould and spent *Mushroom* dung have been placed in the centre of the bed under each light, and as soon as this has become warmed through plaiting will take place. The plants, having a good length of stem, the balls, to avoid any bending and rupturing of the sap-vessels, will be laid on their sides in the holes opened for their reception. To secure an ample supply of side shoots for the furnishing of the bed with bine the points of the plants will be stopped directly the roots have obtained a grip of the compost. To prevent the rising of ammoniacal vapours from the bed that portion of the surface not occupied with compost has been covered with leaf-mould. Tepid water will be used to settle the compost round the balls, also for syringing and sprinkling the surface of the bed on fine days. For some time to come the admission of air will have to be done with care, and whenever possible a high temperature will be secured by closing as early as is compatible with safety. A heap of compost for top-dressing will be mixed for future use, so that it may be ready to hand whenever required. To avert loss of heat on cold and windy nights the sashes will be double matted at dusk. Seeds will be sown now to obtain

plants for setting out in frames when cleared of *Potatoes*, *Celery*, etc. The hotbeds on which they now stand will retain sufficient heat for their requirements.

Forced Cucumbers.—Plants raised early in January and now coming into full bearing must not, if they are to continue yielding fruit for some time to come, be over-cropped. Another thing which helps to avert the over-taxing of the plants' energies is to at once cut away any fruit of usable size. To maintain vigorous growth is another item which must not be lost sight of. Every attention, therefore, has to be directed to the top-dressing, which is far better afforded on the "little-and-often" principle than in great quantities at one time. Whatever additions may be made to it, loam should form the bulk of the compost used for this purpose, and the more flaky and fibrous it is the more will it be appreciated by the roots. Other aids to the maintenance of vigour and fruitfulness are tepid manure, guano, and soot water, and now and again a little nitrate of soda, which should be dissolved in the water when the latter is about to be applied. The trellis must be kept well furnished with young growths, which should be stopped at the first or second leaf beyond the fruits. To prevent overcrowding, a little of the old bine should at intervals be cut out. Syringing may now be freely indulged in both morning and afternoon, and damping down done in accordance with outer climatic conditions. Sprinkling the floor at closing time with liquid manure also acts as a vitaliser. To economise fuel, the most should be made of sun heat. By closing early or in time to secure a temperature of 90 degs. to 95 degs. sufficient heat will be bottled up to serve for several hours without having recourse to extraneous aid. A. W.

MIDLAND COUNTIES.

Early Vines carrying a full crop of fruit will be given a good mulch of farmyard manure as soon as the berries have stoned, washing this in with tepid water on a bright morning when air can be admitted at the top of the house. The trellis being now well furnished with foliage all growths must be kept pinched. The bunches will need looking over again, and small, seedless berries carefully removed. Succession *Vines* started in January are now making rapid progress. Continue to regulate the growths and stop the laterals, but avoid overcrowding the principal leaves. A temperature of 65 degs. is suitable at night for the flowering season of most varieties, excepting *Muscats*, the temperature for which should be 5 degs. higher. Maintain a moist atmosphere. Ventilate freely early, on fine days close early and avoid a too high night temperature. Commence to thin the berries as soon as it can be seen which are swelling. Remove all surplus bunches, and avoid over-cropping. Sprinkle the paths and borders at night with weak liquid manure. Disbud late *Vines*, and tie down as growth advances. Do not keep too close an atmosphere in these houses, but secure strong, healthy foliage by free ventilation and moderate night temperatures.

Caladiums.—Plants growing freely may be finally repotted in light, rich soil, which should not be made very firm. These plants require an abundance of water when growing freely, therefore it is necessary to provide ample drainage. They must be shaded from strong sunshine, otherwise all the light possible should be afforded to bring out the colour of the leaves.

Perpetual-flowering Carnations.—The earliest-rooted batch is now ready to be repotted into 6-inch pots. The pots must be scrupulously clean and well drained. A suitable compost consists of two-thirds good fibrous loam, one-third well-decayed manure, adding a little old mortar-rubble, sand, soot, and bone-meal, mixing all thoroughly. Firm potting is essential. When potted, the plants are returned to the house for ten days or a fortnight, after which they will be placed in cold frames.

Tritomas.—The present is a suitable time to divide and replant these. Even if there is no need to part them for increase of stock, they flower much better if it is done every three or four years and the clumps relieved of some of the weaker growths, which are liable to choke the stronger-flowering crowns. When the plants are lifted, take the opportunity to thoroughly enrich the soil by digging in plenty of decayed manure, and increase the depth of good soil if possible. Plant with the crowns well below the surface-level, and do not heap the soil round them higher than the surrounding level, as they are moisture-loving plants. It is far better to form the soil into a kind of basin than to mound it up.

Ivy.—Early in April is the best time for clipping *Ivy*. That growing on walls should be clipped every year, cutting away all leaves and projecting growths. When treated in this way it looks unsightly for a week or two, but new growth soon appears. This annual clipping also assists the clinging aerial shoots, for it relieves them of much weight, and walls are not so likely to be stripped in high winds.

Calceolaria amplicaulis struck and wintered in cold frames now requires to be transplanted. A bed of soil will be prepared on a hard bottom of coal ashes in cold frames.

The plants are lifted with a trowel, and replanted about 4 inches apart each way. The soil should be loamy with an admixture of half-rotted leaf-soil, or manure from a spent Mushroom bed. The plants can then be lifted with good balls of soil when transferred to the flower beds.

Annuals sown in heat are pricked off into frames or potted singly as becomes necessary, and grown on sturdily, protecting thoroughly from cold at night.

Beet.—Although as yet too early to sow the main crop of Beet, a sowing of the Turnip-rooted variety will be made now on a warm border to afford an early supply of roots.

Turnips.—Successional sowings of small varieties of Turnips will be made at regular intervals, giving a dressing of wood-ashes in the drills at the time of sowing. Birds, especially Sparrows, are very destructive to all kinds of seedlings. A sharp look out must be kept as the Turnips come through the ground, and if not convenient to net the bed frequent dressings of soot and lime will be necessary.

Brussels Sprouts, Cauliflowers, etc., from early sowings must not be allowed to get too big before they are pricked out into cold frames. Lettuces can be pricked out in such a way that every second plant may be lifted in two or three weeks for transplanting out-of-doors, whilst those left in the frames are coming on for early use.

Tomatoes.—Keep the seedlings close to the glass to prevent them becoming drawn. Pot off singly as soon as ready into small pots, using a mixture of good loam, wood ashes, and mortar-rubble. Do not pot too firm, and keep the plants in a house or pit having an atmospheric temperature of 55 degs. to 60 degs.

Potatoes in frames.—The present is a critical period of growth with frame Potatoes, as if forced too hard the top growth will be in advance of the roots, and the tubers will be poor in consequence. Ample ventilation in fine weather is essential, and there should be no lack of moisture. Frame Potatoes are often checked through dryness at the root. With growth well advanced, occasional supplies of weak liquid manure given in a tepid state will be well repaid. Plants in unheated frames need less moisture, and should be protected from cold draughts or rain.

F. W. GALLOR.

SCOTLAND.

Rose pruning.—Considerable progress has been made with the pruning of Roses in the course of the week. Climbers were well thinned out in the autumn; but a look over was given at this time, and the needful regulating and tying of the shoots were attended to. It is always advisable to prune Hybrid Perpetual varieties first, then the Hybrid Teas can be seen to, while the more tender Teas are better left until the opening weeks of April. China Roses are better deferred until that time, and but little pruning is needful in their case. In the case of such as Hugonis, Persian Yellow, Austrian Yellow and the old Scottish Roses, it is sufficient to cut out the dead or twiggy wood. No hard-and-fast rules can be applied to Rose pruning, but a few general points may be mentioned. Cut out all old or decayed wood, next all spindly and weak growths, and then prune the remaining healthy shoots back to three or four eyes. Where such straggling varieties as Melody are grown, it is well to prune back to an eye which points upward, even though rather severe cutting back has to be practised. In the case of such erect and vigorous growing kinds as General MacArthur, Betty, Harry Kirk, Caroline Testout, and similar Roses, if they are grown in beds or in borders closely, they may be cut back, as advised, to three or four eyes; but where they are grown singly with plenty of room for extension, it is sufficient merely to tip the shoots. By following the latter practice massive bushes may be formed, which will produce exceptionally large quantities of bloom. All newly-planted Roses should be cut back to within a few eyes of the base of the plants. In the case of dwarf Roses, flowers may be expected during the season, but as regards Climbing Roses, no bloom need be looked for. It is better, however, to follow this method, for by doing so good plants are built up which will flower profusely during succeeding years.

Dahlias.—A beginning was made in the course of the week with the propagation of Dahlias from cuttings. These are taken either with a heel or with a small portion of the parent tuber adhering. Propagation will during the present spring be more limited than usual, and the cuttings are inserted in pairs in 5-inch pots filled with light sandy soil, and in which they will remain until they are ready for planting out some time in May.

Lupins.—Following the usual custom practised in these gardens, a considerable amount of seeds of different kinds of Lupins was sown. If seeds are sown in the open birds destroy a large proportion of them, and there is in any case a considerable wastage in thinning where the seeds are unharmed. Further, the thinning does not readily transplant, so that sowings are made in quite small pots, three seeds in a pot. The strongest seedling is ultimately given the entire space, and, having formed a compact ball, the plant can be put in any desired position without a check. Meantime,

the pots are placed in an unheated house, and the watering carefully attended to.

Plant-houses.—There is now no scarcity of bloom, although the display is to some extent discounted by the increasing attractions out-of-doors. In the stove, climbing plants were looked over, cut back, or thinned, as individual cases required. The old Begonia Rex is receiving more attention than has been the case for a series of years, and in the course of the week some old plants were broken up and repotted, while younger pieces raised from leaf cuttings were placed in conveniently sized pots. A good roof plant of Bougainvillea Sanderiana was retained. This is a serviceable plant, flowering almost continually, and is to be preferred to *B. glabra*. Propagation goes on as seems to be necessary. Stove heat at night may run to about 63 degs., and with the milder weather now experienced this night temperature can be obtained without excessive firing. Air is admitted during the day when the thermometer indicates 80 degs.; but early closing is practised, and the syringe is now freely used morning and night. In the greenhouse, Cinerarias and Primulas are now outstanding. The former, chiefly of the stellate type, are very showy, and useful alike for decoration and for cutting. Zonal Pelargoniums will shortly be in bloom, and tuberous Begonias make good progress. A further batch of these useful plants was potted up during the week, and a quantity of *B. Weltoniensis* cuttings was put in. Another good variety in the shape of *B. coralina* is also made use of, cuttings of this being put in at the same time. *B. coralina* is also useful in the stove, but it grows well as a rafter plant in a warm greenhouse. A large planted out piece of Heliotrope was cut back, this having outgrown its bounds. Although the space is at present a trifle bare-looking, growth soon follows in the case of cut-back Heliotropes, and the space is soon refilled. A large piece of Zonal Pelargonium Rada, also planted out, was thinned at the same time. This is a capital variety for planting out, and is almost always in bloom. The old growths of the climbing Fern, *Lygodium scandens*, were cut away in order to permit the young fronds to get up, and some training was done in the case of *Mandevilla suaveolens*. Arum Lilies are now very free, and are being regularly assisted with stimulants. As aphid is now apt to make its appearance, a close watch is being kept for possible attacks on these plants. In a cool house *Valloata*, *Crimmum*, and *Nerines* are receiving the attention which they individually require.

Cold frames.—Large quantities of Spanish Irises, English Irises, Gladioli The Bride and Ackermannii, *Ixias*, and *Sparaxis* are grown in cold frames for cutting. Some time ago these were top-dressed, and now that growth is advanced the beds were hand weeded and a further dressing of light, rich soil applied. With the increasing sun heat much more moisture is now necessary, and it is found to be of more service to give a thorough soaking at stated intervals than to look over them daily. Such things as *Calceolarias*, *Pentstemons*, *Tufted Pansies*, and the like now likewise require periodical waterings. Any spare frames are being got ready in anticipation of the pricking-off season now at hand.

Tree Peonies.—These are exceptionally far forward for the date, and, owing to the prevalence of frosts and of cutting east winds some anxiety has been felt. So far no damage has been noticed, and during the week the plants have been assisted either by means of top-dressing or by forking in lightly an allowance of well-rotted manure round the roots.

Laurels.—There are not now so many Laurels as was at one time the case, these having been grubbed out and replaced with flowering shrubs. This is the best time at which to cut back the survivors, and if the cutting is done just now the ensuing season's growths will soon efface the marks of shears or of hedge-knife.

Vegetable garden.—More Potatoes have been planted; these including such varieties as Puritan, Sir John Llewellyn, and The Factor. Jerusalem Artichokes were also planted. The white variety has now replaced the older purple sort. It is equally prolific, and, being shallower in the eye, there is not so much waste, while the quality is equally good. A few lines of Early York Cabbage were planted to succeed those planted in autumn. The soil was loosened between the lines during the week, a dressing of soot having previously been given. A sowing of Chervil was made, and this will be repeated at intervals till mid-summer. Asparagus beds have now been thoroughly cleaned and stirred up. These, as formerly mentioned, will be allowed a good dressing of compound concentrated fertiliser. A small sowing of Victoria Round Spinach was made. This variety is superior to the ordinary Summer Round variety. Spinach Beet, which has stood over the winter, is now growing freely, and will shortly be ready for picking at a time when green vegetables are none too plentiful. Celery having come to an end, the quarter occupied by the trenches has been levelled and dug over. This portion will be utilised for maincrop Carrots and for Turnips. Full sowings of Celery for maincrop purpose were made during the week, the varieties used being Wright's Grove White, Major Clarke's Red, and Wright's Grove Pink, all useful and reliable sorts.

W. McGRROG.
Balmae Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Flower-buds falling off Zonal Pelargoniums (Zonal).—It is difficult to say what causes the flower-buds to fall off these plants without knowing their condition and treatment. Gas would make the buds fall, so would too much or too little water applied to the roots, or if there are worms in the pots, and the drainage is imperfect; cold draughts of air will also cause the mischief; in short, a check of any kind will do it.

Aspidistras of bad shape (H. E.).—These plants have a tendency to push out the creeping root-stock in one direction. Little can be done to improve the shape of the plant (beyond, of course, placing it exactly in the middle of the fresh pot), though if you like to try the experiment it might be divided longitudinally into two equal parts, and the one part turned round so as to extend the other way. This would probably mar the appearance of the plant for a time, but improve it subsequently. Yes, soot-water given in moderation is an excellent fertiliser.

Planting out Carnations (Carnation).—We presume the plants are now in small pots, either singly or in pairs, because the Carnation does not like to be disturbed much at the roots in the spring; and if they were planted out in the frame, the check would be too serious to be thought of. When they are planted out from small pots they do not seem to suffer much by the change. Plant them out whenever the ground and the weather are favourable. Let the ground be deep and rich, and the plants should be inured to the open air by free exposure before planting out.

Starting Begonias (B.).—The tubers certainly ought to be shaken out and repotted, though this may be done either before or just after they commence to start again. It is better and safer to start them in quite small pots, shifting them on as they grow. A cold frame is hardly a suitable place for the tubers thus early, though from about the middle of April they would do nicely there, but on cold night a mat or two should be spread over the glass even then. Can you not start them in a sunny window, and remove to the frame in April? There is plenty of time to start them yet for ordinary purposes, however.

Maiden-hair Ferns (Pteris).—All depends upon what is understood by a cool conservatory whether these Ferns will succeed in it or not. They will not succeed in an unheated house, nor in one from which the frost is just excluded; moreover, the dry atmosphere of an ordinary conservatory is not adapted to their requirements, especially in winter. The plants of these, usually sold in shops, are grown in warm hothouses, in a moist atmosphere, and when removed to less congenial quarters most of the fronds die off. If they are placed in a conservatory they should be at the warmest end, and must not be exposed to draughts.

TREES AND SHRUBS.

The Purging Cassia (C. Fistula) (E. V. Brickenden).—This is the name of the plant the seed-pod of which you send us. It is also known as the Pudding Pipe-tree from its peculiar pods. It is a very handsome tree with the foliage of the Ash and the inflorescence of the Laburnum. It is a native of India, but has been introduced into the West Indies, Northern Africa, etc., whence its pods are imported. The interior of the pod is divided into a number of compartments, each compartment containing a single seed embedded in pulp, which is used as a mild laxative. The genus Cassia is important from a medical point of view as it produces the well-known drug senna.

SHORT REPLIES.

A. H.—The only book likely to answer your purpose, seeing you limit the price, is "Villa Gardening," price 2s. 6d. net, from this office. —**A. L. Morgan.**—Red lead would be of no use, the only way being to net the ground over or use strong cotton thread strung to pegs fixed all over the ground that has been sown down. —**N. H. Evans.**—If you can get rotten stable manure much the ground all over with this. The rains will wash the goodness of the manure down to the roots of the plants. Now that the various plants can be seen, it is an easy matter to lightly fork the manure into the ground if you object to its lying on the top of the soil. Do not use a spade to dig the manure in. For the Palm, very weak soot-water will be as good as anything you can use.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**M. M. Beal.**—Probably an *Antholyza*, but we must have flowers to name with any certainty. —**W. H. Arnall.**—Impossible to name from a half-decayed leaf. —**Casterton.**—*Narcissus minor*.

CATALOGUES RECEIVED.

A. E. KUNDERD, Goshen, Indiana.—List of *Ruined Gladioli*.
THOS. S. WARE (92), Feltham, Middlesex.
—List of Hardy Plants, 1916.

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POOR FORM OF GOOD TREES AND PLANTS.

LOOKING ONE morning in March at my little bank of scarlet Anemone (*A. fulgens*), so very pretty among the Heaths, I was reminded that it first came into cultivation as a double flower long before we took up this brightest Windflower of the spring. In France the double form of it, under the name of Peacock Anemone, was in gardens first, and it is curious to see how sometimes the poorer forms of plants come into cultivation first. For instance, we had the male Butcher's Broom, a most wretched thing, and one wondered why anyone could grow the male form, whereas if we take the trouble to get the fruiting form of it it is a handsome winter ornament. For long years the spotted form of the Aucuba was in gardens. Long afterwards came the green forms, far more precious as evergreens, some, best of all evergreens.

Again, many things are spoilt by doubling. That most graceful flower of the northern world, as one thinks it to be, the Clematis of Japan and China, and also European kinds, the nurserymen have taken a dismal pleasure in doubling. I have never ordered a double Clematis in my life, but somehow double forms have crept into my collection, and hideous they are. The double Camellia, again, is not nearly so graceful as single kinds, and the attention given to the double kinds took away for a time the care for the single ones, the only ones worth growing in our country. The Camellia is hardy in the South of England and in Ireland.

The folded umbrella trees are brought out for their many forms, unlike their natural shapes—pyramids, Irish Yews, and varieties of Cypress. Lately the snow has got in among the branches, smashing the boughs and giving much unworthy labour to gardening men. Very few of these malformations have any true beauty of form, and in their wild states are much more precious. A few Conifers, like the Eastern Cypress, are naturally pyramidal, and that is quite beautiful.

Variiegated trees, too, are often a dreadful deviation from beautiful colour and form, and even diseased, and always ugly. The worst of all offenders in this way are the sports of the Western Arborvitae. In its native land it is not a beautiful tree, but our nurserymen brought out forms of it dreadful to see in their effect. The worst offender among

the variegated trees is the white-washed Maple (*Acer Negundo variegatum*), a very ugly addition to the colours of a fair garden. A very ugly variegation is that of the common Elder, of which there are two or more variegated forms, which with the wild mother plant (*Sambucus nigra*) had better go on the fire heap, so far as gardens are concerned. The Sycamore, a fine tree in its natural colour, is sickly looking in a variegated state. The wretched common Privet, an ugly bush in its green state, is a public nuisance in its variegated form, stupidly bestrewn over the earth by men who have no sense of what true colour is.

The most fatuous attempt at the spoiling of beautiful trees is seizing any variegated form, naming it, and sending it out as a new thing—a hideous mistake. Many of these variegated Pines and Cyresses have been sent out, but they usually perish of disease, and, in any case, should not be seen in any garden where the nobler evergreen trees are cared for.

W.

NOTES OF THE WEEK.

A note from Cork.—The storm fortunately never reached our shores, and now spring is fast advancing, with the Daffodils, Primulas, and Anemones well started.—RICH. H. BEAMISH.

Raoulia australis.—This is a charming, very dwarf silvery carpeter, white in winter as well as in summer. It is a gain to the close-growing, Moss-like plants for the choice rock garden or raised dry border. From Sir F. Crisp.

Growing Iris reticulata.—The precious quality of lasting long in the house mentioned in GARDENING ILLUSTRATED reminds me of several failures to grow it in my cool soil. Some of your readers might kindly tell us of the soils in which it does best. It is worth growing for its use in the house alone. Its beauty is quite extraordinary, and it were better to grow it in paus than be beaten in the open air. Slugs are said to be among its enemies.—W.

The May Flower (Epigaea repens).—There are so many failures with this charming creeping shrub that it might be well if any readers would tell us of the conditions where it thrives. In its own country acres of it may be seen in dry, sandy soil under Pine trees, and no doubt in other conditions. It should be a charm-

ing rock shrub, and now that so many are making rock gardens a home might be found for it. The imported plants often come over with the roots too dry.—SURREY.

Hellebores as cut flowers.—These will last much longer if they are entirely immersed in cold water for a whole night before being put into the vases they are to occupy. If they begin to flag early, this process may be repeated. If this is done, and they are kept in a cool room, they will stand for some days. I have had them for about a fortnight in a room without heat. This applies to both the Christmas and Lenten Roscs.—S. A.

The Great Pilewort (Ranunculus Ficaria).—Among the hardy plants that have cheered this dismal spring this is noteworthy, as it held its handsome buds and flowers well up after the snow left. It is not difficult as to soil, blooming well on a poor sandy bank. It is a giant form of our little Lesser Celandine, but precious as a garden plant. Its fine qualities lead me to plant it in the Heath garden. It is probably now rightly named a Ranunculus.—W.

Plants for limeless soil.—I am going to plant a wild garden in a beautiful but rather desolate and wind-swept part of the Graupian Hills—about 800 feet above sea level—on ground which is either peat or quite limeless soil. Would any readers of GARDENING ILLUSTRATED kindly tell me of any plants or shrubs that would flourish in such soil—not including Rhododendrons, Azaleas, Junipers, Ericas, Lithospermums, Thymes, all of which I have already? I should be grateful to know which Daphnes would do up there, and Lilies besides *L. pardalinum*. I have a rushing rock burn and should be grateful for names of anything that would grow in such soil and surroundings.—LADY STRATHMORE, Glamis, N.B.

White Mignonette (Reseda alba).—Reseda alba is a distinct species, and is not to be confounded with any white variety of the common Mignonette (*Reseda odorata*). Although not so fragrant as the popular favourite, yet the white Mignonette has other and stronger claims to attention. Its beautifully-cut foliage at once distinguishes it from the common Mignonette, as do its giant spikes of brown-anthered white flowers, rising to a height of 2 feet or more above the ground level. In Nicholson's "Dictionary of Gardening" it is described as a biennial, but it can be treated as a half-hardy

annual, or even as a hardy annual. In fact a good stock of self-sown plants often appears in the spring where it has been grown the previous summer. Unfortunately it is seldom included in our seedsmen's lists.—ALBION.

Galanthus Elwesi Whittalli.—The large flowers of this Snowdrop have been much admired this year. They are pure white and borne on stout stalks, each from 6 inches to 8 inches in height, from which they gracefully droop. When fully expanded the flowers each measure $2\frac{1}{2}$ inches across, and when closed are 2 inches from stalk to tip of petal, while a single petal is 1 inch in width. It will therefore be seen what an unusual flower this is. If not quite so elegant as *G. nivalis* it is, nevertheless, an exquisite Snowdrop, seen at its best, perhaps, when closed. The bluish-green leaves are a little longer than the flower-stalk. One bulb in this batch has produced two flowers on a single stalk the last two seasons.—E. M.

Echinopsis Decaisneana.—I am much interested in your illustration of *Echinopsis Decaisneana* in your issue of April 1st. Schumann considers this species as indistinguishable from *E. gemmata* K. Sch. (syn. *E. turbinata* Zucc.), but as figured by you it is markedly distinct in the form of the stem. In *E. gemmata* the stem is globular or top shaped, and does not exceed about 7 inches in height, while the ribs are entire. In your illustration, in proportion to the flower-tube the stem appears to be about 18 inches high. The distinctly divided ribs, too, are totally unlike *E. gemmata*, and are very similar to *E. calochlora* K. Sch., in which species the stem also is columnar. Unfortunately I have not so far succeeded in flowering *E. calochlora*, and cannot therefore compare the two species in this respect, but as it has the reputation of being a very shy flowerer it seems unlikely that you have confused the two species.—R. A. TODD.

The Butcher's Broom (*Ruscus aculeatus*) in fruit.—On one of the dullest days of the wet month of March a bunch of this, full of brilliant fruit, came to me, to my great pleasure, from Mr. Gerald Loder. How many gardens have I seen with miserable tufts of the male form of this plant, and wondered how anyone should ever grow such a poor scrubby thing. On the other hand the female plant bears the most beautiful fruits one could wish for among winter berries. It is found more on the coast and in chalky districts in a fertile state, and hence, generally, gardens in the country do not show it in fruit. I am very glad to have it and am cutting up every bit I can of the female plant and putting it in the Heath garden. I think it is wild in what are called the undercliffs of some of the counties near the sea. In any case a nurseryman should have no difficulty in getting a stock of this brilliant native shrub. The plants came originally from near the Sussex coast and evidently are happy on the chalky soil.—W.

Potatoes.—An ominous sign of the times, says the *Daily Telegraph*, is the steady rise in the price of Potatoes. During the last fortnight the value of Potatoes has risen about 15s. a ton wholesale. To the consumer who calculates by the pound this may not seem much, but should it continue, the effect will certainly be felt throughout the length and breadth of the land. The wholesale price now ranges from 5s. to 7s. per cwt. in London, which means that the lowest possible figure at which retailers can serve the public is 3 lb. for 2d. As a matter of fact, 1d. per lb. is the universal price in most parts of

London and the suburbs. Reports to hand from Scotland indicate a shortage in the available quantity. Apparently there is plenty of Potatoes in Ireland, but facilities of transport are lacking. There is a general opinion amongst dealers that Potatoes will be dearer as the season advances. Owing to bad weather practically nothing has been planted, and the new crop will be very late.

Galanthus Atkinsi.—This Snowdrop, a form of *G. Imperati*, has handsome, shapely flowers of great purity. In the form of its flowers it is much superior to what is known as Backhouse's variety of *G. Imperati*, which has been grown by some as *G. Atkinsi*. The true *G. Imperati Atkinsi* is not so tall as Backhouse's variety, but is more erect in habit, and the flowers are perfect, whereas those of Backhouse's variety are not so shapely and frequently produce an additional segment, which gives the flowers a singular appearance when open. The true *G. Atkinsi*, which probably came from the garden of the late Mr. Atkins at Painswick, was sent out by Messrs. Barr and Sons as long ago as 1875. Its price then was half-a-crown per bulb, and the only trade purchaser at that time was the late Mr. Wheeler, of Warminster. As this Snowdrop died out with Messrs. Barr in their nursery at Tooting it was fortunate that Mr. Wheeler secured it, as it grew very freely with him at Warminster. Backhouse's variety was sent out by Messrs. Backhouse, of York, in 1877. Neither of these Snowdrops is at all plentiful, although apparently doing quite well in light soils. Backhouse's variety is always earlier with me than *Atkinsi*, although they are growing within 3 feet of each other. *Atkinsi* ranks with *Melvillei* as among the finest of our Snowdrops, and I find that it is more amenable to cultivation with me than *G. Imperati* imported from Italy.—S. ARNOTT.

Native plants.—I have often thought that if I had the space, and circumstances permitted, I would devote a certain portion of the available area to British trees, shrubs, and plants exclusively; not a single thing of exotic origin should enter there. I would plant the Sloe, the Bullace, the Hawthorn, the Dogwood, the wild Euonymus, the Gorse, the Broom, the Butcher's Broom, not forgetting that finest of all evergreens the Holly, but not the variegated forms, which would be out of place. I would use abundantly the Bluebell, the common Primrose, the Wood Anemone, and any other interesting plants of British origin, such as the field Scabious, *Potentilla Anserina*, Foxgloves, the Centaury, the Heather, and other native Heaths. It is only in this way that the true worth of British plants, trees, and shrubs can be realised. Is there anything finer than the Hawthorn when it comes into tree-form and happens—which is seldom—to have ample space. It then forms a low, spreading tree, lovely when in bloom, and quite as good in its second phase when loaded with berries. I have seen the Bullace on a Surrey common 12 feet high smothered with bloom and loaded with fruit and I know of Hollies 15 feet high with branches sweeping the ground. The Dogwood, when it has a fair chance, is very ornamental when in fruit. Our native shrubs, which formerly grew in the woodland and free, open spaces, have found their last refuge in old hedgerows, where they have to suffer periodical mutilation. Let them enjoy natural conditions and they surpass in beauty and effectiveness many of those things which are cherished simply because they come from foreign lands.—J. CORNHILL.

FRUIT.

THE BEST LATE APPLES.

I THINK "F. B." (page 138) is quite right in the conclusion drawn from his investigation as to the merits of late Apples alike as to scarcity of varieties and the two most worthy to follow in the wake of Cox's and Ribston. Where they can be satisfactorily grown one could hardly have two better sorts than D'Arcy Spice and Claygate Pearmain. The Apple known as The Spice (D'Arcy Spice), from the place whence it emanated, and Spring Ribston is not altogether an attractive fruit in appearance, although quite as much so, perhaps, as one or two more first-rate kinds, notably Cornish Gilliflower, but of really excellent quality. It takes a long time to develop into even a fair sized standard, being naturally of slow growth, but once established it is a very fair cropper, and I have also seen it satisfactory both in bush and cordon form. I have on more than one occasion strongly advocated the claims of Claygate Pearmain in *GARDENING ILLUSTRATED*, and always look on it as one of the best of the late Apples, but it seems to want a rather stronger soil than most to have it at its best, a natural sequence, perhaps, when one considers that the original tree is said to have been found in a garden at Claygate, in Surrey, a village of deep clay deposits and brick and tile-making industries. It is rather quicker and stronger in growth than The Spice, but only comparatively, and would be described as somewhat slow in growth and slender in habit. It is a good and consistent cropper when established, but the fruit spots rather badly in some districts if preventive measures are not taken. With respect to its partiality for a rather heavy soil I think this is a characteristic it shares with most of the Pearmain family. I have never, for instance, seen or tasted the old Winter Pearmain so good as in the Weald of Sussex. The best of the small late Apples is Wyken Pippin, and a tree or two might be included whether the plant is in standard, bush, or cordon form, as in either it comes quickly into bearing and is a consistent cropper. Although of small size it is much better in quality than sorts often recommended as good late kinds.

Hardwick.

E. B. S.

Cropping Vines.—Some growers are inclined to crop their Vines more heavily than usual this season. In every case it would be unwise to leave more bunches on the Vines at the final thinning out than each one can properly mature. If the Vines, especially young ones, are over-cropped, it takes several years' careful treatment to bring them to a normal condition again. Experienced cultivators know how to treat their Vines, but many amateurs err on the side of over-cropping. Young canes planted this winter or spring should not be allowed to bear any fruit during the coming summer. Older Vines that are in a bad state of health, and deficient as regards root-action, should not be cropped. Strong young Vines planted a year ago and duly cut back may bear one, or even two, bunches, according to the strength of the Vines and the size of the bunch. Established Vines that have filled the roof-space may be safely cropped to the extent of from 1½ lb. to 2 lb. per foot run of main rod. Then the berries will be full sized and colour satisfactorily. Over-cropping always has a bad effect on the colour of the Grapes and future crops. As

fire-heat may be restricted make good use of all available sun-heat, especially during the early stages of growth.—BOURNE VALE.

GOOSEBERRY RED CHAMPAGNE.

This is quite distinct from the variety known in Scotland as Ironmonger, in which the fruit is rounder and of a darker red, the habit spreading and not erect as in the Red Champagne. This erect growth we would gladly see more in evidence in the Gooseberry. The berries, so well shown in the illustration we give to-day, belong to the rough or hairy section, the skin rather thick, light red, the flavour very rich. There are, in addition to the Red Champagne, white and yellow forms. To have these small, richly-flavoured Gooseberries in perfection we find the best way to grow them is

cooked and are of a very bright red colour. I grew the variety for many years. It was raised by Messrs. R. Smith and Son, of the St. John's Nursery, Worcester, and owing to its medium height was a grand garden variety. As a cooking or preserving Raspberry none of the newer kinds approaches it.—F. K.

INJURY TO PEACH SHOOTS.

Will you kindly inform me what is the cause of the disease on the young shoot of Peach-tree enclosed? The tree is a young one, and was perfectly healthy until now. I should be glad to know if there is a remedy, and, if so, what it is. I may mention that the same has shown itself on a young Lime-tree in a quite remote part of the gardens here, but nowhere else, and the trees are quite 300 yards or 400 yards apart, with a hill between.—Mrs. M., Henley-on-Thames.

[The injury the Peach shoot has sustained is not due to disease, but appears to have been caused either by frost or as a result

This usually has the effect of putting an end to the further production of strong growth and in promoting the rapid increase of fibrous roots, without which well-ripened, fruitful wood may in vain be looked for. The remedy, therefore, in your case is at once to open out a trench some 4 feet or 5 feet distant from the tree, and to carefully search for roots from that point to within 3 feet of the stem. Carefully save all those of a fibrous nature and keep them in a moist condition till they can be replanted. All strong, thong-like roots met with (it is to these that gross-habited wood is due) should be shortened back to within 3 feet or 4 feet of the stem, doing this with a sharp knife, making the cut in a sloping direction, or to look outwards. Then lay the roots out afresh, place them in a nearly horizontal position, put some fibrous loam, if you can spare it, over them, and mix a fairly liberal quantity of old lime rubbish with the soil if none was added to the compost or staple when the tree was planted. Before finally filling in, settle the soil about the roots with a good watering; allow an hour to elapse for it to drain away, when the finishing touch can be given.]

NOTES AND REPLIES.

Apple-trees.—Recently, when pruning some young standard trees, I was impressed with the care needed in the removal of shoots. In one tree the major portion of the young shoots had fruit buds at the tops. After removing all crowded inside growths I left the others full length, and now there is a prospect of a fair crop. In my young days I was taught that these shoots must be reduced to make them produce fruiting spurs. Some other trees in the same plantation had not a bloom-bud on the young growths. Apple Peasgood's Nonsuch had most on the young shoots. When a young tree is well established and making good firm wood the best way is to let the shoots remain their full length and there will be no fear as to their making fruit-buds. I have seen shoots 2 feet long studded with fruit-buds. Hard pruning causes waste of energy and loss of crop.—J. CROOK.

Strawberry Fillbasket.—For many years the Strawberry I grew for preserving was the well-known Vicomtesse or Garibaldi. Of late years Fillbasket did such good service that it was grown largely for preserving and was all one could wish for. The Vicomtesse is earlier than Fillbasket, and at times I have, in a late spring, had the blossom injured by frost. Fillbasket flowers much later and gives enormous crops; indeed, I think this variety the heaviest cropper I know. The fruits are bright red, of excellent flavour, and make a splendid preserve. In a poor soil the plants made few runners. I did not allow the plants to remain more than three years in one place. Though in the third year the crop was heavy the berries were very small, hence the advantage of renewal as advised every third year. This is one of the Messrs. Laxton's best introductions.—W. F.

Striking Grape Vines (Amateur).—Strike your Grape Vine from single eyes and well-ripened wood. Cut the piece of wood to, say, 2 inches to 3 inches in length, half that distance each side of the bud, and pare away quite a third of the wood under the bud—that is, remove all bark and make a flat surface on the under part of the eye. Plant in good loam, and in a 3-inch pot. Make the soil very firm, and have the bud or eye just above the surface, the other part being covered—that is, the wood only, the bud being visible. Place in heat of 60 degs., which is none too much, and, if possible, give a little bottom-heat at the start. Damp overhead frequently, but do not give much moisture. Keep close, and in inserting the eyes place a little sharp sand under the bud.



Part of a fruiting branch of Gooseberry Red Champagne.

as flat-trained or cordon bushes. In addition to the three forms of Champagne just mentioned, the following are also good, and have the same erect habit of growth—viz., Langley Gage and Whitesmith, white; Green Gascoigne and Pitmaston Green Gage, Sulphur and Broom Girl, yellow.

Raspberry Semper Fidelis.—It may be thought unnecessary to grow Raspberries for preserving, but the variety in question was so distinct from others for this purpose that it met with a ready sale in the Midlands and was a great favourite in the Birmingham market. With the introduction of numerous new varieties I fear Semper Fidelis has been neglected, as I note it is not now catalogued by our leading fruit growers. I do not know of any Raspberry with such a distinct sub-acid flavour and excellent colour when cooked. The berries mostly remain whole when

of its having come into contact with unpainted galvanised wire. Judging by the grossness and unripe condition of the wood we incline to the belief that frost is the cause of the trouble, for the simple reason that under ordinary conditions young wood in a Peach-tree, if immature at the close of autumn, suffers in precisely the same manner as has the specimen shoot sent should severe weather be encountered afterwards, and the more soft and sappy the wood the greater the amount of injury sustained. To get the wood thoroughly ripened by the "fall of the leaf" is one of the chief aims of the Peach grower. To accomplish this the root system is as far as possible kept under control, or in other words the roots are prevented from either getting down into the subsoil or out of bounds by a periodical lifting and cutting back of the strongest, and by laying them out afresh in a nearly level position in the border.

ROSES.

ROSE PRUNING.

RAMBLERS, Noisettes, Hybrid Chinas, Teas, Bourbons, and Hybrid Perpetuals trained on the retaining walls of terrace steps, and over part of the masonry surmounting the latter, have been pruned according to their requirements and recorded. The latter is carried out in as informal a manner as circumstances allow. Dorothy Perkins is invaluable for this purpose, and the same with regard to that fine old Rose, Souvenir de la Malmaison. Gruss an Teplitz is a splendid variety for mingling with the last named, and is also very effective grown by itself in this way. Boule de Neige is another variety which gives excellent results when the last named is grown in combination with it. Laurette Messimy, Duke of York, and W. A. Richardson are also very fine as used for the clothing of the wing walls of a balcony, with the old Monthly China, Bardou Job, and Mme. A. Carrière on the piers. The young wood on the foregoing has sustained but little injury from recent severe frosts.

STANDARD ROSES.—These have been pruned, re-staked, and tied anew where necessary. Hybrid Teas and Bourbons have, in consequence of the wood having been damaged by frost, had to be cut back more severely than usual. Hybrid Perpetuals have had the heads well thinned and the young wood spurred back to three and four buds. The most annoying thing in connection with Roses grown on this principle is the tendency they have, as they become aged, to die off when spring opens. It is therefore necessary to have a reserve from which to draw upon in case of emergency. Unless the season is too far advanced they can be lifted and transplanted successfully in spring. Some Hybrid Perpetuals struck from cuttings, and reduced to a single growth, the latter being tipped at a height of 4½ feet, were employed two or three years since to fill some vacancies caused by death, and through the removal of others to another part of the gardens. The buds, with the exception of three nearest the tip, were rubbed out. These produced good stout shoots which flowered well, and which formed the foundation of the present heads. Since then the stems have thickened and are surmounted with good-sized heads which bloom well. So far they look very healthy.

BUSH ROSES.—A number of beds filled with Hybrid Perpetuals and Chinas, dwarf Polyantha, Provence, Moss, and other varieties has also had attention. The beds will be dressed with a suitable fertiliser, as manure cannot be spared, which will be lightly pointed in. The pruning of Teas and their hybrids will be deferred till the end of the month or early in April.

WEeping ROSES.—All the pruning required in this case is the cutting out of the weak wood and the tipping of the strong pendent shoots. Although there are several varieties of different types of Roses which are charming when grown on tall stems, so that the strong flowering shoots hang downwards, there are none more dainty in appearance and lasting in regard to the duration of their flowers than the Wichuraiana hybrid, Lady Godiva.

ROSE ARCHES.—The tipping of the long shoots and the cutting out where necessary of the weaker wood having had to be postponed through inclement weather, have now been attended to and the growths lightly fastened here and there to the wirework of the arches, or so that the flowers when open will be displayed to the best advantage. G. P. K.

GARDEN FOOD.

ENGLISH MELONS A MISTAKE?

I SEE a letter in the *Gardeners' Chronicle* from H. E. Durham praising the French Melons as worthy of our attention when grown in cool frames, pits, etc. One of the most curious facts is that we have in England poor kinds of Melon, which have always seemed to me to have an oily, poor, flavour, and by many people rarely eatable. In certain countries Melons wholly superior in flavour are grown as in North Africa, where the great oval Melon has a flavour of the finest Pineapple, and so, too, in America, where the field Melon is better than ours. The Melons grown in Spain and which often come to us in autumn are also good in flavour, but, having been gathered before they are ripe, are not to be judged of fairly. In the north of France and as far down as Orleans well-flavoured Melons of the Canteloupe kinds are grown, and often eaten with salt and pepper. They differ wholly in flavour from the others we know of, and are, I think, more wholesome and better. I always thought the slight difference between that country and ours would make it difficult to grow these Melons, but the writer referred to says he gets over the difficulty by means of a cold frame or a pit, and I am going to try the same, as that race of Melons would be a great addition to our tables. W.

NOTES AND REPLIES.

A useful salad Onion—Paris Silver Skin.

By many the Onion would be found fault with for salad, while others consider it an agreeable addition. The variety named I prefer to the Chives or the coarser Onions often used. There are now several varieties of the small White Queen type, such as the Improved Queen and others, all excellent for the above purpose. The last named may be liked on account of its size, as it is smaller than the Paris Silver Skin, but as regards size it is not necessary to allow the bulbs to grow too large, or the tops to age and lose the mild flavour liked in a salad. Very few persons sow what are termed salad Onions, but depend upon the ordinary sowing in the open. For years I have sown the Silver Queen in boxes in January and February for salads. Grown thus it is excellent. It is an easy matter to sow in this way for an early supply, and to make several sowings during the season in the open ground to keep up a succession. Those who have grown this type of Onion know how quickly it ripens. If sown thinly, small, shapely bulbs from 1 inch to 2 inches in diameter may be had in a few weeks. Sown, say, every month from March till August, it makes a splendid addition to the summer salads, the delicate flavour making it much more suitable than the ordinary varieties. There are no better Onions than these small, silver-skinned varieties for pickling, owing to their size, mild flavour, and colour.—F. K.

Seakale.—Well grown, blanched, and served this is one of our most delicious vegetables. Fortunately its cultivation does not present any great difficulty. The essential point is to select a plot of good ground exposed to the sun. The young sets are prepared from the roots of the old plants lifted for forcing. I select as far as possible roots ½ inch in thickness and about 5 inches in length, pointing the end which is to go into the soil. They are then tied into small bundles, placed in boxes with a little moist sand among them. If placed in a cool shed these keep per-

fectly until required. In March I put them out in rows 2 feet 6 inches apart, the plants in the rows 18 inches apart, leaving the crown slightly below the surface, and when growth commences thinning out the shoots to one. Keep the hoe plied freely among the plants during their growing season, and endeavour to build up strong crowns. On dry soils frequent watering is necessary. From November onwards these crowns should be ready for blanching, which may be carried out in various ways. For the earliest supplies I lift the crowns and place them (after removing all side roots) in deep boxes, which are stood in a dark, gently-heated shed. The heads obtained in this way are inferior to those obtained by placing large pots over the plants where they have grown, covering the pots with newly-gathered leaves, packed in tightly to exclude light and air. This old-fashioned method gives magnificent, succulent heads, weighing 1½ lbs., without the flower-stalk showing. When required for late use a heap of ashes is placed over each crown.—E. M.

Apple Dr. Harvey.—I have grown this for many years and consider it has no equal among Apples of its class and period of use. It remains in good condition till about the end of March. The fruit when cooked is of good flavour and very sweet. The colour is a fine yellow, and it appears quite proof against that troublesome disease, black spot. The tree is proof against the American blight and has never once developed even the faintest trace of the blight. To anyone who knows the heart-breaking labour and loss of time involved in cleansing and keeping clean an infected orchard this alone will surely be a powerful recommendation. The only fault of this variety is a tendency in strong, rich soils to make a good deal of small wood. This tendency, however, is easily checked by slight root-pruning, and this treatment, if combined with judicious manuring, will result in heavy and regular crops of magnificent fruit.—JOHN SCUDAMORE, *Ditchingham Rectory.*

Seakale forced or not forced.—I have lately enjoyed some Seakale which had been gently forced by leaves on the spot where it grew, and must say the flavour was much better than it is when the roots are forced in a house. Succulence and flavour are both much better if the shoots are advanced in a natural way, and, if possible, without manure. The green Seakale, as it comes out of the sand, is also well worth eating. The forced Kale one often sees at tables is weak and inferior.—W.

The Dandelion as a salad.—When well blanched and mixed with Celery and Endive in the salad-bowl this forms an excellent salad, and one which is very wholesome. The improved broad-leaved Dandelion is far better than the old form of this common weed. Seed sown now will furnish strong roots for the following winter's forcing, and a dozen roots put into the Mushroom-house weekly will furnish a good cutting every day. Some palates may object to the bitter flavour of the Dandelion, but others, again, think this its best quality.

Mixed dry fruits.—The above make a useful and palatable change from the usual run of raw or cooked fruits. Quite a good variety is present in the mixture: Apples, Peas, Apricots, Prunes, generally Figs, but owing to the difficulty in obtaining them they are not found in every mixture. There is sometimes another fruit present that I am not sure of—the small core is usually left in it and the kernels resemble those of the Apple, while the flavour is pleasantly brisk. To cook these there is no need to add any sugar. Stand the fruits in warm water for a few hours, and then cook slowly in the oven. The addition of custard is a matter of taste.—C. T.

TREES AND SHRUBS.

PINK PEARL AND OTHER CHOICE RHODODENDRONS.

RHODODENDRON Pink Pearl was a decided gain to our gardens, for in it we have a variety combining the large flowers of a species like *R. Griffithianum* with the shapely and compact truss of the *R. catawbiense* hybrids. Its parentage does not appear to be generally known, although it is said to claim *Cynthia* as one parent. From its general appearance, however, it would appear that there has been some influence of *R. Griffithianum* at work. Many of the hybrids which contain blood of that species have loose trusses and very large flowers, and they are not very hardy, as may be instanced by the very beautiful sorts one sees in Cornwall,

Gardens, Kew, but in the North of England and in Scotland.

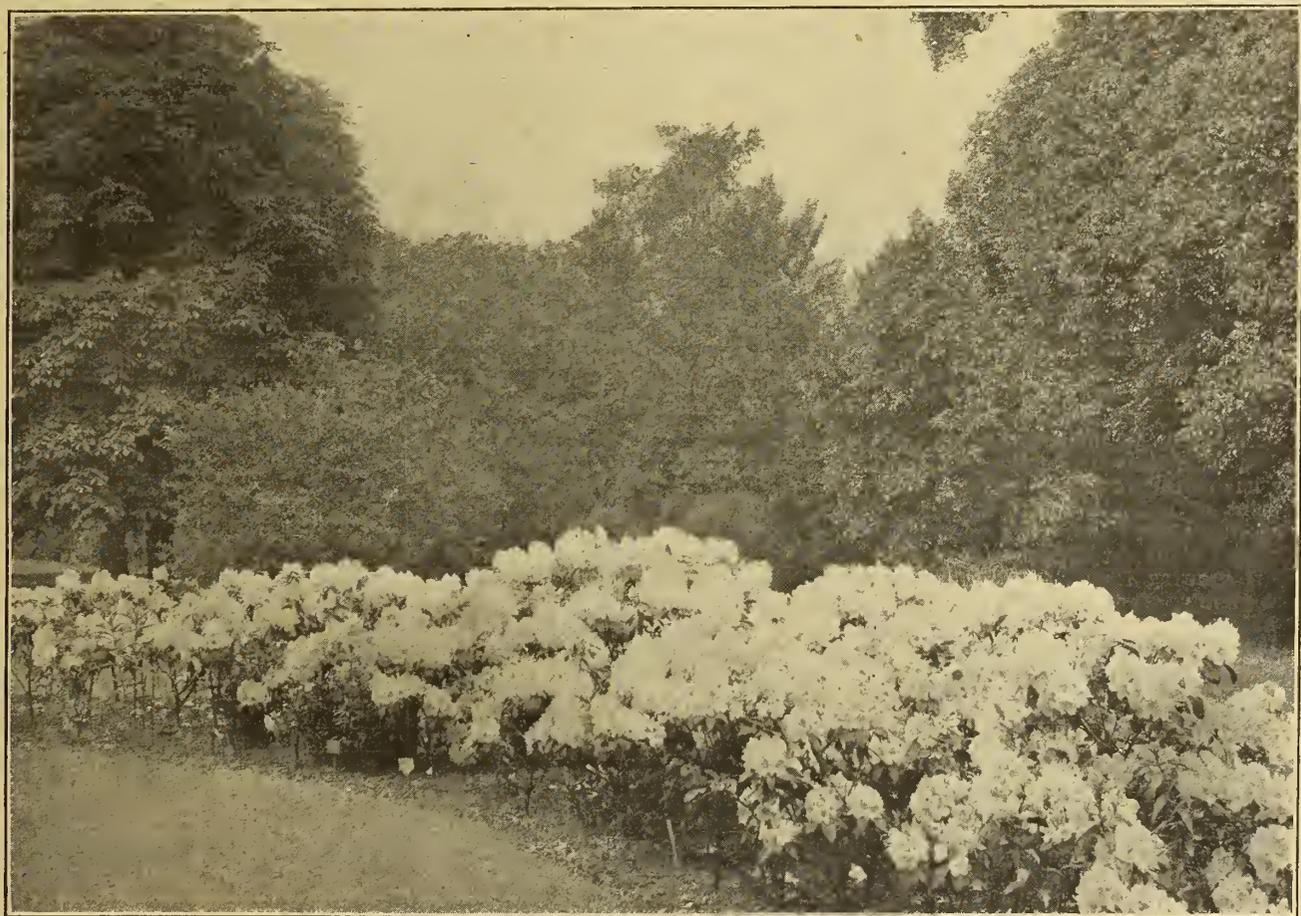
There are other kinds with large flowers and large, shapely trusses, which can be grown with Pink Pearl, the majority of them having appeared since the introduction of that variety. White Pearl, a sport from Pink Pearl, has large trusses of white, pink-flushed flowers, but is not so beautiful as the older plant. It is much like *R. Gauntletti* in appearance. Gomer Waterer bears immense heads of large, white, rose-flushed flowers. It is of sturdy, compact habit, with fine dark-green leaves. Juliana bears a resemblance to Pink Pearl in size of truss and flowers, but the bright pink blossoms have fringed or waved margins. Alice, one of the newest varieties, is recognised by its pink flowers being deeper in shade than those of Pink Pearl. Mrs. E. C. Stirling pro-

under the name of Dawn being specially remarkable for its large flowers and trusses.

Raisers of new, large-flowered kinds would do well to keep hardiness and late-flowering in view, for though most kinds can be grown in the milder counties, those which are tender, either in winter or spring, by reason of early growth and flowering, must necessarily have but a limited sphere of usefulness. It is always desirable to obtain plants on their own roots whenever possible, for grafted plants are liable to injury from suckers appearing from the stock and overwhelming the scion. D.

NOTES AND REPLIES.

Trees in storms.—In the storm of March 24th, 1895, the wind blew first from the south-east, veered round to the south



A group of Rhododendron Pink Pearl in the Royal Gardens, Kew.

Devon, S. Wales, and other places where the climatic conditions are similar. There may be seen such kinds as Gill's Triumph, with rich, bright red, almost scarlet, flowers, of great size and substance; Glory of Penjerrick, with as fine flowers of a darker shade; Beauty of Tremough, with pink-flushed blossoms; Lilian Fox, with large, shapely trusses of blood-red blossoms; cornubiense, only slightly inferior to the last named; Gauntletti, a beautiful pale pink with trusses sometimes nearly 1 foot high and 8 inches wide. These do not give good results in the immediate vicinity of London, although several of them thrive a few miles out on the higher land of Surrey, Kent, and Sussex. Pink Pearl, on the other hand, is much hardier, and gives excellent results not only about London, as may be seen by the accompanying illustration of a bed in the Royal Botanic

duces large pyramidal heads of white flowers which are flushed with pink. Strategist is a rich pink with large flowers and compact trusses. George Hardy, with white flowers, is a handsome variety, as also is the old, but not well known, *R. Manglesi*, a particularly desirable kind by reason of its erect and compact inflorescences of large white flowers. This variety was raised by the late Mr. Mangles, who also gave us many desirable kinds. A beautiful red-flowered hybrid raised at Kew has been called The King, a first cross from *R. Griffithianum*, and presumably less hardy than Pink Pearl. Sir Edmund Loder has raised many new kinds, some with very large trusses of flowers. All that he has raised are hardy with him near Horsham. Several have been exhibited by him of late years at the fortnightly meetings of the Royal Horticultural Society, one shown

and west, and finally to the north-west. There was no snow, and only a little rain fell near the end. On March 28, 1916, the wind blew at first nearly due east, and finally from the north; heavy snow fell continuously throughout the 26 hours it lasted, and the freezing of the snow on the branches of the trees assisted much in their destruction. In both years the gales had been preceded by a long spell of wet weather. In 1895 the conifers which suffered were *Cedrus Libani*, *Cupressus macrocarpa*, *Picea pectinata*, *P. lasiocarpa*, *P. bracteata*, *P. Pinsapo*, *P. amabilis*, *P. nobilis*, *P. ephalonia magna*, and the *Larix*. In 1916 the few *Cupressus macrocarpa* that were left have all been blown down; the Larches have nearly all gone, and also *Pinus Strobus*, *Abies excelsa*, and *Cupressus Lawsoniana*, which had stood out the ordeal of 1895. In both gales the Conifers that have weathered them are:

Sequoia gigantea (out of more than 100 specimens here both in sheltered and exposed situations not one has been blown down), *Sequoia sempervirens*, *Thuja gigantea*, *Libocedrus decurrens*, *Pinus ponderosa*, *P. austriaca*, *P. Laricio*, *P. Jeffreyi*, *P. Pinaster*, *P. Sabiniana*, *P. muricata*, *P. macrocarpa*, *P. sylvestris*, and *Cupressus sempervirens*. Specimens remain of *Abies Douglasi*, *Picea grandis*, and *P. Nordmanniana*. Of the hard-wooded trees, Elms and Chestnuts have suffered most severely in both gales. Sycamores and Beech have survived. Yew, Holly, Box, and Laurel have been much damaged by the storm of last Tuesday.—HUNTLY, *Orton Hall, Peterborough, in Times.*

INDOOR PLANTS.

WATERING POT PLANTS.

THE question is often asked, "How often ought I to water my plants?" Though pot plants should be examined periodically—usually once a day—atmospheric and other factors vary so much that no fixed rule can be laid down. Most plants in a growing condition require water when the soil is approaching dryness. To an experienced gardener this condition is usually indicated by the appearance of the surface, combined with his knowledge of the plant, the soil in which it is potted, and the drainage. Novices are often recommended to tap the side of the pot with the knuckles, a clear ringing sound being emitted if the ball of earth is dry, or the reverse if wet. It is a useful but not a perfect test, because, although a pot plant is always dry when the pot rings, the plant should have been watered just before that stage is reached. If the ball of earth has shrunk from the sides of the pot some injury has already occurred to the roots. The point of a healthy root is thickly covered with short hairs. Turn a young, soft-wooded plant out of its pot, and the roots, if growing freely, will show this feature plainly. It is principally through these hairs that water and, with it, nutriment in solution are taken up. They are extremely delicate and soon perish under any unfavourable conditions, such as stagnant or insufficient moisture. New root hairs quickly form again if the cause is merely temporary, but a check is given to the plant, which all good cultivators strive to avoid. Such a check is often apparent in the cessation of growth at the points of the shoots or the appearance of yellow leaves at their base. When water is applied, enough should be given to moisten the soil throughout. This is comparatively easy if the plant has been potted correctly, viz., if the soil has received an equal pressure throughout and a suitable space and no more has been left between the soil and the rim to hold the water. The actual measurement varies, of course, according to the size of the pot, but the proportion is always the same—about one-tenth of its height. A greater space causes so heavy a saturation that the soil may become sodden, while less will in most cases be insufficient, and the plant suffers in consequence.

RAIN-WATER is the best, but ordinary service or spring water can be rendered quite suitable by exposing it for twenty-four hours in the open air. Water should always be raised to the same temperature as that in which the plants are growing before it is applied to their roots. Drainage is not absolutely necessary if watering is carefully carried out, but in most cases well-drained pots are as necessary to the plants as a safety-valve is to an engine. Good drainage often prevents over-watering from being fatal. Hard-wooded plants,

such as Heaths and Azaleas, are particularly sensitive. Plants seldom remain long in a healthy condition when the pots are exposed either to a sharp draught or to the full rays of the sun, the constant watering necessary washing much of the nutriment out of the soil. A plant droops its leaves because moisture is being evaporated from them faster than it can be supplied. Flaggings is by no means an infallible sign that the soil is dry; often, indeed, that it is too wet, and that the points of the roots have decayed and can no longer absorb the moisture with which they have been surfeited. During summer the afternoon and evening are the most suitable times for watering, as the soil remains moist during the night and the plant can absorb a good store against the coming day. In winter the morning is better, the superfluous moisture being then carried off before the house or frame is closed for the night or a low temperature occurs. Plants that it is desired to repot should always be watered previously and allowed to drain, so that the soil is moist, but not sticky.

Should plants be watered at once after repotting? Much depends on the season of the year, the condition of the ball of earth, if any, surrounding the roots, and the frame, house, or window in which they are to be placed. In summer a light watering may be given with advantage, but the cultivator should aim at keeping the plant moist by shading, reducing ventilation, and spraying the foliage, anything, in fact, to prevent evaporation, rather than by saturating the soil about its roots. In winter, if the soil used is in a fairly moist condition, no water will be needed for several days, and then only sufficient to reach the drainage. Many seeds never germinate at all in a heavily-saturated soil, and cuttings decay. The advice as to light watering and the subsequent prevention of evaporation given above applies even more strongly in these cases. When saucers are placed beneath plants to catch the water which drains away, the plants should not be allowed to stand in the water, which should be emptied out and two little pieces of wood placed in the saucer to keep the pot above the water, especially in winter or in the case of sensitive-rooted plants. Persons who are fond of plants will soon learn when they want water, and achieve success where others fail, by anticipating and supplying their wants. J. COMBER.

Nymans.

GLOXINIAS GROWN COOL.

WHERE Gloxinias are grown from seed in order to obtain good flowering plants the first season, a considerable amount of heat during their earlier stages is necessary. Nearly all writers on Gloxinias refer to them as requiring stove, or, at all events, intermediate-house temperature. Good Gloxinias can, however, be grown under much cooler conditions, as I have proved over and over again. In order to obtain the best results in this way the tubers of the preceding year should be laid in boxes of sandy soil, kept almost dry, and wintered in a temperature not lower than 15 degs. at night. This is about that of an ordinary greenhouse, in fact such a structure as tuberous-rooted Begonias will be quite safe in when dormant. Much the same treatment will suit these two classes of plants. By the middle of March, or thereabouts, the Gloxinias will be starting into growth, when they should be potted and placed on a stage in the warmest part of the greenhouse. They must be moderately watered, when, under the influence of the spring

rise in temperature and increased sunlight, they will soon start into growth. Tubers about the size of a penny are the most suitable for flowering in this way. The first potting should be into pots $3\frac{1}{2}$ inches to 4 inches in diameter, using a compost containing a liberal amount of good leaf-mould. When these pots are well filled with roots the plants should be shifted into those in which they are to flower. For this purpose 5-inch ones are very suitable, though a few of the strongest may be put into pots 6 inches in diameter. Given a good light position in the greenhouse, yet shaded from bright sunshine, the plants will make satisfactory progress, the growth being stout and sturdy. If a cold-frame is available the plants may, towards the end of May, be placed therein. Watering must be carefully done, and if the weather be cold the lights may be closed early so as to husband a little of the sun-heat. Grown in this way insect pests give but little trouble, but should thrips put in an appearance they may be readily destroyed by vaporising with nicotine. An occasional dose of liquid manure will be beneficial when the pots are well filled with roots, but care must be taken not to spill any on the foliage.

Plants treated thus are later in flowering than those grown under warmer conditions, and are therefore valuable in maintaining a succession, while the amateur with but a greenhouse and perhaps a frame or two is thereby enabled to grow them. Gloxinias grown in this way will flower well in July and August. Tubers suitable for this mode of treatment can be purchased when dormant at a very cheap rate. K. R. W.

NOTES AND REPLIES.

Greenhouse Acacias.—The well-known *Acacia dealbata* (the Mimosa of the florist shops) is too large to be accommodated in an ordinary greenhouse. There are, however, several that will flower freely in pots from 5 inches to 6 inches and upwards in diameter, and are of considerable value for greenhouse decoration. Among them are *Acacia platyptera*, whose blossoms, like little golden balls, are borne during the autumn and early winter months. *A. hastulata*, also known as *A. cordata*, does not bloom till the New Year, the straw-coloured blossoms being freely borne. A neat, bushy-growing species is *A. ovata* or *obliqua*, which flowers quite early in the year, and bears a profusion of bright, golden-yellow flowers. A species quite distinct from any other is *A. Drummondii*, whose pale-yellow flowers are borne in bottle-brush-like clusters. One that will attain a considerable size and yet can be flowered freely in a comparatively small state is *A. armata*, a sturdy-growing bush, with rich golden-coloured blossoms. Quite different from the others is *A. lineata*, a compact-growing kind, whose bright-yellow flowers are very numerous. All of the above may be readily grown in ordinary potting compost, such as a mixture of loam, peat, and sand. *A. platyptera* and *A. Drummondii* are benefited by a larger amount of peat than the others. These different Acacias can be placed out of doors during the summer months, under which conditions they will flower more freely at the appointed time.—K. R. W.

Begonia Gloire de Lorraine.—Cuttings from the base of this plant are now showing freely, and as soon as they reach 2 inches in length they are taken off, inserted in small pots of sandy soil, and placed in a propagating frame with a fairly moist atmosphere. Avoid striking cuttings made from last year's stems, for, though these may be got earlier, they keep on flowering, and get stunted in growth. Those of the right kind, taken off later, will soon overtake such as these, and make far more satisfactory plants.

OUTDOOR PLANTS.

CROCUS MARY VAN MARIS.

This is one of the half-dozen novelties sent out by Messrs. Van Maris, Hillegom, three years ago. It is a large and beautiful pure white flower, with a striking orange stigma, which is most effective when the blooms are fully expanded. I have found this lovely Crocus excellent for forcing in pans, simply plunging in leaves from the time the corms are planted until the flower-stems are about 1½ inches high, afterwards bringing gradually to the light. In this way all the bulbs bloom together. This variety is now (March 26th) flowering in the Grass, where its snowy whiteness is seen to advantage. E. M.

SOME USEFUL HARDY TUB PLANTS.

SEVERAL illustrations which have appeared lately in GARDENING ILLUSTRATED showing the nice effect produced by pot and tub plants in certain positions in the

ground beneath and around should be thoroughly moistened when the weather is dry with a fine rose daily before noon.

With regard to plants suitable for the purpose among the first chosen would be Funkias, the large, handsome foliage and showy flowers being somewhat unique in hardy things. *F. ovata* and *F. o. variegata* are two of the best. The Maiden's Wreath (*Francoa ramosa*) is not quite hardy, but there is nothing like it out of doors in the summer. Established plants throw a great quantity of tall, graceful spikes and associate well with other things. A mass of rich golden-yellow will be supplied by *Oenothera fruticosa Fraseri*, one of the best of the Sundrops. There is an impression that all these are decidedly short-lived in flower, but it is not so with the variety under consideration. Given good cultivation it will continue in bloom for several weeks, and not a few solitary flowers, but quite a nice display. The best of the forms of *Chrysanthemum maximum*, as Mrs. Bell and King Edward (the

When tubs have been well prepared for a start the plants should make good headway and will require little attention the first season, except in the way of careful watering and any staking and tying that may be necessary, but in after seasons will be benefited by a rich top-dressing before the young growth starts. If no rough shed of sufficient size is available it is as well to knock up a frame-work of uprights and cross-pieces to support a dressed cover under which the tubs can be placed through the winter, and if the weather is exceptionally severe a little dry bracken can be worked between them and shaken over the surface. E. B. S.

Hardwick.

AMONG THE HARDY FLOWERS.

PRIMULA ROSEA.—This dainty Himalayan Primrose has now come into flower, although the stems have not reached their full length. I know that it does best in a really moist place, such as by the side of a stream or pond, but it is not everyone who



Crocus Mary van Maris.

garden and in the immediate neighbourhood of the house, mostly in the way of semi-hardy and tender things, have led to the thought that there are several hardy plants that might be utilised for a similar purpose where tender things are not available. Good tubs for the purpose can be made by sawing old 18-gallon casks in half, the exteriors painted green or oak-stained as deemed advisable, and a pair of cheap handles provided for convenience in lifting. The percentage of holes bored in the bottom should be on the same lines as an ordinary flower-pot, and the drainage not too liberal, a couple of layers of crocks and a handful or two of coarse ashes being all that are necessary. A good compost to put on the drainage is ½ inch of dry cow-manure well broken up, and this, together with a little good leaf-mould, can also be incorporated with the potting soil, a good, fairly-holding loam in the proportion of one to five. The tubs should be raised slightly from the ground, and, if standing in positions fully exposed to sun and wind, woodwork, soil, and

one a little earlier than the other), will furnish material for a couple of tubs, and also last a long time in flower if care is taken that the foliage is kept free from the attacks of the leaf-boring maggot. A tub or two may be devoted to Phloxes, but a shady spot will have to be found for them, otherwise, in a hot summer, foliage and flowers will suffer. Good sorts are Frau Antoine Buchner (white), Selma (pink), Coquelicot (orange-scarlet), and Crepuscule (silver-mauve). Early-flowering Chrysanthemums are so well known for the purpose that it is only necessary to suggest the choice of sorts or colours that may be most appreciated. Not so well known for the purpose, but equally beautiful at about the same season, are the best of the Japanese Aneones, semi-double sorts like Lord Ardilaun (white), or of extra substance like Queen Charlotte (pink) are the most enduring. If any tubs can be spared for scented evergreen plants, *Choisya ternata*, the Munstead Lavender, and Rosemary are three interesting things to grow.

is fortunate enough to possess either of these. I find that loam and leaf-soil or peat, in equal proportions with some sand, are quite a good medium for this lovely Primula. It is true there is a little hardness about the colour, but that cannot be helped, and the best varieties I have seen are really very brilliant.

THE YELLOW CROCUS AND THE BIRDS.—It is curious how in some gardens the birds rarely, if ever, trouble the yellow Crocus, while in others they ruin the flowers, tearing them to pieces and apparently taking delight in wrecking the hopes of the gardener. In other places—my own among the number—they rarely do any harm. A well-informed ornithologist, who was also interested in plant life, once told me that he had formed the opinion that certain families (I use the word in its restricted sense) had acquired the habit of destroying the yellow Crocus, while others had not. That is to say, that there are certain families of the common sparrow, for example, which will destroy the Crocus, while others leave it quite unharmed. I

think this idea is a little far-fetched, although there may be some truth in it. Is it not a question of food or water? I have the greatest sympathy with those who see their Crocuses torn up, and I am glad that I have not to have recourse to the device of using threads above the flowers.

THE ORANGE DAISY.—I see this name given to *Erigeron aurantiacus*, which I admire very much, but which, with me, is very liable to die off. I believe this is due to the attacks of slugs in autumn and spring. I have been looking over some seedlings and find that they have been very badly cropped by the slugs. I have in some former seasons, though not to the same extent, had a similar trouble with the Alpine Starwort (*Aster alpinus*). It is very provoking to find that some plants have been so severely cropped by slugs that they are quite ruined. I believe that all such plants stand a much better chance of escape if they are top-dressed in early autumn.

LYCHNIS CHALCEDONICA.—When readers are thinking of ordering seeds of hardy perennials I would suggest that they might consider this. It is quite a showy border plant for summer bloom, and a group of seedlings, such as may be procured from a small packet of seeds, will give a sufficient number of plants to constitute an important feature in the border. It flowers generally from early July (sometimes earlier) well through August. It is about 3 feet high. The flowers are of a brilliant scarlet. Some folks prefer the double variety, but I do not consider it better than the single one.

SPIDERWORTS IN SPRING.—The quaint, old-fashioned Spiderwort, or *Tradescantia*, has two seasons of value in the garden. The summer one is universally recognised, as almost everybody admires the distinct look of the leaves and flowers, but it is not generally observed that it is a pretty plant in early spring when sending up its young growths in a nice garb of good colours, shades of purple and crimson.

AN AMATEUR OF HARDY FLOWERS.

FUCHSIAS IN THE FLOWER GARDEN.

Those who have a stock of old Fuchsias will find them very useful for the flower garden through the summer if there are a few vacant beds. Such beds might be partially carpeted with Tuffed Pansies, leaving the necessary spaces for the Fuchsias, which as either large, medium, or dwarf plants should have sufficient room to develop. It is as well to act on the principle of one bed one variety unless there are sorts of different heights very similar in colour, as, for instance, *Flocon de Neige* and *Alice Hoffmann* and *General Roberts* and *Display*, in which cases the two varieties can be used respectively in the centre and outer portions of the beds. Another bed may be set apart for *Sunray*, with its rich golden foliage, on a carpet of *Kingcup Pansy*. If the old plants have been stored away under a stage, an outhouse, or similar places, they should, after the necessary cutting back, soaking, etc., be allowed to break slowly and be grown along steadily without any attempt at forcing, and if put into a bit of fairly good soil when potted up from the ground will want little attention until planting time except pinching back any shoot likely to get too long, and occasional doses of weak manure-water when roots are pushing actively. In connection with Fuchsias it may be noted that there are places in most flower gardens where some of the varieties of *F. macrostemma* can be used to considerable advantage. *Riccartoni* is one of the best,

and a very nice effect is produced by associating this with small clumps of *Yucca filamentosa*, with some plants of the dwarf *Dunrobin Castle* towards the edge of the beds. Another variety of *F. macrostemma*—*gracilis variegata*—is very useful as an occasional dot plant on a carpet of purple Pansies. E. B. S.

Hardwick.

COLLEGE MEN AND LANDSCAPE GARDENING.

The Americans begin to snuffer from the work of pretended landscape gardeners, who think that work can be done without a gardener's training and without the full knowledge of trees and shrubs that anyone who has any claim to design gardens should possess. We find the following in the *American Gardener's Chronicle*:—

One of these novices was called in to make a plan for a small place of about 5 acres. After completion it was found that the plan could not be made to fit the ground, and, among other incongruities, it contained a rustic bridge. The designer had, however, neglected to specify where the water to flow under it was to come from as there never was any water, still or running, where the bridge was planned to be erected, the only water on the estate being that derived from a well 300 feet deep and the nearest stream was three miles away. In a city where the appointment is political, and therefore the holder need have no qualifications, the park superintendent asked to have a landscape gardener appointed as his assistant, and the job was given to a young man just out of college. One of the first attempts of the latter was to destroy a good lawn by cutting a large bed in the middle of it and "bedding out" in March some three hundred Easter Lilies in full bloom from a greenhouse. Three days were more than sufficient to bring them into a condition for the dump; *Astilbes* were put in their place, which required a less time for their destruction. As this lawn was partially surrounded by naturally arranged shrubbery the discord thereby created may be imagined, and it caused a deal of amusement in the city at the time, even among those who did not claim to have much knowledge of gardening, and many desired to know if that was the style of landscape gardening taught at college. This same man committed the vandalism of destroying some of the late Frederick Law Olmsted's classic work because it interfered with the view of the pedestal of a statue!

More recently the landscape work upon two new estates was given into the hands of a young college man. His plans proved him to be absolutely unacquainted with the merest elementary principles of art in the garden and that he had no knowledge whatever of horticulture. His planting plans called for huge thickets of shrubs all spaced exactly 18 inches apart; beds of *Rhododendrons* were in positions where they received all the sun at all seasons, and herbaceous perennials were quite unprovided for; perhaps he had never heard of them. College education may have some value, even if nothing more than that set forth by a prominent public man a few years ago, who stated that everyone who could should go to college if only to find out the uselessness of college education in the practical work of life.

NOTES AND REPLIES.

Campanula glomerata.—There are three varieties of *Campanula glomerata* which are worthy of cultivation, these being *C. g. acaulis*, *C. g. dahurica*, and *C. g. superba*. The first sort produces dense clusters of beautiful blue flowers from May to August. Its height is somewhat variable. My plants reached about 12 inches, but other gardeners tell me they only get their plants half this height. The second sort has flowers of a fine violet colour. The flowers are large and freely produced from June to August, and the plant reaches a height of about 2½ feet. The third sort (*superba*) is finer than either of the above, but still less often seen, because for some reason it has not come to the front. The flowers are much deeper in colour and borne on erect stems in July and August. The plant reaches a height of 12 inches to 18 inches and is remarkably free-flowering. —E. T. ELLIS, *Wetwood, Ecclesall, Sheffield*.

Oenothera Lamarckiana.—This (page 141) seeds so freely that it is liable to become a troublesome plant in the garden unless precautions are taken to remove a portion at least of the seed-pods before the seeds ripen. There is not much chance of its being lost from a garden where it has once been grown, as one or two plants will provide any quantity of self-sown seedlings to maintain the succession. Its great weakness from a garden point of view is that it is dowdy-looking in the morning and early afternoon. It is only in late afternoon that the flowers expand these lasting through the night. They are large and of a pleasing yellow, but have a rather peculiar butter-like odour. It is a true biennial.—S. A.

Scilla bifolia alba.—The flowers of this are not so large as those of some of the other varieties of *S. bifolia*, but make a nice contrast to the blue and pink varieties. The finest white form of *S. bifolia* I know is *White Queen*, a beautiful variety raised or selected by the late Mr. James Allen, of Shepton Mallet. The blooms are about twice the size of those of the others, and of good substance. A great deal might be done in the way of improving the white varieties of *S. bifolia* by raising seedlings.—S. ARNOTT.

Sweet Peas.—With advancing growth much more watering is now needful in the case of Sweet Peas. The stems ought not to be permitted to fall about over the pots, and small temporary supports of a twiggy nature should be afforded in good time. If under glass in cool house or cold frame the pots must be kept as near the light as possible. This prevents unnecessary drawing; and, further, to induce a robust and stocky growth, as much air as possible must be given on all suitable occasions.

Dog's Tooth Violet in Grass.—I am pleased to see that Mr. F. W. Gallop advocates planting *Dog's Tooth Violets* in Grass in his calendar for the "Midland Counties," on page 174. They are charming in Grass, and, as the foliage dies off early, they are not in the way in a lawn which is kept mown in summer. The varieties of the common *Dog's Tooth Violet* seem to be the best suited for the purpose, and colonies of this plant in irregular patches in the Grass are very beautiful.—S. ARNOTT.

Jeffersonia diphylla.—Those on the outlook for a plant which will succeed in a shady corner will find a suitable subject in the above. It flowers during late April, is about 8 inches in height, and produces freely pure white blooms, each almost an inch in diameter. Although it does best in peaty soil, yet I know that it grows quite well if well-rotted leaf-mould be substituted for peat. It may be increased by seeds, but good results follow division, this being best attended to in November or December.—KIRK.

Anemonopsis macrophylla.—As its name indicates, this resembles to some extent *Anemone japonica*. Its *Anemone*-like blooms are pure white with a tinge of violet, and are freely produced in late summer and autumn. *A. macrophylla* succeeds well if it is treated in all respects similarly to the Japanese *Anemone*, and, like it, may be increased by division or from root-cuttings.—SCOT.

VEGETABLES.

PROFITABLE VEGETABLES.

It may be advisable to dispense with a few things that would otherwise be grown in order to utilise all available ground for the most profitable things. These, besides Potatoes, will be Onions, Runner Beans, Spring Cabbage, and medium-height curled Kale, and to them might be added a dwarf Marrow Pea and green Haricot French Bean to be grown for harvesting and used occasionally as required through the winter months. I should also like to add Seakale. There is an impression that this occupies an undue area in proportion to the results obtained. On the contrary, a wealth of material can be obtained from a small piece of ground, given good cultivation. The ground should be manured and deeply dug or bastard-trenched, and sets put out about 9 inches apart and 18 inches between the rows, or, at any rate, sufficiently wide to allow for ridging up with some light material for blanching. When gathering the first crop care should be taken to avoid cutting below the crown. If this receives attention a nice after-growth follows, which, if small, is very tender and of delicate flavour. The planting should be an annual affair. The old plantations of Seakale yield a lot of material for cutting, but the blanching is a troublesome business unless one has pots and leaves or litter, whereas with the annual crowns in rows this is not required.

There are some vegetables which may safely be reckoned as profitable if intelligently treated. Cauliflower among the number. If three sowings are made of a small, quick variety respectively in February, late March, and mid-May, a nice succession is obtained and the ground can be soon cleared. This is much more profitable than growing Broccoli, which in some cases remains about ten months on the ground before the single head is obtained. A similar three-course sowing is the most profitable way to deal with Carrots, and if those from the last sowing in July are allowed to remain in the ground with a little protection in the way of Bracken or some similar material the roots can be pulled as required all through the winter. Of those things which are very acceptable but quickly over, as Spinach and Lettuce, the best way is to sow small quantities and often. The requirements of the household, whether on a large or small scale, can soon be noted, and measures taken accordingly. Spinach, however, is very seldom found in medium and small gardens, and does not seem very popular, this also applying to Parsnips and Jerusalem Artichokes. I always think this is specially unfortunate in the case of the last-named, because a number of tubers can be so easily grown, and that, too, in positions hardly suitable for other things. It is a nutritious vegetable that can be used satisfactorily in many different ways, but the cottager and small-holder will have nothing to do with it. E. B. S.

Hardwick.

NOTES AND REPLIES.

Early-sown Beetroot.—There is no difficulty in having good roots from last season's crops if cool storage is given, but at times there is a scarcity. There is a considerable demand for young roots for salad as soon as they can be had. Few vegetables force more readily than the Beet, if the term forcing can be employed, and it gives so little trouble. For many years I used to sow in March in 60-pots seed of a good Globe variety, taking care to sow only a few seeds round the outside of the pots. When it was seen which were

the strongest they were thinned to three plants and grown near the glass in cold frames. Grown thus the plants were of a nice size for planting out the first or second week in April, care being taken not to break the ball. The seedlings do well planted out at the foot of a warm wall in good soil, and may be placed fairly close together. It is surprising how quickly they are fit for use if given moisture in a dry spring. The roots, though not large, are much liked in May and June for the salad-bowl. I have at times sown in boxes thinly and transplanted when the seedlings were of a fair size, but care has to be taken that the tap root is not broken at the lifting.—E. R.

Pea World's Record.—I first grew this variety in 1911, a season none too favourable, as we had very dry, hot weather quite early in the season, but it did well. It is an early Pea, but I do not advise sowing it too soon unless the land is well drained. For June and early July gathering it is splendid, and, sown for that purpose in March and April, there will be a heavy crop. The pods, borne mostly in pairs, are quite large for an early Pea, having eight to ten Peas in each. The quality is so good that I am sure those who have grown it will not omit doing so again. The pods are long, dark green, and the haulm vigorous for an early variety. What makes it more valuable is its heavy cropping. Being a medium grower—3 feet—it can be grown somewhat closer, thus making it an ideal variety for gardens limited in size. I have had it fit for the table in thirteen weeks from date of sowing.—W. F. K.

Tomatoes.—If these are required for planting out-of-doors a sowing should be made at once. Sow the seeds thinly in clean, well-drained pots or pans, using a compost of loam, leaf-mould, and sand. Do not make the soil too firm in the pots, cover the seeds lightly with fine soil, and place in a warm house, or put where there is a little bottom-heat. The chief aim should be to raise the plants in medium warmth, and keep them sturdy yet steadily growing throughout. As it is unsafe to plant Tomatoes out until the end of May, or early in June, it is obvious that strong plants must be available at that time, as our summers are generally short. Well-grown plants, if attended to, will give good crops of fruit in the open in sunny seasons. Sunrise, though a tall grower, does well outside, so do also Sutton's Open Air and Up-to-Date.

Greening Potatoes.—At one time it was quite customary for the older school of Scottish gardeners to "green" the tubers before they had completed their growth. The method adopted was to draw the soil from the tubers in the drills when they were rather more than half-grown, and when they were thoroughly greened they were lifted and stored. Actual experience shows that the crop is heavier from immature greened tubers than from fully ripened sets. This raises an interesting question. Would immature seeds of other things—Peas, for example—give similar results? It might be rather useful to experiment.—W. McG.

Early Peas.—Adverse weather conditions have for some time past precluded the possibility of getting Peas raised under glass planted in their permanent positions outdoors. Advantage should be taken of the welcome change to get this carried out now and as the planting proceeds to mound and stake them without delay, placing plenty of fine spray between the sticks on either side of the rows to shelter the plants from cold, cutting winds. A sprinkling of soot or Tobacco powder on the leaves and tips of the shoots deters sparrows and wood pigeons from attacking them.

The Potato Onion.—The bulbs, if not already planted, ought to be got out without delay. Plant 3 inches or 4 inches deep, and as top growth progresses lightly mound them up. In a season when Onions have kept none too well, the value of this old underground variety is undeniable. For planting use good-sized bulbs, for small sets will often merely increase in size, instead of breaking up into offsets as they ought to do.—K. B. T.

PERPETUAL-FLOWERING CARNATION SOCIETY.

MARCH 29TH, 1916.

NEITHER the flowers nor the competition were up to their usual standard on the occasion of the twentieth exhibition of the Society held at the Royal Horticultural Hall on the above-named date. No doubt the exceptionally wet, sunless weather of the weeks preceding the show were responsible for much inferior flower quality, the lack of competition, to the abnormal circumstances prevailing at the present time. To some extent, also, the show suffered, owing to interrupted railway conditions. These things notwithstanding, there were many good vases of flowers and an exhibition of general interest. No novel feature was introduced, while some of the exhibits in the decorative classes, e.g., baskets and epergnes, were, we thought, of the retrogressive rather than the progressive order. No new variety of Carnation received an award. There was no competition for the Branton Challenge Cup or for the Lord Howard de Walden Challenge Vase.

OPEN CLASSES.

In the leading class for twelve vases of Carnations, twelve varieties, twenty-five blooms of each, for which the first prize is the George Monro, Junr., silver-gilt challenge cup, value fifty guineas, two competitors entered, the cup being awarded to the Clury Nursery Co., Langley, for a fine lot of flowers. The varieties were British Triumph (crimson), White Enchantress, Sunstar (yellow), Baroness de Brien, Enchantress, Lady Meyer, Enchantress Supreme, Lady Northcliffe (all pink shades), Beacon (scarlet), White Wonder, and Mrs. C. W. Ward and Gorgons (cerise), both excellent. With better arrangement—it was generally too lumpy—this would have made an imposing exhibit. Messrs. W. Wells, Limited, Merstham, were second. Lord Kitchener, Aviator, Champion, and Pink Sensation being their finer flowers. Messrs. Wells were the only competitors for the challenge cup offered by the American Carnation Society for three vases of twelve blooms each, the firm staging Good Cheer, Aviator, and Pink Sensation, the last of outstanding merit. Only one exhibitor, Mr. J. C. Jenner, Rayleigh, staged seven vases of Carnations, seven varieties, twenty-five blooms each. The varieties were Mary Allwood, White Wonder, Mrs. C. F. Raphael, Enchantress Supreme, Satin Robe, Salmon King, and Carola (crimson). Only the last and White Wonder were first class. Mr. H. T. Mason, Hampton Hill, was first for five vases, distinct varieties, twenty-five blooms each. His set comprised Warrior (good crimson), Beacon, Enchantress Supreme, White Enchantress, and Lady Fuller (deep pink). Mr. W. H. Page, Tangley Nurseries, Hampton, took first prize for three vases under similar conditions, having White Wonder, Beacon, and Lady Fuller. The exhibit was rather overdone with Carnation foliage. Three competed for the single vase, one variety, twenty-five blooms, Messrs. Wells leading with an excellent lot of Pink Sensation. Mr. W. H. Page was second with Philadelphia.

OPEN TO GENTLEMEN'S GARDENERS AND AMATEURS.

For three vases of Carnations, twelve blooms in each, six varieties, two varieties in each vase, the first prize was awarded to Major Sir R. Baker, Bart., M.P., Blandford (gardener, Mr. A. E. Usher), who associated Mikado and Wonder, Benora and Baroness de Brien, and Carola and Mrs. C. F. Raphael respectively. The

same exhibitor also took the first prize for three vases, eight blooms, two varieties in each vase, combining Penora and Carola, Marmion and Baroness de Brien, and White Enchantress and Mikado, against four competitors; for three vases, six blooms in each as above; one vase, twelve blooms, one variety; one vase, nine blooms, one variety, having Carola in each case; and one vase of Carnations, nine blooms, three varieties, where Champion, White Wonder, and Mrs. Ward were employed. The Countess of Derby, Sunningdale (gardener, Mr. W. J. Reed), led in the class for twelve blooms, three varieties, with Carola, Mikado, and R. F. Felton, and took first prize for the vase of five blooms in at least three varieties raised and grown by the exhibitor.

DECORATIVE CLASSES.

For the dinner-table decoration of Carnations four competed, Mrs. Alex. Robinson, Park Hill, Carshalton, taking the premier award, and showing good taste and some originality. She used dark brown fancy baskets with bowls therein and employed Lady Northcliffe Carnation in capital condition, interspersed with Thorn twigs just breaking into leaf, Salix sprays with woolly catkins, Bramble sprays whose leaves matched the baskets for colour, and trails of miniature-growing Ivy cleverly introduced. It was the only good object-lesson of the meeting. Mr. W. Heath, who was second, employed the same Carnation, with Cytisus and Asparagus sprays. The arrangement struck us as a little untidy. Mrs. A. R. Bide, Farnham, had by far the best decorated basket of Carnations, employing the rich scarlet and white fancy variety, Fanny, with touches of Croton leaves and Asparagus. It was at once good, attractive, and not overdone. Those of the second and third prize-winners were hopelessly heavy or over-coloured. The decorated vases or epergnes of Carnations were of service only as demonstrating what not to do. We have rarely seen a worse lot; a more heterogeneous mixture.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MARCH 30TH.—*Daphnes* (in variety), *Laurustinus* (various), *Alnus cordifolia*, *Arbutus canariensis*, *Ericas* (in variety), *Andromedas* (various), *Berberis* (various), *Azara microphylla*, *Almond* (*Prunus Amygdalus*), *the Purple Plum* (*Prunus Pissardi*), *single and double Camellias*, *Osmanthus Delavayi*, *Forsythia spectabilis*, *Cydonias* (in variety), *Skimmias*, *Osoberry* (*Nuttallia cerasiformis*), *Ribes sanguineum*, *Periwinkles* (various), *Rhododendron venustum*, *R. Jacksoni*, *E. ciliatum*, *Salix caprea*, *Dog's Tooth Violets* (in variety), *Wallflowers*, *double and single Arabis*, *Aubrietias*, *Violets*, *Polyanthuses*, *Snowflakes*, *Aconite*, *Narcissi* (in several varieties), *Snowdrops*, *Grape Hyacinths*, *the Notted Iris* (*I. reticulata*), *the Algerian Iris* (*I. stylosa*), *Scillas* (in variety), *Puschkinia scilloides*, *Veronica filiformis*, *Milkwort*, *Crocus* (in great variety), *Pulmonaria saccharata picta*, *Glories of the Snow* (*Chionodoras*) (in variety), *Hepaticas* (in variety), *Anemones* (in great variety), *Saxifrages* (various), *Lenten Roses* (several varieties), *Candytuft*, *the Great Pilewort* (*Ficaria grandiflora*), *Violet Cress*, *Forget-me-not*, *Hyacinthus azureus*, *Fumitory*, *Blue-eyed Mary* (*Omphalodes verna*), *the Bitter Vetch*, *Synthlipsis reniformis*, *Corydalis* (in variety), *Hutchinsia alpina*.

WORK OF THE WEEK.—The weather has again been most unfavourable for outside work, snow having fallen almost daily, therefore the repairing of garden-paths, which began to show signs of wear from the constant heavy carting, has been attended to. The paths are formed of sandstone, and as it is possible to quarry this on the place, advantage was taken of the bad days to get out a good supply of material with which the damaged paths were brought up to their proper level, the whole being given a coating of fine material and finally well rammed. The centre is raised so that the water quickly finds its way to the drains. Another new path has also been formed of the same material, and as this lies lower than the border on one side it was

necessary to put down a single line of sandstone blocks 9 inches deep, which will prevent the soil being washed over the walk, at the same time providing a place for some choice edging plants. Cuttings of the blue Bindweed (*Convolvulus Mauritanicus*) have been potted off, and those raised from seeds have been given a shift into larger pots. Cuttings of the False Heath (*Fabiana imbricata*), inserted in autumn, have been potted off. These have been in a cold frame all the winter. Later sowings of Sweet Peas have had small stakes placed among them and transferred to cold frames. Snapdragons have been pricked off into boxes, and will be kept in a warm-house for a time. The forking over of vacant ground intended for annuals is being done. Pruning of bush Roses continues, and the beds are cleaned and forked over as the work proceeds. Beds carpeted last season by Tufted Pansies will be given a change. Where the Pansies have come safely through the winter they have made fine plants. These are being carefully lifted and replanted in beds hitherto filled with other subjects. A bed of China Roses is being carpeted with Tufted Pansies, and a bed of Gladiolus Brechleyensis has been likewise planted with Giant Summer Forget-me-not. Other beds have been prepared for Perpetual-flowering Carnations and Cannas. For the Carnations lime was freely used. *Perovskia atriplicifolia* has been pruned back to a few eyes as this fine shrub will soon be on the move. Some of the slender-growing Heaths have been badly broken by the snow falling from the trees above them. E. M. Sussex.

SOUTHERN COUNTIES.

Mint.—This, being in demand more or less for nine months out of the twelve, it is necessary if a break in the supply is to be avoided that a new bed be planted occasionally. The present is a good time to do this, as the roots are active and well furnished with growth on the point of pushing through the soil, consequently they start growing at once and soon become established. A piece of ground of suitable area—preferably a portion of a border facing south when an early supply is needed—should be marked off, manured, and then dug. If in good working order planting can take place at once, but if the soil is at all sticky an interval of a few days must be allowed for it to dry sufficiently so that the surface, after being lightly trodden, can be raked down to a fairly fine condition. The roots should be laid out regularly, but not too close together, on the prepared surface, and then covered with 2 inches in depth of fine soil, which should be made firm by lightly beating it with the back of a spade. If dry weather intervenes between the time of planting and before the roots have got a good hold of the ground, an occasional watering is beneficial. Existing beds are always the better for a light top-dressing either of some old potting soil or decayed hotbed material after it is freed of sticks and any other extraneous matter by passing it through a coarse sieve.

Asparagus.—To allow of the oldest bed being broken up each year for forcing, as well as to make sure there shall be no falling off either in the supply or quality of the outdoor produce, one or more new beds should be made each year. These may be formed either by planting with one-year-old roots or by sowing seed, the latter method being preferred in my own case. Although a longer time elapses before the plants come into full cut, it is the least troublesome way of establishing a bed, and while, as a result of there being no root disturbance, the crowns are thoroughly established when the third year is reached, the quantity and quality of the produce are all that can be wished. The present is a suitable time to sow the seed. This may be done on the flat in light, friable, and sandy soils, but in those of a heavy nature it is best to raise the beds above the surrounding level beforehand. The beds may be 3 feet, 4 feet, or 5 feet wide, with 3 feet alleys between. The first will accommodate two rows, and the two latter three rows of crowns each. To raise the beds to the requisite height at the outset the soil is taken out of the alleys to a depth of 6 inches and spread evenly over them. The edges are beaten down firm with the back of a spade and then cut true and perpendicularly with the aid of the same implement and a garden line. A stout stake driven in at each corner completes the job. The drills are drawn 2 inches deep, and four to five seeds are dropped into them at intervals in groups, each group standing about 15 inches apart. When germination takes place and the plants develop sufficiently for the strongest to be distinguished, they are reduced to one in each group. The site for the beds should be prepared some time in advance of seed-sowing so that the surface may become mellowed and in good working condition.

Bedding plants.—As these are now not only occupying valuable space, but are doing no good where they are in the heat of fruit houses, they will be taken out and placed in cold pits to undergo a proper hardening off. If well watered before being removed no harm will accrue if they should get dry for a few days, by which time they get somewhat inured to their new surroundings and not so liable to suffer when watered. The foliage being tender, a little shade from direct sunlight is also neces-

sary for a few days. For the present the precaution must be taken to mat the pits down at night.

Herbaceous Calceolarias.—The flower-spikes are pushing up fast and require a neat stake to support the main stem. Feeding with liquid-manure is now being done as the pots are crammed full of roots and in need of further supplies of nutriment, that in the soil having become exhausted. The forwardest plants of Clibran's Calceolaria are also receiving mild doses of liquid.

Malmaison Carnations.—These are now being staked out and tied, the larger specimens being allowed from four to five Bamboo stakes each for their support and the smaller ones, or such as will carry but a single bloom, one each. The roots now being in fit condition for the assimilation of a stimulant, they will be fed with Carnation manure. Having a house devoted entirely to them, free ventilation is accorded at all times, frosty nights excepted.

Indian Azaleas.—With a view to having a plentiful supply of white flowers for the Easter festival, a good few bushes with prominent buds have been placed in a late vinery to be forced gently into bloom. At the present time that old variety Fielder's White is supplying a fine lot of long-stemmed sprays for cutting. This variety stands cutting with impunity, as any loss of wood is always made good by the production of free and vigorous growth directly the flowering period is past.

Poinsettia pulcherrima.—A portion of the plants which have been resting under a stage will be brought forward, cut back somewhat, and placed in heat to afford cuttings for the raising of the earliest lot of plants to flower in late autumn.

Fuchsias.—Plants which were cut back in January broke well and have since been partially shaken out and shifted into pots two sizes larger. They are now making excellent progress, and the shoots will soon receive the first stopping. If they continue to make good growth they will again be pinched and then allowed to flower. Successional batches of plants will be similarly treated very shortly, both in regard to shaking out and repotting. With respect to stopping of shoots, they, unless the plants should be required earlier than is anticipated, will be pinched three times before being allowed to bloom. These will make nice hushy plants by the end of the summer. Some plants which have got either too leggy or unwieldy for further indoor purposes, will, when they have been hardened off, be planted outdoors among the dwarf shrubs. Cuttings put in early in the year have been potted off and will now have the points pinched to make them break and become bushy.

Bouvardias.—Plants of such varieties as President Cleveland, Bridesmaid, etc., which were cut back some few weeks ago have broken well. The plants have been relieved of some of the old soil and given a shift into pots two sizes larger.

Streptosolen Jamesoni.—A good few plants which were cut back at the same time as the preceding have been partly shaken out and repotted. Plants in 5-inch pots are found very useful.

Flower garden.—The cleaning and digging of the herbaceous and shrub borders and beds which have so many times been interrupted through stress of weather have now been brought to a conclusion. The edges of walks have been hoed and all made as clean as circumstances permit. The pruning and training of creepers and Roses on walls are progressing and will shortly be finished. As soon as the weather becomes more settled and warmer, border Chrysanthemums will be planted. The plants in the meantime are being well hardened by exposure in the daytime.

Strawberries.—A number of plants intended for forcing to supply fruit during this and next month has been planted out in the open in rows 2 feet apart and 18 inches distant from each other. Under favourable conditions these should yield a good crop of fruit. A. W.

MIDLAND COUNTIES.

Climbing conservatory plants.—Many of these are now making new growth, and the young shoots require to be regulated with a view to furnishing the allotted space on the trellis and preventing crowding and entanglement. This applies more particularly to such plants as *Lapagerias*, *Tacsonias*, *Hibbertias*, *Dipladenias*, *Thunbergias*, etc.

Genistas.—As these plants are now going out of flower, all the weak shoots will be removed and the chief ones shortened sufficiently to make shapely plants. Plants which are in need of more room will be repotted forthwith. To start the plants into growth they are placed in an intermediate temperature and syringed daily. They must be afforded full light or they will fail to flower satisfactorily. If an increase of stock is desired, cuttings may now be put in, selecting shoots that have no flowers or that have not bloomed. Insert the cuttings round the rims of pots filled with light, sandy soil, and place

the pots in moderate heat. I prefer to raise a few plants every year and throw away those that have been cut back for two or three years.

Gladioli.—The early-flowering varieties that were potted early are now being gently forced into bloom. The Gladiolus will not stand much forcing, the flower-buds turning yellow and dropping off if it be attempted. The general stock will, for the present, be grown on steadily in a cool-house.

Hardy Ferns will soon be pushing up their new fronds. Last year's fronds may now be removed. If there are no bulbs growing among the Ferns the surface-soil should be very lightly pricked over and a good dressing applied. Most Ferns delight in a heavy mulch of half-decayed leaves, which not only conserves the moisture, but also provides a good rooting medium.

Michaelmas Daisies.—Plants obtained by potting up small portions from the outside borders early in the season are now in good condition for planting out. Large beds filled with one or more varieties have a fine effect in the autumn.

Rose cuttings put into pots last autumn and wintered in a cold-frame are in a suitable condition for planting out. I find a cool west border suits them best until they are large enough to go into the permanent quarters. They should be put out now, even if they are not rooted, for if well callused they soon form roots and grow away freely. Nearly all the Ramblers and Rugosas root

should be placed round the plants to lead them up to the taller bushy sticks, which should not be less than 8 feet or 9 feet high, and should be put in at once, keeping them well away from the plants. It is a good plan to put a string or wire round the whole to keep them together, otherwise they are liable to displacement by strong winds.

Potatoes.—There should be no delay in getting the maincrop Potatoes planted during the next fortnight. If late frosts occur, a little fine soil can be drawn over the tops, and should a wet autumn follow, disease will be less prevalent than when late planting is practised. Continue to prick out

Brussels Sprouts, Cauliflowers, and early Broccoli, which have been raised under glass, on warm, sheltered borders as they become ready.

New Zealand Spinach is one of the most useful vegetables, especially in hot, dry seasons where Spinach is in demand, and yet for some reason it is little grown. It appreciates a hot, dry summer, and when cooked can hardly be distinguished from the other. One or two sowings should be made during April in boxes, planting out in a sunny position on fairly rich land in May. It is somewhat tender, and must be protected against frost, especially when young.

Chicory is very useful when salads are in demand during winter, as it is not only easily cultivated and blanched, but it forms a splendid substitute for Endive, which is often

plants in beds in cold-frames for early use. A further sowing was made for outside planting. The varieties preferred are Long Green and Long White.

Celery trenches.—A couple of Celery trenches have been opened. Into the bottom of these a good layer of well-rotted manure was worked, and about 4 inches of sifted vegetable mould were placed on the surface. The beds thus formed are valuable in many ways. In them are planted temporarily such things as Tufted Pansies, Calceolarias, Marguerites, hardy Chrysanthemums, Pentstemons, and such like. In the trenches these things root well into the fine soil, and can be transferred to their flowering quarters when the time arrives with fine balls and with little check. As the season advances half-hardy annuals, such as Stocks, Asters, and Marigolds, will be pricked off into the trenches. These, too, invariably do well treated in this way. Should frosts occur, the plants can be readily protected by laying Pea-stakes across the ridges or placing mats supported on posts over them.

Vegetable garden.—In the early part of the week a considerable amount of progress was made. Spent vegetables were removed, and the quarters occupied by them were deeply dug after having been well manured. The break occupied by Leeks has been cleared in order that it may be turned over at an early date. The Leeks have been laid in thickly at the end of a quarter previously dug, where they can be easily got at, and in which they



Marquette Carnations in a vase.

very freely, and are much best on their own roots. A great many of the Teas, Hybrid Teas, Chinas, and Polyanthas also root easily and are quite free on their own roots.

Rose hedges.—If these have become bare at the base, now is the time to remedy matters by hard pruning. If the plants are well established many growths may be cut down level with the ground. In fact, the whole hedge can be so treated if desired, but such drastic treatment is rarely necessary. The unfurnished condition of the base of a hedge often arises from a bad start. If the plants are cut hard back after they have been planted twelve months they usually grow strong and bushy, and if one or more of the oldest growths are cut down hard each year, a constant succession of young wood from the base is secured.

Clematises being plants of free growth, attention must be given to the young shoots when they are growing freely, regulating and tying them to prevent them becoming tangled or injured by the wind.

Sweet Peas sown in pots and raised under glass are now good, sturdy plants several inches high, and, having been thoroughly hardened off, will, as soon as the weather is favourable, be planted out on ground which has been well prepared. Rows or hedges of Sweet Peas are very attractive. They can also be used to mask an unsightly place during summer, but the most effectual way of growing them is in separate colours planted in clumps. When planting make the ground fairly firm about them. A few small sticks

none too plentiful during midwinter. Make two or three sowings, the first now on deeply cultivated soil. Sow in shallow drills 1 foot apart, and thin the plants to the same distance.

Onions raised in heat and carefully hardened off are now fit for planting, and, provided the weather is favourable there need be no further delay in so doing, for the plants will grow more freely in the open. If ample ground is at command the rows may be 2 feet apart, which will allow of working among the plants without damaging the brittle leaves as they become larger. When fairly dry, tread the ground well, then rake over roughly and roll it, afterwards again raking it and drawing shallow drills. Lift with a good ball of soil, and plant 1 foot apart in the row with a trowel.

Leeks.—The early-raised plants can likewise be put out. Take out a trench in a similar manner as is done for Celery, placing a good thickness of decayed manure in the bottom, on which lay 6 inches of good soil, then tread lightly and plant 1 foot apart down the centre.

F. W. GALLOW.

SCOTLAND.

Vegetable Marrows.—Seedlings from the earliest sowing were potted on during the week into 5-inch pots. These will yet awhile be given a little heat until the weather will permit of their being removed to a frame to be hardened off. It is intended to grow these

will keep quite well until required. A stretch of cold-frames was filled with seedlings of Brassicas of various kinds, including several varieties of Cauliflowers, a midseason Cabbage, Curly Kale, Brussels Sprouts, and Savoys of the Drumhead type. The trouble involved in this handling of the seedlings is always amply repaid, the plants being much more robust and a trifle earlier than those from the usual nursery beds in the open. Successional sowings of Broad Beans and of Peas are being attended to as becomes necessary. Taylor's Broad Windsor Bean and Duke of Albany and Stratagem Peas are useful varieties for present sowing. A sowing of Henderson's New York Lettuce was made in pans during the week. This is a Cabbage variety of some merit, which matures in a comparatively short time, and which remains in good condition over a prolonged period. More Parsley was pricked out into a frame, and autumn Onions were looked through, and such plants as were by stress of the east winds rather loose were firmed up. Toward the end of the week a snowstorm of some severity put an end to the work on the soil for the present.

Lime-washing.—Taking advantage of the stormy weather all the needful lime-washing has been done among plant-houses, pits, and frames. This is, as a rule, done twice each year. Not only does lime-washing give things a tidier and cleaner look, but it clears off fungoid growths and disposes of insects and their eggs which may be present in nooks and crannies. The inside walls of plant-houses were attended to at the same time, any plants

which interfered with the work being loosened until the wall was washed, and afterwards regulated, pruned as was necessary, and retied. The refuse lime is always thrown on the manure heap, where it is of value.

Boxwood.—In the beginning of the week a start was made with the annual trimming of Boxwood. To many this may appear rather early, but this practice has been followed for many years with the best results. There is a large quantity of Box to be attended to, and it is (purposely) permitted to grow higher than is usual, so that it takes a long time to get over it all. At the present time, before the busy season really starts, it is, therefore, considered advisable to push on this work, and, as has been said, no evil results follow the trimming of the Boxwood so early in the year.

Hardy fruit.—Growth is increasingly active among hardy fruit-trees, and the usual precautions customary at this time are being taken. Gooseberries, being wired in, are free from the attacks of bud-eating birds, but they are at times (perhaps owing in part to their being enclosed) liable to trifling outbreaks of caterpillar. Now that the bushes are uniformly green they have been freely dusted with soot. This keeps the fly from depositing its eggs in the tissues of the young foliage; and by and by a second dressing will be given. This is, generally speaking, sufficient to prevent damage being done, and the summer rains clean the foliage and prevent any unsightliness. There is, fortunately, no "big-bud" among Black Currants in these gardens, but, as it is known to exist in the neighbourhood, a close inspection is made from time to time in order that any incipient outbreak may be promptly dealt with. Strawberry beds have been dressed with a quick-acting chemical manure and well hoed up. The plants, as a whole, have come through a rather unfavourable winter in a satisfactory way. The flowers of the earliest Peaches and Nectarines on south walls are on the point of expanding, and protection is being given at night when frost threatens. Plum-trees are very little behind. The promise of bloom is gratifying; but so much cannot be said in the case of Pears. Certainly the majority look very promising, but the appearance of some trees—notably Beurré Hardy and some young trees of Dovenné du Comice—is not so good as usual. Apples, both on walls and in the open, promise well, and the same may be said of Morello Cherries, both old and young trees.

Fruit-trees in pots.—These, having been kept as cool as possible, are now in bloom, and are fertilised daily when the sun shines and pollen works freely. In the case of trees in pots, regular attention is now necessary in respect of moisture, and the trees ought to be inspected twice a day. As soon as the petals fall and the set is assured, the syringe must be got to work. This is done twice a day round about 7 a.m. and again at present about 4 p.m. As the sunshine increases, the afternoon syringing will gradually be done later, but never after 5.30 p.m. If it is possible to partly plunge the pots less watering may suffice.

Thinning fruits.—It always pays to attend to the thinning of Peaches and Nectarines under glass at as early a date as possible. At the same time thinning must not be rushed—that is to say, it is much better to spread out the operation and thin by degrees. The same remark applies to disbudding, and in both cases badly-placed fruits or shoots ought to be removed first. There is always a certain amount of fruit-dropping at stoning time, so the final thinning may be delayed until after that time. In the case of Grape thinning, it may be feared that the work will be prolonged over much more than the customary time. Grape thinning is not learned in a day, and there is a great scarcity of skilled thinners. This will, however, result in young lads getting a chance which they might not otherwise have had, and which will be beneficial to them. Beginners are never, as a rule, apt to be too severe in their methods, and when once a sharp lad who has an intelligent interest in his work has learnt how to thin it is surprising how soon he improves.

Ferns under glass.—Among recently-repotted Ferns growth has been rapid and regular. With the greater strength of the sun it is now advisable to shade the young fronds from the direct rays, otherwise there is a danger that they may be scorched. It is, perhaps, rather too early to obscure the glass permanently, and it is better to shade the plants by means of temporary screens, which can be removed after sundown or during sunless days. Such shade can be easily afforded by placing a few moderately long canes among the plants upon which tiffany or newspapers can be placed. In the course of the week a number of young Pterises of various kinds was potted into 3-inch pots. Such young plants are useful in many ways, and as they are of no great value, should odd pieces come to grief when employed in small vases the loss is not grudged. *Adiantum Henslovianum* has been given a thorough trial among the other varieties of the family grown in the ordinary temperature. While it has done fairly well, the plant never had the appearance which it had when grown (like *A. Farleyense*) in the stove, and so it has been replaced in the warmer house.

W. McGuffog.
Balmie Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of course the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Cytisus racemosus losing its flower-buds (P. D.).—The most general cause of this plant losing its flower-buds in the manner complained of is that it is grown in too high and dry a temperature, or that it has been allowed to suffer from want of moisture at the roots, and then heavily watered. To grow this *Cytisus* well it should be kept in a cool house from which frost is just excluded.

Astilbe (Spiræa) japonica in pots not flowering (J.).—The plants should have been divided and planted out in a sunny border of good, rich soil for a couple of seasons. They will not go on flowering perpetually in pots without some recuperative treatment. Divide at the end of March and plant out, allowing them to remain until they become strong clumps, then pot up again. When dividing, a large root may be cut into three or four portions.

Ferns under a bell-glass (A Fern Lover).—Your bell-glass would be very suitable for a plant of the Killarney Fern (*Trichomanes radicans*). Begin by putting plenty of drainage in the bottom of the pan, then a little Moss, and use a compost mainly of peat, with a little loam or leaf-soil, with a number of pieces of sandstone about the size of marbles in it. If you can stand the Fern-pan in another pan of water, so as just to touch the bottom of it, it will be an advantage. Do not let this Fern stand in the sun.

Chrysanthemum cuttings flagging (P.).—A shelf in a greenhouse is a very bad place for newly-pit-in Chrysanthemum cuttings, as there they would be sure to flag. If a slightly warm and rather close frame is not available, then cover a portion of the stage in the greenhouse with a few slates, and on these place some Coconut-fibre. Stand the plants on this and cover them over with a hand-light. Do not allow the soil in the pots to become dry, and the cuttings will soon strike root if not already too much dried up by being placed on the shelf.

Growing Ten-week Stocks (C. R.).—Ten-week Stocks sometimes go off with a disease known locally as blackleg, which is chiefly caused by sowing early in heat, and permitting the plants to remain too long in the seed-pans. With more rational treatment, not so much forcing, sowing thinly, and pricking off as soon as they can be handled, and hardened in cold frames, there will not be much risk of failure. Dressings of lime and soot are always beneficial; and it may be necessary to change some of the soil. When the same beds are planted with Stocks every year, a little sulphur dusted among the young plants will be beneficial.

Daffodils not flowering (Disappointed).—As the bulbs are planted amongst shrubs the reason of their not flowering is obvious. They cannot have sufficient nourishment to perfect and mature the bulbs, or the bulbs themselves may be crowded too closely together, and require removal to fresh ground. They ought to be replanted once in three or four years, when the bulbs are quite at rest—say, in August, or perhaps in July. Plant the bulbs in deep, rich soil, if in clumps, 4 inches or 5 inches apart. They might not flower well the first year after planting, but would do so

abundantly in subsequent years—that is, if the plants have a fair exposure to light and air. If the bulbs are planted under bushes they cannot do well, as not only are light and air excluded, but the roots of the bushes exhaust the soil to an alarming extent.

TREES AND SHRUBS.

Pruning Laurels (J. R. Morton).—The best time to prune Laurels is during the spring—say, early in April. The shoots made following the cutting get firm before the winter, otherwise a spell of hard frost is apt to cripple them should a cold, damp autumn follow the summer growth.

VEGETABLES.

Growing Tomatoes in a greenhouse (Tomato).—It is an easy matter to secure a crop of Tomatoes in an unheated house during the months of July, August, and September. You should purchase good, strong, well-hardened plants in pots towards the end of this month, and as soon as they have got used to the house—say, a week afterwards—plant them out. Do not grow them in pots, if it can be avoided, but set them out in mounds, or in a ridge of good, loamy soil, placed on the front bed or stage. About $\frac{1}{2}$ bushel to each is enough to start them in, adding a little more on the surface from time to time during the season. Place them from 12 inches to 15 inches apart, and train them to a single stem. Good turfy or fibrous loam, with a fifth or sixth part of thoroughly decayed hotbed manure, and a little soot and bone-meal, forms about the best compost. It is not well to use rich soil at first, nor to give much water until the plants commence fruiting; but when the fruits are swelling freely the plants may have liquid manure at almost every application with advantage.

MISCELLANEOUS.

Brick pits v. frames (F. Q.).—There are both advantages and disadvantages in brick pits over frames and hotbeds. The advantages are: less manure is required, and the heat is economised, being retained with brick walls, cold rains and wind being excluded. On the other hand, brick pits are more costly, and if the heat declines too rapidly there are not the same facilities for renewing it with linings, as in the case of a hotbed. Of course, the brick pit has a neater appearance in the garden as the hotbed always makes a litter. Stout boards would make a useful pit, and be nearly as warm as bricks, but not so lasting, though it would be cheaper in the first construction. A useful brick pit would be 4 feet high at the back and 2 feet 6 inches to 2 feet 9 inches at the front, and may be excavated 1 foot deep. If excavated more it would be very damp in winter as a store pit. From 5 feet 6 inches to 6 feet would be a convenient width.

CATALOGUES RECEIVED.

CHEAL AND SONS, Crawley.—List of Dahlias, etc., etc.

THE BOUNDARY CHEMICAL CO., Liverpool.—From one Garden Lover to Another: A Book of Practical Information.

W. A. BURPEE AND CO., Philadelphia.—Forty Years' Burpee Service. Fortieth Anniversary Supplement, 1876-1916.

OBITUARY.

MR. R. H. FREMLIN.

We have lately lost a very interesting gardener of Wateringbury, in Kent. Mr. Fremlin was a true lover of hardy flowers, and knew well what to do with them. I had often seen plants in particularly good soils, like those round Edinburgh, in which hardy flowers grew finely, but for many years I had not seen them do so well as in Mr. Fremlin's garden. He told me it was the best Hop soil in the county, and the flowers we so often cultivate with difficulty flourished in that soil and were very charming to see. After spending several hours with him among the flowers on the lawns it was a pleasant surprise to get into the shade of a group of trees and find there a colony of the giant Forget-me-not in splendid health. This garden and a few others make one doubt if any preparation of mixed soils ever gives so fine a result as a naturally friable and good soil. He was one of the first of the few to bring hardy flowers of the best into the garden landscape, so to say, and with singularly good effect, and not merely in mixed border or the hungry margins of shrubbery. We have had the pleasure of illustrating in past issues various rare plants of his collection. W.

GARDENING ILLUSTRATED.

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NOTES OF THE WEEK.

The Blizzard on Tuesday, March 28th, was very severe in this locality, uprooting many trees and doing immense damage to many fine Cedars, Yews, and other shrubs.—F. W. GALLOP, *Lilford Hall Gardens, Oundle.*

Primula Winterei in S.W. Scotland.—*Primula Winterei* has stood the winter here quite well. It is on a sloping moraine facing south-west, and has had no covering of any kind during the winter, which has been a most trying one for many plants.—S. ARNOTT.

Lonicera nitida.—A shrub which seems to approve of this extraordinary season is *Lonicera nitida*. A fine specimen about 2½ feet high is quite covered with flower-buds. It was planted, I think, in 1913, and has never before shown signs of flowering.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

The Green Snowdrop.—A nice little group of the curious green Snowdrop, *Galanthus nivalis virescens*, was in bloom in the rock garden at the Royal Botanic Gardens, Edinburgh, on April 5th. It is the latest of the Snowdrops and is rather singular with its green markings on the exterior of the outer segments, and the almost total emerald colouring of the interior.—ESS.

Prostanthera rotundifolia.—This shrub was one of the numerous attractive plants at the Royal Botanic Gardens, Edinburgh, the other day. It is a charming little shrub with neat leaves and labiate flowers of a pleasing blue or purple. The *Prostantheras* are not much grown in private gardens, but are worth considering by those who care for out-of-the-way shrubs. It is a native of Australia.—S. M. D.

Orange-berried Holly and birds.—Looking round to-day (March 28th) I notice that a good-sized tree of the above has been untouched by the birds. After such a spell of bad weather as we have had lately it struck me as rather unusual that a tree so loaded with fruit should be ignored while the scarlet berries of trees in the same group were cleared off in a few hours by the missel thrush and other birds.—E. M.

Narcissus capax fl.-pl.—It is rather disappointing to find that the blooms of Queen Anne's Double Daffodil are much fewer than is generally the case. This is always a favourite, and it does not seem

to grow cheaper—that is, in comparison with other varieties. Probably this may be, in some measure, attributable to the slowness of increase among the bulbs, one clump with me having grown only very slightly larger during the last twenty years.—W. MCG.

Poisoning from Daffodil bulbs.—At a meeting of the Edinburgh branch of the Pharmaceutical Society of Great Britain a communication was made by Mr. W. G. M'Nab on a case of poisoning from Daffodil bulbs. Poisonous symptoms had followed partaking of soup and afterwards of stew containing what were supposed to be sliced Onions, but which proved to be bulbs of *Narcissus pseudo-Narcissus*. The bulbs had been stored in the same house as the Onions, and had been taken by mistake. Similar cases of poisoning have been recorded and traced to the alkaloid pseudo-narcissine.

Diervilla rosea for cutting.—Looking round the other day, the progress made by a group of *Diervilla rosea* is worth noting. These shrubs were planted a little over a twelvemonth ago, and, as was to be expected, did not bloom very freely last season. They are in a rather holding dark loam and have made considerable progress, appearing to be suited with their position, which is slightly shaded. The flowers, when cut in the bud state, expand freely in water, and in the same state bear a long railway journey well, arriving, I am told, in excellent order and remaining effective for a considerable time.—KIRK.

Lithospermum rosmarinifolium is in most abundant bloom. I am not sure that its clear blue clusters of flower are still brighter and more abundant than in the familiar *L. prostratum*, but it has the merit of growing in calcareous loam, which is fatal to *L. prostratum*, and, moreover, flowers all the winter, which is a great merit. I wish some clever hybridist would furnish us with a hybrid between the two that would take after *L. rosmarinifolium* and grow on limestone, while retaining the hardness of *L. prostratum*. It would indeed be a plant for everyone. Saxifrages are being hybridised every day; why not *Lithospermums*?—E. H. WOODALL, in *The Garden*.

Anemone blanda scythinica.—This distinct variety of the Greek Anemone is now (March 25th) in bloom. The flowers, when fully expanded, are white, heavily shaded with blue on the underside of the lower

row of petals. The above variety seems to be the gem of the lot and is increasing freely with me on a bed which catches the morning sun. There are pink, blue, and white forms of *A. blanda*, all of which are early and suitable for carpeting the ground below Roses and other shrubs, naturalising in the Grass, or growing through permanent edgings to flower beds. The *A. blanda* forms are easily distinguished from the Apennine Windflower by their rather larger flowers and round, bulb-like roots, the latter having a creeping rhizome and flowering later.—E. M.

Tulipa saxatilis.—This reminds one so much of a larger and brighter *T. sylvestris*; its way of running at the root and popping up in unexpected places is so amusing when left to itself in a dry, rocky soil. It enjoys calcareous clay, but I fancy it thrives in sandy soils also. The pretty way its buds and half-opened flowers hang their heads is most original, and the tender pink of the widely-expanded bloom is very pleasing, especially when three or more flowers are open on one bulb. Altogether it is a great gain to the spring garden, and it is best when left to take care of itself—another great merit, as it can cover a considerable area.—E. H. WOODALL, in *The Garden*.

Andromeda formosa.—Flowers of this noble evergreen flowering shrub have come to me from Knap Hill. They were so well flowered that I had to ask Mr. Waterer how they came about, and this is what he says:—"The winter always kills the buds with us, so I put it into a cool-house, and as it came out well I send it you, and am very pleased you like it. I suppose it would flower in Cornwall and Devonshire. Here it is hardy in a sheltered position as far as the plant is concerned, but the buds are always killed in the winter." The flowers are certainly very much stricken by frost, and it is one of the things well worth growing out-of-doors in some simple way and then transferring to a cool-house for the sake of its beautiful flowers.—W.

Sea sand.—The note by "Kirk," on page 137, should remind readers that sea sand may be more freely used by those who live by a sandy sea beach or are within reasonable distance of such and without a ready supply from other sources. I used sea sand for a number of years for every purpose for which silver and other sands can be utilised, and generally fresh from the shore. In my case the proportion of shell was not large, but many particles

were present in the sand which was used as collected. This sand contained a perceptible amount of salt, but it never did any harm to cuttings, seeds, or plants. It was regularly employed for every purpose, including putting round corms of Gladioli when they were planted. Cuttings struck in this pure sea sand succeeded perfectly well. I employed it for eighteen or twenty years, and, were I again in possession of a garden by the sea, I would revert to the use of sea sand with every confidence.—S. A.

Christmas Roses: Treatment and time of planting.—Christmas Roses like a deep, rich soil in partial shade and sheltered from boisterous winds. The bed must be 3 feet deep, and a good layer of cow-mauure put on top of the drainage, which is most important, care being taken that it does not come into contact with the roots. This provides the cool, moist bottom Christmas Roses are so fond of. After flowering, mulch with leaf-mould and well-rotted manure, and in dry weather give ample supplies of water, alternated with soot and manure water. Divide the clumps and plant as soon as possible after flowering in good turfy loam and leaf-mould made firm.—J. C. PRESTON, *Tabley, Knutsford.*

Trifolium uniflorum.—Few of the Trefoils are so deserving of introduction to the garden as this, which appears to have dropped out of cultivation and which I do not find in the catalogues of the present day. It was introduced from Syria 116 years ago, and has probably been sacrificed in the wholesale banishment of so many hardy flowers at the time the bedding system was in vogue. As a plant for the alpine-house it ought to command attention, and I believe it is hardy in a dry position. As seen in one of the houses at the Edinburgh Royal Botanic Gardens, Edinburgh, the other day, it was very beautiful. The trifoliate foliage is prettily marked with brown on the green ground, and the flowers, which are purple and blue, are large and raised well above the trailing foliage.—S. ARNOTT.

The Scarlet and Poppy Anemones.—Looking at groups of *A. fulgens*, happy in meadow turf where they have been for some years with no care or disturbance, I thought of the many years that had been wasted with the Poppy Anemone (*A. coronaria*) and its numerous forms, double and single, not one of them half so good as the wild scarlet plant. At one time long lists of the double forms were sent out and the varieties labelled and grown without any good results. The mixed forms of the Poppy Anemone are showy, but not always good in colour, and in a border where they get better soil than *A. fulgens* has in the Grass they are a poor, ragged lot. Near the sea and in open soils, as in Ireland and Normandy, at Caen, they are free and hardy. In my cool, heavy soil they are not hardy, and rarely survive the winter, whereas *A. fulgens* is really hardy.—W.

The Scarlet Windflower (*Anemone fulgens*).—This has been in bloom for several weeks and is now reaching its highest point of beauty. When planted in rich, made-up soils it gradually disappears for some reason, but in meadow Grass it not only survives year after year but increases freely. The roots are planted during the autumn and winter, when the turf is lifted with a spade and three or more roots, at about 1 foot apart, put in, when the sod is replaced. In the Grass the Scarlet Windflower has few rivals at this season of the year; indeed so satisfactory is it naturalised in this way that its numbers have been considerably in-

creased of late. Established groups are gradually increasing into little colonies, which are in some instances intermingled with Daffodils and Grape Hyacinths. Once planted no further care is necessary. This Anemone should be more used in open woodlands, on sunny banks, in pleasure grounds, orchards, etc. Indeed, any position having a south-west exposure, and not of a boggy nature, will suit it. The flowers have a large blue-black boss in the centre, which serves to enhance their beauty when fully open. The flowers, freely produced on slender stalks, each 1 foot in length, even in the Grass, are very useful for cutting. There is a remarkably beautiful form with broader petals and larger flowers which comes from Greece.—E. M.

Cydonia Maulei.—This is the dwarfest of the Quinces and very useful, as it is equally at home in a mass in the front of the shrubbery or grown in a bed on the outskirts of the lawn. Moreover, it is worth growing, for its golden, fragrant fruits make an excellent jelly; in fact, some people consider that they are better than those of other Quinces for that purpose. It is usually about 2 feet in height, forming a spreading bush sometimes 5 feet or more across. The flowers are orange-red in colour and borne freely from the previous year's wood. There is a variety, *alba*, with dirty-white flowers, which is much inferior to the type in general beauty, but this cannot be said of *atrosanguinea*, with large, blood-red flowers, and which, if anything, is more free-flowering than the type. *Leichtlini* and *superba* are other forms which closely resemble the last-named. Another variety is *Sargenti*, a particularly dwarf form which might find a place in the rock garden. *C. Maulei* was introduced by Messrs. Maule, of Bristol, about forty-five years ago. It does well in light, loamy soil, and can be increased by seeds or by division. In many respects *C. Maulei* might be looked upon as a dwarf form of *C. japonica*, but it flowers more satisfactorily in the open border than that species, and is distinct in other ways. It blooms from early April to late May.—D.

Primula rosea.—In your issue of March 25th "An Amateur of Hardy Flowers" discusses the treatment of *Primula rosea*. It grows very well here in running water, and the earliest blooms come on plants which grow on a ledge of millstone grit over which a small stream flows summer and winter. I do not understand the suggestion that soil should be brought up round the crown. These plants stick up on a dense mat of roots out of the mud, and in some cases the mud is nearly all washed away by the stream, and I found no tendency to rot off. The roots get so thick that it is very difficult to divide them. My object in writing is, however, to point out the merits of *Primula rosea* as a bowl plant for winter flowering. I took one clump indoors during the last week of January when the flowers were beginning to show red. The second week in February it began to bloom, and has continued seven weeks in flower. Another clump was taken in during the blizzards of February, and it has now been flowering four weeks and looks good for another two at least. The plants are simply put into a bowl of water. The plants have the great merit of not growing straggly and floppy, even after six weeks of only the light of a room-window, but, of course, the flowers do not develop quite so good a colour as when grown in the natural way. My first plant has now gone back into the mud, where I hope it will recuperate during the next ten months.—L. J. ROGERS, *Westwood, Leeds.*

VEGETABLES.

BRUSSELS SPROUTS.

VARIOUS dates are chosen for sowing this important vegetable. Seeds may be sown outdoors during March and April, and these will produce good crops in due course. Some will choose a small frame, or even a handlight, and in this plants are forwarded for spring planting. Requiring Sprouts fairly early in the autumn, I almost invariably sow a portion of my seeds on a gentle hotbed in late February, giving air freely as soon as the seedlings are above the soil, the lights in fine weather being entirely dispensed with. The plants, when strong, are planted direct into their permanent quarters, for the custom is to set apart a plot that has been cleared of some other crop in time for the land to be manured, deeply dug, and pulverised by the weather. That the land shall not be standing idle in the interval it may be marked for the rows of Sprouts, the intervening spaces being cropped with Lettuce sown or planted, or with Radishes. It would be possible to sow in single drills in these intervening spaces Cabbage seeds for autumn use, early Cauliflowers, salad Onions, or any other quick-maturing crop that would be cleared before the Sprouts required the whole space. Much, however, depends on the width apart that is allowed. Of course, it is possible to grow a crop of Potatoes on the ground, planting the Sprouts between them. In this case not less than 30 inches must divide the rows. In strong ground 3 feet apart for Potatoes would not be too much. I have now for some time discontinued growing Potatoes as a companion crop, because of the difficulty of cleaning them without injuring the Sprouts. When planting Sprouts as an independent crop I allow 2 feet between the plants and the rows, and in this way the ground becomes fully occupied.

I always sow some seeds with the early Broccoli, Cauliflower, Cabbage, Leeks, and others of kindred nature, and these, being later, are planted for succession as ground becomes vacant. As a rule, these are short-stemmed compared with the frame-sown plants, and, of course, do not give quite the same amount of produce. At the same time, in small gardens where there is not an early demand, these outdoor-raised plants are most serviceable. In dealing with intercrops it is well to get these sown or planted as early in the season as possible, so that they have plenty of time to grow ahead of the Sprouts. Autumn or early glass-raised Lettuces can be planted at any time previous to the putting out of the Brussels Sprouts. I have cut many hundreds of summer Lettuces from the Sprout quarter without detriment.

In the matter of variety I have a distinct preference for Sutton's Dwarf Gem, of dwarfer growth than some of the "exhibition" stocks. One named Covent Garden Favourite is also dwarf. Veitch's Paragon I used to favour, because it was dwarf and gave good, firm buttons. Cambridge Champion was once boomed because it bore large Sprouts, but I think that now the small, firm Sprouts are preferred. The Wroxton is a favourite with many.

It is strange that in cottage gardens the owners quite early in the season cut off the tops of the Sprouts without any reason for so doing. Cutting the head off, naturally removes much immature growth that would develop with the advancing weeks of winter. The removal of the heads, too, has a tendency to force the buttons open. In late winter it is often possible to find

nice, close buttons clustering in the head when there are none below, and it is well to remember that, hardy as Brussels Sprouts are, the plants do sometimes feel the pinch of wintry weather. Leave the heads untouched until February at least has somewhat advanced, and when Cabbages, Savoys, etc., are getting scarce the Sprout tops come in every useful.

Wills. W. S.

NOTES AND REPLIES.

Planting Rhubarb.—This crop, from the great weight of its produce, quickly exhausts the soil; therefore it is not desirable to let it stand too long without removal, as plants that have been for some time undisturbed are liable to produce flowering shoots, which, even if cut out as soon as they make their appearance, interfere with the growth of the edible stalks. It is not a good plan to disturb the whole plantation at once, as this stops the supply for a time. If some of the outside crowns be severed from strong established stools with a por-

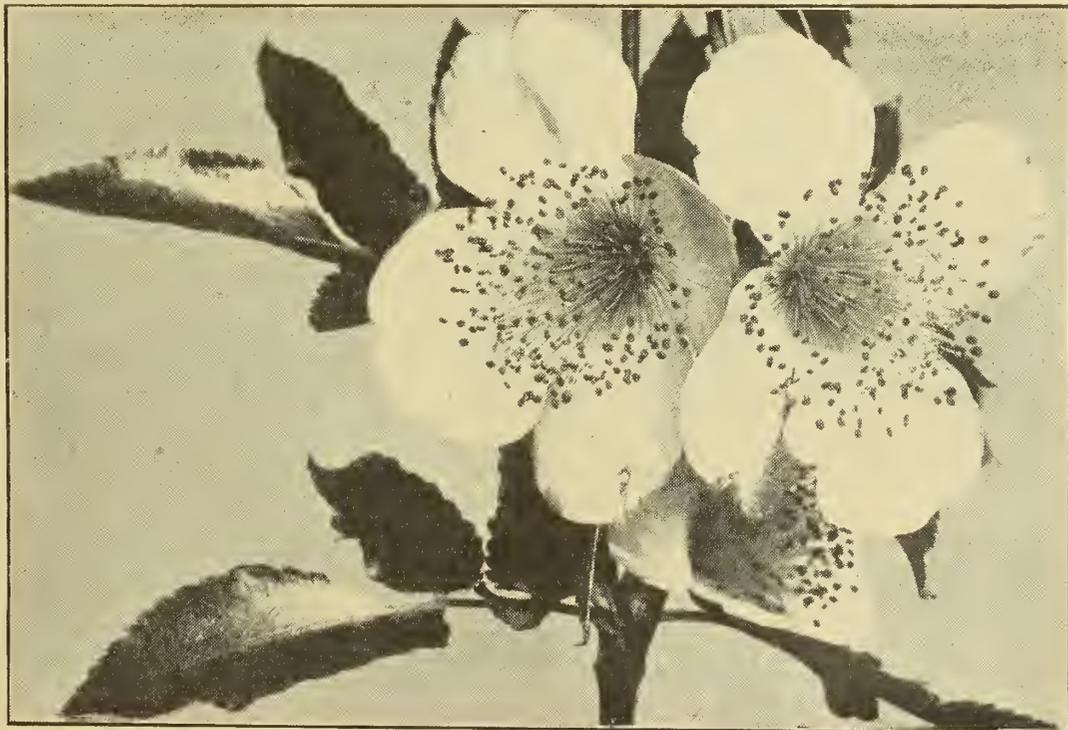
the glass. When only a few plants are wanted, suitable shelf-room is easily found within a few inches of the glass, but when plants by the thousand are required to plant several houses an arrangement of wire supports to suspend from rafters or sash-bars can be managed. I have often found it necessary to fit up a temporary stage or platform with boards, which are easily moved from place to place. The importance of light is everywhere recognised, especially when the plants are young and weakly.—E. H.

The Globe Artichoke.—I have frequently seen many inferior plants of this in gardens, and in others I fear the culture is at fault. I have grown all the varieties I could obtain, and some are almost worthless. I like the Large Purple and the Large Green Globe when good strains can be obtained. It is not desirable to rely always upon seed. For years I had suckers sent me early in the year from France, from a noted grower, as I could not get plants from seed in this country of

TREES AND SHRUBS.

EUCRYPHIA PINNATIFOLIA.

ALTHOUGH here and there one meets with good examples of this Chilean shrub, it is less frequently found in gardens than could be wished. This is, doubtless, due to the fact of its being difficult to establish, especially when, as is frequently the case, it has been propagated from layers. In a mild winter it is practically evergreen, but when severe frost is experienced the majority of the leaves fall by the middle of January. The flowers appear in July and August, and are suggestive of a large, shapely single Rose. The petals are white, and there is a central mass of golden stamens. It succeeds best in a moist climate in damp but well-drained ground. The south-west counties of England suit it admirably, whilst good examples are reported from Ireland. In Cornwall a very fine specimen is to be seen. Seeds are ripened in this



A flowering shoot of *Eucryphia pinnatifolia*.

tion of root each, and planted now two or three together, and allowed to attain a maximum of strength, not gathering from them this summer, they will bear strong stalks next spring; or roots that have been forced through the winter planted now and permitted to regain strength through the summer will succeed. As Rhubarb is a deep-rooting, gross-feeding plant, in all cases it should have rich deep soil, and if it be of a heavy, retentive nature some old exhausted tan, leaf-mould, wood-ashes, or sandy road-drift, if such can be procured, all mixed together with 6 inches or 8 inches of good rotten manure, should be mixed with it, trenching the ground 2 feet or 2½ feet deep, planting 6 feet apart each way. A crop of Radishes, Spinach, or Lettuce may be had off the ground between the rows before the Rhubarb makes sufficient growth to interfere with them. Existing beds of Rhubarb will be much benefited by heavy drenchings of manure-water during the next two months.

Advantage of light.—When raising Tomatoes early in the season it is important for the young plants to be near

anything like the quality. In some gardens these plants, in spite of protection, winter badly. Though from seed sown now—March—one can form new beds, in low-lying districts and badly-drained soils, frequent plantings are necessary, indeed it will be found advisable to make new plantations every three years, as after that time the heads become less succulent and the plants much weaker. I have frequently gained time by sowing seed in 5-inch pots in spring and thinning to the three strongest. Seedlings raised under glass, and when ready planted out in deeply-dug, prepared land, give a good return the following year.—M. F.

Clubbing in Cabbage, etc.—In some soils this is very troublesome. The one I have to deal with causes much thought to bring a crop through without many affected plants. Anything that will assist the crop is helpful. I have found nothing to equal soot and poultry manure. Last year these were most helpful with Cauliflower, Brussels Sprouts, etc. When the plants were coming into the rough leaf the first dressing was given, scattering it among the plants and giving another dressing in a fortnight. When planted out a coating is put round each plant when established, with another dressing in about a month.—J. C. F. C.

country, and plants raised from them appear to succeed better than those raised from layers. Layered branches take a couple of years or so to become well enough rooted to sever from the parent plant. Cuttings have occasionally been rooted, but not in any great quantity.

NOTES AND REPLIES.

The Star-flowered Magnolia (*Magnolia stellata*).—Few shrubs are more beautiful than this when seen at its best, for every branchlet is then clothed with glistening white, fragrant, star-like blossoms, each really semi-double in character. It is a native of Japan and has been grown in our gardens since 1877, although it only became really well known about twenty years ago. Often met with between 6 feet and 8 feet in height, it is over 12 feet high in some gardens, a particularly fine example existing in the gardens at Abbotsbury Castle, in Dorsetshire. It is, however, always met with as a bush, thereby differing from *M. Kobus*, a good-sized tree from Japan, with leaves like those of *M. stellata* and similar-sized white flowers, except that in

M. Kobus there are but six petals instead of twice or thrice that number, as in M. stellata. The flowering time is late March and April, and on that account it should be planted in a sheltered position, for if exposed to cold winds or frost when in flower the petals are soon injured. Plant in well-drained loamy soil and place a little peat or leaf-mould about the roots at planting time. Propagation is usually effected by grafting it upon stocks of M. Kobus, but it can be raised from layers. There is a variety with rose-flushed flowers, but it is not so beautiful as the type.—W. K.

The Mountain Pine (*Pinus montana*).—Although the ordinary form of this does not grow large enough for use as a timber tree, there are varieties that grow from 50 feet to 100 feet high and form a considerable portion of the forest vegetation of certain parts of the Pyrenees and also of a restricted area on the Italian frontier of the Swiss Alps. The chief of the tall-growing forms, known as *P. m. uncinata*, is being tried in some parts of the Scottish Highlands under forest conditions. Its value would appear to be greater, however, for shelter than for timber, for at high elevations it may grow large enough to protect young trees of greater commercial quality which cannot at present obtain a good start in bleak and exposed situations and at high elevations, but would grow well once they became established. The dwarf form of *P. montana* is, however, well worth planting for cover either in park or garden, or on hillside or moorland, for it harmonises well with the natural shrubby vegetation of the wilder parts of our country, is a good evergreen, and makes excellent cover for game. Moreover, it can be used with effect with double-flowered Gorse and common Broom for clothing bare places where the soil is thin and poor. It should be planted permanently when very small and young, for, as is the case with other Pines, trees two or three years old become established more quickly than older specimens.—D.

Spiræa arguta.—Of the early-flowering Spiræas, this is, in the open ground, one of the very best, while it is equally desirable for flowering under glass earlier in the season. It is of a very pleasing habit of growth, with slender, gracefully-arching shoots. Some of the Spiræas fail at times to give satisfaction by reason of the blossoms being injured by spring frosts, but this can be relied on. The pure white flowers are borne in clusters on the upper part of shoots made the previous year. When at their best the entire plant is quite a mass of white, which is very noticeable against the somewhat dark-coloured bark of the stems. It reaches a height of 6 feet to 8 feet, and a well-furnished specimen will be as much in diameter. For flowering under glass it may be potted up in autumn, just as the leaves are about to drop, when, if plunged out-of-doors and kept watered, the roots will take possession of the new soil before they are taken under glass. *Spiræa arguta* is of hybrid origin, but there is some doubt as to its parentage, though *Spiræa Thunbergi* is regarded as one parent.—K. R. W.

Linum Pallasi.—Under this name there is a fine yellow Flax cultivated in one of the cold-houses at the Edinburgh Royal Botanic Garden. It is after the style of *L. flavum* and *L. arboreum*, and bears at Edinburgh the reputation of being one of the best of its class. "The Index Kewensis" refers *L. Pallasi* to *L. tauricum*.—S. A.

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GARDEN FOOD.

MEATLESS CURRIES.

WHERE there is a garden, especially one in which there are facilities for growing small saladings under cover, it is economical to have at least two meatless dinners a week. Vegetable curries are nice in cold weather, but, as a rule, the English idea is to mix curry-powder with the gravy until it is very hot, and serve the dish with boiled Rice. Curry may be quite mild and yet be delicious. The flavouring of a mild curry is not disliked by children, and it adds to the variety of the dishes that can be made out of vegetables. The preparation of curry requires some care, as it is the cooking and frying of the gravy which make or mar the whole.

CABBAGE CURRY is delicious. Take a Cabbage with a firm, hard heart, wash and cut it into quarters, removing all the loose leaves. Slice finely after cutting out the whole of the stalk. Melt a dessertspoonful of bacon fat in a good-sized saucepan, place the sliced Cabbage in this, and fry gently, stirring occasionally until the Cabbage looks rather transparent. Slice two moderately large Onions in rings, peel and chop two large sour Apples, add these to the Cabbage, and continue frying the whole until it is nicely browned. Sprinkle into the saucepan a dessertspoonful of good curry-powder according to taste, a tablespoonful of flour, sufficient salt, two lumps of sugar, and the juice of a large Lemon. Fry for ten minutes longer, stirring all the time, then add two cupfuls of hot water or vegetable stock. Simmer for a few minutes until well blended, then turn into a jar. Stand this in a pan of boiling water and cook for an hour or longer. Just before serving pour two tablespoonfuls of boiling milk upon a tablespoonful of desiccated Coconut. Leave for five minutes, then stir the Coconut and milk into the curry, and serve at once with boiled Rice.

POTATOES are very good curried by the above recipe, as also firm Brussels Sprouts. Perhaps the best way to serve Brussels Sprouts is to boil them and toss them in a little cream or butter and serve on squares of buttered toast. Carrots and Parsnips will also curry nicely, and there is no end to the various vegetable curries that can be made with a little trouble and forethought. H. T. C.

NOTES AND REPLIES.

Apple Newtown Pippin.—It is only recently I have made the acquaintance of this popular Apple. I have not had occasion to purchase, because the garden furnished all I needed. The Newtown Pippin is undoubtedly a good Apple, and it is to be regretted that it will not grow in this country. The fruit imported now in such a fresh, plump state does not compare with our own in normal times. Some of our own standard sorts compare favourably with it, and even in its present season the Newtown is not very far ahead of a good sample of Sturmer Pippin, which seems to be overlooked by many private gardeners. Unlike the Newtown, the Sturmer is a hardy, free-fruited, and healthy tree, adapted to our variable climate. Adams' Pearmain, Bess Pool, Claygate Pearmain, Reinette de Canada, and Dutch Mignonne are each very good Apples. It is, of course, more or less true that purchasers of these imported Apples have not a fruit garden of their own of any size, therefore those who are dependent on their own home supply must look to those sorts that will thrive and crop freely and regularly in their own gardens. The secret of having plump Apples in spring is a cool

store and gathering as late as possible. If they are not carefully gathered and cool-stored, then they shrivel before their season has actually commenced, and, when shrivelled, their value has gone. I have recently tasted some Surrey-grown Sturmer Pippins that are as firm, juicy, and full-flavoured as to place them in competition with the best of these imported fruits.—W. S.

Celeriac.—Good Celeriac should be plentiful in all country gardens, but it is not always made good use of by the cook. Such soup and dishes are often spoiled by over-spicing. Pepper, Mace, etc., are better left out. The very large-rooted kind of Celeriac is not the best.

CELERIAC SOUP.—Scrape a root or two, according to size, of Celeriac, wash it well, and cut it into slices. Cut a large Onion and a Turnip in the same way and put all into a stewpan containing 1 oz. of butter; cover them closely with a large piece of greased paper and let them cook gently for fifteen minutes without becoming in the least brown. Stir in two tablespoonfuls of best flour, and when it is smoothly mixed with the fat pour in by degrees, stirring quickly all the time, a pint and a half of water. As soon as it has boiled and thickened, lightly season. Draw the pan to the side of the stove where the vegetables can simmer gently, and when they are quite tender, pass them and the liquid in which they were cooked through a sieve and add one and a half pints of milk. Make the soup hot, letting it just reach boiling point, and serve it with some dry, grated Parmesan cheese for those who like cheese.

Excelsior Haricot.—This is a small variety of Haricot, in shape like the Flageolettes, but rather fuller. It is also somewhat different in colour, being browner, although a green shade is noticeable. Our sample was from Messrs. Barr, Covent Garden. We steeped the Beans twelve hours, then placed them in clean, cold water, brought them rapidly to the boil, and let them remain at a gentle heat until soft. We added a little "nutter" (vegetable butter) to them while cooking, as some form of fat seems necessary to make Beans palatable. Served with roasted Potato and a little cheese savoury and breadcrumbs they answered excellently. They have a pleasant flavour and are easily digestible.

Keeping Ribstons.—When I sent you two or three specimens of my Ribstou Pippin early in December last I mentioned that when in past years I had stored them on shelves they had shrivelled after the turn of the year, and that this year I was trying the experiment of storing them in a flour barrel, each in silver paper. The experiment has been quite successful, as you will see by a couple sent you herewith. About 3 per cent. or 4 per cent. of them only have gone rotten. I am not quite sure whether they would not have been better without the silver paper, which has become damp, but perhaps the damp has been absorbed by the paper and saved the fruit.—J. D. THORBURN, Upton Cross, Chester.

The Potato Onion.—The fine examples of this shown in a recent issue were sent me by Lady Moore from Glasnevin. The warm Irish soils seem to suit this interesting Onion better than some of our heavy soils, and the Onion finds favour with the cook, and is said to be a cause of the merit of the Irish stew, often, it is said, misunderstood by the English cook. The flavour is milder than that of the common Onion. Of its origin little appears to be known.—W.

—I was pleased to see such a fine illustration of the Potato Onion in the issue of April 8th, the figure on page 185 giving an excellent idea of the variety. The Potato Onion can be recommended as a most excellent keeper, remaining hard and fit for use after the ordinary variety begins to turn soft and give indications of growth. It is worthy of more extended cultivation, and might—probably would—succeed in gardens where sown out. Onions fail owing to the attacks of the grub.—W. McG., Balmac.

PLANTS AND FLOWERS.

ROOM AND WINDOW.

THE TAURIAN SCILLA AND THE BAYONNE DAFFODIL.

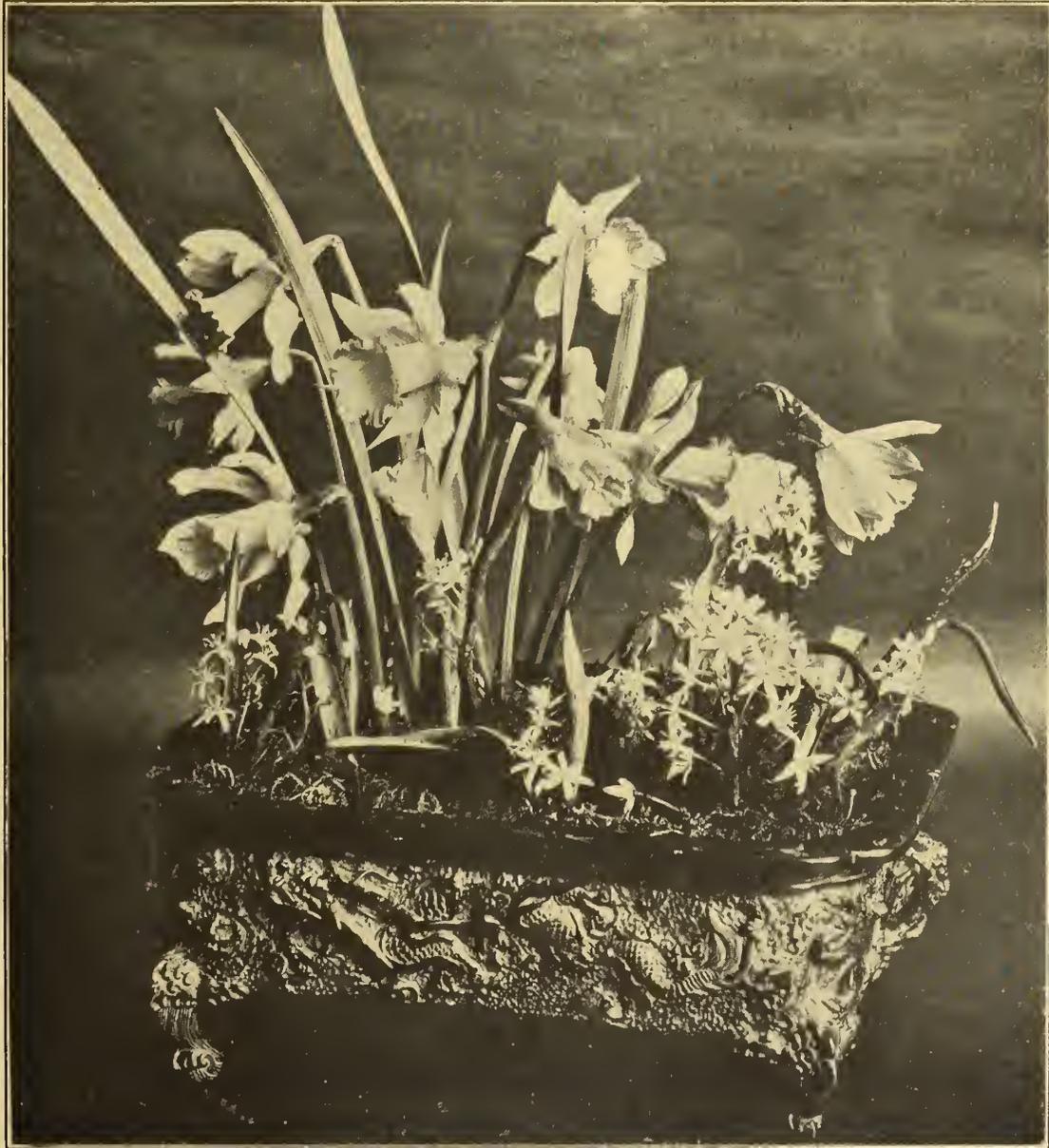
THESE are among the plants one cannot well do without. The Taurian Scilla sometimes called a variety of *S. bifolia*, and erroneously so from a garden point of view, is an early and charming flower, not to be got in the trade so freely as some others. It is much bolder and of a richer

order. Roots of Pansies and other hardy seedlings can be cheaply obtained in the market, and Sweet Peas may be purchased in the shape of seeds or small plants, while a lot of brightness may be obtained from Nasturtiums sown now.—E. H.

Fine-foliaged plants in rooms.—At this dull time of the year those who have plants in the windows of rooms sometimes wonder what they can do to assist in their well-being. Such plants may include *Aspidistras*, *Aralias*, *Ficus elastica*, or even Palms of the hardier sorts, and when gas is used, that and the heat from fires sometimes injure them. Much good can be done in such cases to those broad-leaved subjects by sponging the foliage with tepid soapy water at frequent intervals, afterwards washing them over with clear water. It is of advantage, too, to change their position occasionally. In all cases, just at pre-

Caladiums, and feathery Palms were all useful, and when these were not available we could find suitable things in cooler houses among Ferns and bulbs. Of course, there were fruiting plants, including the small *Otaheite Orange* laden with fruit. For a change I have sometimes with advantage used pans of *Selaginellas* as a base for flowers.—E. H.

Flowers for the rooms.—There are now the early-flowering bulbs in much variety, white and red *Azaleas*, *Primulas*, *Cinerarias*, *Arum Lilies*, *Lilium longiflorum*, and plenty of Ferns, Palms, and other fine-foliaged plants that will keep fresh a long time if carefully managed as regards watering, which means they must be kept reasonably moist at the roots and the leaves washed with a soft, damp sponge occasionally to remove dust and other impurities. Of course, there should be other things in re-



The Bayonne Daffodil and the Taurian Squill in a vase.

colour than the ordinary *S. bifolia* of France. It has its place here around some of the Bayonne Daffodil, the earliest and the best of the early Daffodils. The Bayonne Daffodil grows on the Grass better than it does in the garden soil.

W.

NOTES AND REPLIES.

Window-boxes.—I suppose window-boxes and other decorations will in some cases be stunted in consequence of the war. That will be a mistake, I think, as there is nothing like useful and interesting work to enable us to see the bright side of things. There are many cheap plants to beautify boxes and small beds and borders. *Mignonette* and other annuals may be sown when the soil is in good working

sent, no excess of moisture ought to be supplied.—KIRK.

Epimedium leaves for winter.—The bronzy leaves of the *Epimediums* are valuable for winter decoration. It is not advisable to crop the plants too hard, as the old foliage helps to protect the young growths, which are sometimes liable to be injured by late frosts. The best of the *Epimediums* for this purpose are the larger-growing ones, such as *E. colchicum* and *E. perralderianum*, both of these having good stems and bold, handsome, well-coloured leaves. Associated with Rose and other fruits, they are pretty for table decoration when flowers are scarce.—ESS.

Plants for table decoration in winter.—In the past we depended largely upon the stove or other warm-houses for plants to decorate the table. *Pandanus Veitchii* was good, but the spines on the leaves were sometimes troublesome. *Crotons*, bright-leaved *Dracaenas*,

serve, as where gas is burnt there must be a change sometimes.—E. H.

Treatment of seedling Abutilons (*Inquirer*).—You have only to grow the plants on in much the same manner as *Fuchsias*, affording them plenty of light, air, and moisture, and they will probably all bloom in the autumn or early part of the winter. When the tiny seedlings have formed one proper leaf transfer them singly to 3-inch pots, using a mixture of equal parts of loam and leaf-mould, with some sand. Keep them moist and shift them on into larger pots until those from 6 inches to 8 inches in diameter are reached about the end of August. For this last potting the soil should be somewhat heavier, consisting chiefly of good fibrous loam, and it should be made quite firm about the roots. Give some weak liquid-manure once or twice a week when the pots are full of roots.

GARDEN PESTS AND FRIENDS.

AMERICAN GOOSEBERRY MILDEW.

THERE is no doubt that the above pest is spreading throughout the country. Unfortunately, in new localities it is seldom recognised until a considerable area has been infected. Enough has been published in leaflets and also in the horticultural press to enable gardeners and those used to such descriptions to identify it, but by far the greater number of those who grow Gooseberries never read anything concerning them. Numbers of cottage gardens have old, uncared-for bushes badly diseased, yet as long as they bear a crop of fruit they are permitted to exist, a source of infection to the whole district. Not only is the disease wind-borne, but the kindly-meant gift of cuttings to their friends often carries the disease miles further, and too often establishes a new infected area. It is not the cottagers' fault. They cannot be expected to deal with it satisfactorily. If the disease is noticed at all they usually conclude that the bushes have got "some kind of blight," and a little mildew more or less is not an uncommon occurrence. The Government have enough on their hands without making a house-to-house inspection, for although this might be possible in towns and allotments adjacent thereto, in the country the distance to be travelled would be serious. Landowners might do much good by instructing their gardeners to inspect and report on their tenants' bushes, and help them to obtain young stock from uninfected sources. Again, in the case of one or two infected cottage gardens on an estate it might be possible to destroy the bushes at once, allowing no host plants for a few years, eventually replanting with clean stock from the home nursery or elsewhere. Under the present law, the Board of Agriculture, when notified, sends an inspector—sometimes months afterwards—who insists that all shoots must be tipped as soon after August as possible. A recommendation as to spraying with sulphide of potassium is also given, though this does not appear to be compulsory.

The market-grower who grows Gooseberries cannot afford to lose his livelihood, so he probably carries out the instructions of the Board more or less thoroughly, and gathers his crop green. Even if the fruits have been sprayed he may be able to wash them clean enough for sale. But the private grower wants not only green Gooseberries, but ripe ones in due season, and spraying in summer is liable to spoil ripe fruit entirely. Indeed, the problem of ridding his garden of this pest and of continuing to supply the table with Gooseberries each season is a difficult one, especially in comparatively small gardens.

Those who have the space to plant a plot at a safe distance from the infected area should do so, and destroy the old plot as soon as the other comes into bearing. If a sufficient number of young Gooseberry bushes is planted a good crop of Gooseberries can be had the second summer after planting. Indeed, I have often seen an excellent crop the first summer. It is only necessary that sufficient bushes should be planted to compensate for their small producing capacity; the quality of the berries is usually first-rate. According to the leaflet No. 195 issued by the Board of Agriculture, "The ultimate and only sure remedy where a plantation has been badly attacked is early pruning for a series of three or four years," viz., the removal of all diseased tips in August and September each year. Can any grower be absolutely certain that he has cut off and

picked up every diseased tip from a number of bushes? If not, the remedy is by no means "sure." It would appear that the only "sure" remedy for the owner of the small garden is to destroy his Gooseberry bushes and forego home-grown Gooseberries for three or four years until the disease has died out in his garden, and then replant from a clean source.

J. COMBER.

OUTDOOR PLANTS.

TUBEROUS BEGONIAS IN THE FLOWER GARDEN.

It may not be generally recognised that a very interesting and enduring display can be made outside with tuberous Begonias through the summer at a minimum of labour and expense, a fact worth noting in a season like the present, when both are a serious consideration. Instead of starting them in heat the tubers can be planted



Cordyline australis at Ashbourne, Glounthaune, Cork. (See p. 207.)

in a cold frame from which frost can be excluded, and brought along gently until planting time. Any old potting soil will do for the purpose, and they can rest within an inch or so of a solid ash bottom, so that they can be lifted without injuring the roots. Where opportunity has offered for seed-sowing and selection there is generally a good stock of tubers on hand, and in singles they should be somewhat in habit of which *B. Worthiana* is a type, with rather small, erect flowers rather than big, unwieldy blooms too heavy for the stalk and likely to be prostrate after a storm. Doubles also should not be too large; not larger, for instance, than in sorts like Major Hope (pink) and Lafayette (scarlet), otherwise a lot of staking and tying is necessary, and even if this could be done, which is hardly likely, the flowers would not show to the best advantage. From the time the young growths make their appearance until planting, a watch must be kept for the minute thrips that,

if allowed to make headway, will greatly disfigure the foliage. Begonias show to the best advantage alike in the display of flower and proper development of the plants when set out singly or in thin groups on a carpet of dwarf plants. If opportunity does not offer for striking tender things, hardy subjects will have to be utilised, and, indeed, answer the purpose equally well. For scarlet and pink kinds one of the best dwarf things is a white Tufted Pansy like Seagull, which, if a little special attention is given, will remain in flower all through the summer. The little Violetta is sometimes used, but of the two I prefer Seagull. Failing the Pansies a very good substitute is *Antennaria tomentosa*. This live carpet, as represented by Pansies or *Antennaria*, is preferable to mulching the ground around the Begonias with Cocoa-fibre. E. B. S.

Hardwick.

AMONG THE HARDY FLOWERS.

SCILLA SIBIRICA.—I like the blue form of this better than the white one, either for the open garden or in pots for the house. Is there a pink variety of *S. sibirica* in existence? I know a pink variety of *Scilla bifolia*, but not of *S. sibirica*. I plant 2 inches or 3 inches deep, which I find quite enough.

CROCUS TOMASINIANUS.—This is a pretty and useful *Crocus*, a few corms of which a friend who has grown it for some years gave me. Its sapphire-lavender flowers are pretty. It blooms early in March, is very hardy, and stands the storms of the time much better than some of those with larger flowers. My friend has several varieties, one with deep purple flowers, another with lilac ones, and a rarer one still with white flowers.

COCKBURN'S PRIMROSE.—There is much that is puzzling to an amateur in the conflicting accounts of the behaviour of *Primula Cockburniana*. Most folks assure us that it is only a biennial, others say that it is a perennial, and others declare that it seeds and sows itself so freely that they never trouble about renewing it should it die out. One of my friends who is keen on Primulas has been collecting information from others to compare their experiences with his own. His conclusion is that Cockburn's Primrose is a biennial in all but a few places, and that it seeds best in a gravelly soil, though there it is not perennial. I am not hopeful of ever being able to retain it as a perennial in my garden. So far I have only managed to keep it until after it flowered. It is such a striking thing with its vivid orange-scarlet flowers that I would be glad could I reckon it as perennial.

PROPAGATING PRIMULAS.—Most hardy Primulas require to be propagated occasionally, either by division or seeds, and it is hopeless to expect many of them to live and be happy in the conditions so many of us amateurs give to a number of our flowers. They are not so troublesome if they are kept well top-dressed, but if they are left alone for a year or two they generally suffer. I find that the best time to divide hardy Primulas, including Polyanthus and so forth, is just after they have flowered.

ADONIS VERNALIS.—This old favourite is just coming into bloom. Nobody can deny that the finely-cut foliage is very ornamental, and when the large, many-rayed flowers open out to the sun it is a charming plant. It prefers a rich, moist loam, but I have been compelled by the force of circumstances to cultivate it in a drier loam. I have added a little peat, and, to give it as much moisture as convenient,

have planted it at the foot of a little rockery.

THE ALPINE ERYNGO (*Eryngium alpinum*).—This has become one of my favourites. I was lucky enough to come across it in a garden where there was "enough and to spare," and was made happy by the gift of a good clump. Its possession led me into some discussion respecting its requirements in the way of soil, and I learned that in a stiff, rather clayey loam in a coldish district it never did so well as in a lighter, drier one.

AN AMATEUR OF HARDY FLOWERS.

SUB-TROPICAL PLANTING.

MANY pleasing effects may be produced in the southern parts of England by the introduction of sub-tropical plants, and where Bamboos and *Cordylines* survive,

erythrorachis, red-ribbed and highly perfumed when in flower, can be arranged between the collections of Bamboos; *Yuccas*, which thrive in rather damper soil than their appearance would warrant; *Eryngiums*, *Kuiphofias*, *Arundinarias*, *Gyneriums*, including the fine golden form so little seen in our gardens; and *Chamaerops excelsa*, which often develops, even in our climate, into a small tree. Of the *Kuiphofias* the finest and most effective are the seedlings of *K. Northia*, which appear to be hardier than the original species. *Aegle sepiaria*, an interesting shrub, with its masses of fragrant white flowers, is hardy in ordinary English winters when planted in well-drained ground. *Colletia horrida* and *C. ferox*, with their peculiar woody spines and interesting clusters of white flowers which appear in the autumn, *Fatsia japonica*, with its irregularly-

hardened off. These will be planted out in rows 1 foot apart, the rows 15 inches asunder. Of the single varieties, *La France* and *Admiral Avellan*, a large number is grown. The former, if propagated early, blooms more or less throughout the autumn and winter, and in the greatest profusion in spring. The latter blooms in the spring only, but the flowers are plentifully produced over a long period. All the young growths having a few roots attached are used for the propagation of both sorts, which are planted as soon as severed from the parent plants in a well-manured and partly shaded plot of ground and watered in. These two kinds require more space for development than the double ones, and are therefore set out 18 inches apart in the rows, which are 15 inches asunder. Until new roots are formed and the plants become established



Cordylines and Arundo conspicua at Ashbourne, Glounthaune, Co. Cork.

other species will be found to flourish, despite short, severe attacks of cold and frost. Two essentials, however, are necessary for their successful cultivation—the most favourable conditions of sun and protection from winds. The latter is of equal if not of more importance than the former as large-leaved, tall-stemmed plants or trees suffer greatly from the rending, swaying motion imparted by strong winds. The soil most suitable should be naturally friable, sandy, and well drained, thereby encouraging the permeation of heat into the ground itself.

It is a mistake to introduce too much colour, but rather develop the general impression of soft shades of green. The various groups can be formed upon a well-kept sward of short Grass.

Bold groups of *Cordyline australis*, *C. Banksi* and its beautiful variety *C. Banksi*

shaped leaves, *Eucomia ulmoides*, the cousin to the India-rubber tree, and the various forms of the taller Grasses, both green and glaucous-blue, such as the *Aira* and *Elymus*, may also find a place.

When a collection of such-like forms is carefully arranged upon a sufficiently large scale it will be found that even in the southern parts of England we are able to bring into view pictures which can otherwise only be enjoyed in warmer and more favourable climates. R. H. BEAMISH.

NOTES AND REPLIES.

Violets.—These are now over and propagation of the several varieties must be attended to. With regard to the double varieties *Marie Louise* and *Mrs. Astor*, the cuttings, as was mentioned in a previous note, had been put in. These are now well rooted and are being

water is required daily in dry weather, with an over-head sprinkling in the afternoon to act as a reviver.—A. W.

Arctotis grandis.—This half-hardy annual one rarely sees in English gardens. Being a native of South-west Africa, it requires a warm site and dry position, and may be sown out-of-doors where it is to bloom during the present month or in May. A better way, however, is to sow at once in heat, planting out in the mixed border in late May. The flowers, borne on long stalks, are excellent for cutting. It reaches a height of 2 feet, and blooms freely all the summer.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield.*

Leptosyne Stillmani.—This grows about 1½ feet in height. Sown in April out-of-doors in good soil, it will bloom in from six weeks to seven weeks if the weather is good. The large, bright, golden-yellow flowers are useful for cutting. Sow the seed thinly, and thin out the plants so that they can have plenty of room. If you want to keep the plants in bloom cut off dead flowers regularly as soon as they appear. Seeds may be sown earlier in heat, and the seedlings pricked off as soon as they are 1 inch high. Plant out in May.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield.*

CHRYSANTHEMUMS.

CHRYSANTHEMUM NOTES.

RECENT unusually wintry weather has necessitated keeping the plants warmer than we generally do in March, but by the time these notes are in print they should be out of the greenhouses and placed in frames where the standing ground is cool and moist. These conditions tend to a strong, healthy growth, free from insect pests. Here also ventilation is an easy matter, and we can allow abundance of air in favourable weather, besides readily protecting at night from frost. Subject to the latter and cold, cutting winds we should endeavour to give open-air treatment, because, after all, Chrysanthemums are pretty hardy. Each morning one likes to sprinkle the leaves overhead after each plant has been attended to at the roots. At this time of the year the one look through should carry us through the day, as it is advisable that when closed for the night the leaves as well as the roots should not be too wet.

REPORTING should claim attention. Those plants in small pots may go into the 5-inch size, and, of course, if there be any what we will call late-rooted cuttings to deal with these should be potted singly. Soil composed of rotted turf sifted rather fine forms the chief part of the compost, and to each bushel of this may be added a peck of leaf-mould with a sprinkling of silver sand. The addition of manure in early stages may prove harmful, that is, if the same is not old and quite rotted, and certainly artificial manures would be. In potting, the soil may be pressed firmly with the fingers, but not rammed in with a stick as in later shifts. I have always contended that Chrysanthemums bear the better quality blossoms, all other things being equal, if each plant is allowed to grow to its natural height from start to finish, than through any system of taking the tips out of the growths. I would therefore start with one stem. This will eventually branch out, and, as time goes on, the number of branches to be trained can be managed at will. If the object be big show blossoms the number of side stems carried up is usually not more than three, and this small number is kept to until the end of the season, the whole of the plant's energy being centred in them. On the other hand, if a bushy specimen is desired, one that shall give a great number of flowers, then retain more side branches. Stopping does not help us at all, for in the first place if a plant has its top taken out the chances are that it will produce growths unequal in strength, and therefore there will be a want of shape, and in the second place valuable time is lost. A long season is required to perfect the growth, or otherwise the flowers will exhibit faults due to imperfect ripening.

EARLY-FLOWERING VARIETIES have for years had some distinguished group among them. The earliest, perhaps, was Mme. C. Desgranges and its progeny. This group, however, produced only shades of yellow and its parent white. Then there was the Gustave Grunerwald collection of "sports." This family was notable for earliness, nice flowers, but the habit of growth was poor. After this came Mme. Marie Masse and its numerous different-coloured sports. Somehow each and all of the above are now wanting in constitution, they do not grow so well as formerly, and to-day we have a distinct race more preferred, named Polly. There are Crimson Polly, Bronze Polly, Yellow Polly, and White Polly, a set that should be cultivated by all. The class has one fault, and that is not a great freedom in producing

cuttings for propagation. But, when once obtained, the plants grow freely, the habit is particularly branching and free-flowering, whilst the blossom is, in quality, surpassed by no other sorts. These varieties make capital pot plants, too, and are well worth trying thus for decoration early in September. In regard to the varieties generally there is nothing gained in raising a fresh supply of plants in heat early in the season. At this time there should be a supply of healthy cuttings, which, if rooted in cool frames, may be expected to outdistance early-reared ones at the flowering season. These outdoor kinds are worth generous treatment in the way of deeply-dug and well manured ground, and they should have an open spot in which to grow, as well as a couple of feet between each plant. Returning to plants in pots. It is not too late to root cuttings of November-flowering varieties to provide useful material in comparatively small pots for decoration or for cutting. Exhibitors also have found these late-rooted plants useful in giving just one handsome flower on each, and the plants take up but little room. As the season advances, however, it will be found easier to root cuttings of Chrysanthemums on a cool bottom—of ashes or the like—and shaded from the sun, inside a glass structure, of course. H. SHOESMITH.

Chrysanthemums losing their leaves.—I have been growing Chrysanthemums for the past few years with very unsatisfactory results. I always notice about July or August the plants lose a lot of leaves from the bottom half way up the plant. Would you please let me know the cause of this? The flowers are always very small. I would like to know at what time and how often the plants ought to be pinched?—AMATEUR.

[The loss of leaves is caused by faulty watering. During the months named we get, of course, our hottest weather, and the plants will not put up with neglect even for a day. Once they get so dry at the roots that the leaves flag, seldom do these recover—they turn yellow and eventually fall, and naturally it is the lower leaves which suffer first. Watering should be attended to as often as twice a day—morning and evening—then there would be little likelihood of trouble. Crowding the plants is another frequent cause of leaves falling, as under such conditions the plants do not obtain enough light and air. Stopping or "pinching," as the plan is sometimes termed, need not be followed. Let each plant grow to its natural height. Those who cultivate for exhibition may find pinching useful in the case of just a few varieties, but to recommend any interference with the whole lot is a mistake.]

Late Chrysanthemums.—There are, of course, varieties which naturally bloom late, but these are limited not only in quantity, but in colour. At Christmas there is usually a demand for white Chrysanthemums, and while there may be newer additions to the list, I find nothing superior to the older varieties, for cutting at least. Take, for example, Souvenir de petite Amie, Moonlight, and Boule de Neige of the older sorts, Nellie Pockett, Elaine, and Julian Vallet of more modern date, and these grown in bush form will give plenty of flowers for cutting. In yellows, Noces d'Or, Mrs. Greenfield, and W. H. Lincoln cannot be surpassed. If an addition might be made to these three it is Phœbus, cuttings of this struck in April and grown naturally giving good results in late December. A good chestnut-red is Sarah Owen, and General Nogi is an excellent late Chrysanthemum. Both of these make ungainly bushes, but flower well. The colour of General Nogi I would describe as a pale lavender.—W. McG.

ROSES.

POT ROSES.

THE earlier batches of pot Roses will now need some extra nourishment to enable them to produce first-class flowers. Newly-potted Roses are excepted, for if these were started in good compost they will find as much nourishment as they need until the roots have occupied the compost. Only when the pots are full of roots should liquid manure be used, or it will sour the soil before the roots can assimilate it. For the same reason, too, we see the urgent need of providing good drainage. Animal manures in liquid form are somewhat offensive when used under glass. Soot-water is quite safe. The soot should be tied in a bag and steeped in water, applying it when about the colour of weak tea. Guano may be given to well-established plants, and will have very beneficial effects upon growth and bloom. A safe liquid is made by using 1 oz. of guano to a gallon of water. Artificial manures are best applied on the surface, about a tablespoonful to each pot. This is then watered in and a sprinkling of potting soil placed over the manure. Each subsequent watering will then take a portion of the food down to the roots. Bone-flour is a valuable plant food that is not used so much as it deserves. It may be applied in a similar way. Such dressings need only be applied about once a month, the ordinary watering doing the rest, but liquid manures must be given twice weekly.

Those who do not mind the unpleasant odour will find that liquids made from animal manures are superior in their effects to any of the foregoing. The manure is placed in a bag and steeped in a tub of water for a few days, being given fairly strong and as clear as possible. Not only are these animal manures highly nutritious, but the ammonia fumes arising from them do much to keep the foliage clean and healthy. Although well-established pot Roses need a considerable amount of nutriment, great care must be taken not to overdose them or they will turn sickly and may even succumb. When the plants seem to be thriving on the amount of food given do not be tempted to increase the strength, but leave well alone.

While the young foliage is developing it is important that sudden changes in temperature are avoided, such being productive of mildew and other ills. Open the ventilators just a little for an hour or two each day to keep the atmosphere sweet and buoyant. On really warm, sunny days air may be given more freely early in the morning, but it should be shut off again early in the afternoon. Mildew is almost sure to appear sooner or later unless some preventive is used. It is wiser to forestall the evil and commence syringing with a reliable fungicide as soon as the foliage begins to develop. Patent sprays must be used on young foliage with extreme caution as to the strength of the fluid, or irreparable damage will be done. An effectual wash for mildew is made with Cyllin soft soap dissolved in soft water, adding a little flowers of sulphur. It must be constantly stirred when using and applied with a spraying syringe. A very fine sediment will then be left on the foliage. Another good wash is made by dissolving 1 oz. of potassium sulphide, or liver of sulphur, in three gallons of soft water. Bordeaux mixture is a little more trouble to make, but is certainly the finest fungicide it is possible to use. An ounce of copper sulphate is dissolved in a little boiling water and left to cool; next

dissolve some lime in two gallons of water, and then slowly pour in the cold sulphate solution, stirring all the time. Bordeaux mixture must be used the same day as it is made. Whatever solution is used it should be applied very thoroughly, beneath as well as above the foliage. Incidentally, good and constant spraying will do much to keep in check that most harmful of hot-house pests—red-spider—for these insects cannot stand moisture. Green-fly is most easily and effectively destroyed by vaporising the house.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SAXIFRAGA BOYDI ALBA.

NEXT to *S. Burseriana* Gloria and *S. B. major*, this beautiful species, which blooms later, is the finest of the early white-flowered Saxifragas. How well this plant may be grown and flowered in February without any protection is shown by the illustration on this page. The culture recommended for *S. B. Gloria* at page 99 also suits this plant admirably. The plant

the "A.M." from the Royal Horticultural Society, a year or so previously, ninety odd trusses of flowers. The high-mounded character of the example necessitated frequent mulching, and finely-screened sand was carefully strewn over it and worked and washed into the cushion. The suddenness of its death suggested a deadly fungoid attack or a dose of some virulent poison. All the same I inwardly vowed I would never again allow a plant to gain such a size without division. So far I have not had the opportunity. That, of course, is tantamount to a belief that to some extent at least a smaller, younger plant would have escaped. Unfortunately, continued experience points to the unpleasant fact that young and vigorous yearlings are by no means immune—also that frame-grown plants "go off" as badly, often worse than, others grown more fully exposed. Nor is it confined to a few plants. Indeed, a large grower told me a year or so ago of a 200 batch of one variety going to the rubbish heap at once. I immediately inquired, "Why not to the fire-heap instead?" Equally unpleasant, too, is the

centre I attribute to dryness and the rosettes getting out of touch with the soil. Division and the replanting of the rosettes of leaves right up to their bases are an easy remedy for these quick-growing sorts, all of which love moisture, or at least uniformly cool soil conditions. When a gap occurs in a choice cushion sort I have more than once cut away the decayed parts and thrust in a piece of sandstone or limestone, first filling the interior with good soil. In a surprisingly short time the new growth can be seen nestling closely to the sympathetic rock, an object-lesson of high teaching value when we remember that the greater proportion of these Cushion Rockfoils are rock-loving, and inhabit such places in Nature. Given this or its nearest possible equivalent—two-thirds finely-broken sandstone is good—and avoiding rich soils, the cultivator places at the disposal of his plants a dietary of a most congenial kind.

E. H. JENKINS.

ROYAL HORTICULTURAL SOCIETY.

APRIL 11TH, 1916.

THE fortnightly meeting held on this date was attractive and interesting. May-flowering Tulips in bowls of fibre were very fine. Alpine plant groups were numerous and good. Several collections of the choicest Daffodil novelties were on view. Of Roses, only one collection was shown, Carnations and Orchids being fairly represented. Few novelties received awards. The following are the more important exhibits:—

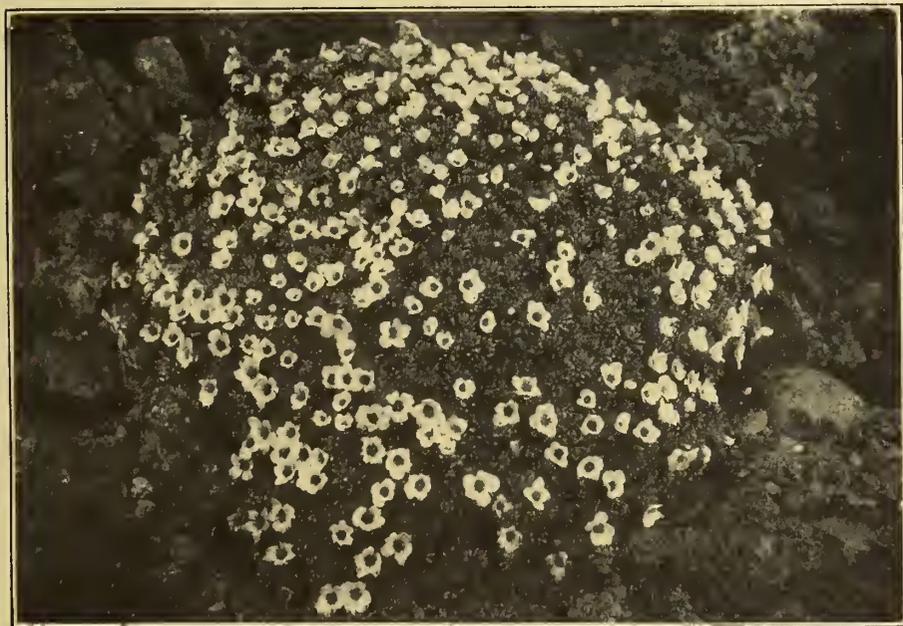
ALPINE AND HARDY PLANTS.

Messrs. Waterer, Sons, and Crisp, Bagshot and Twyford, showed many good things in conjunction with rockwork, none so brilliant, however, as a great patch of *Saxifraga oppositifolia* W. G. Clark, before which all others of its set pale. Later than the rest, too, it stands alone. Another distinctive member of the *Saxifraga* family was labelled *Elizabethæ* No. 5, its mass of orange-yellow flowers distinct from all. A dozen other things might have been selected; those named, however, are indispensable to every good collection.

Mr. G. Reuthe, Keston, Kent, had a collection particularly rich in Saxifragas, the brilliant-red flowered *S. retusa*, a new yellow not unlike *S. Paulinæ* in flower, which was also shown, named *S. Bileki*, being noted for the first time. The white Italian *S. Boryi*, too, and the golden-flowered *S. pungens* were others of note. Two brilliant things of widely diverse character, *Tulipa linifolia* (intense scarlet, dark base) and the lovely blue *Chillean Tecophylæa cyanoerens*, at once caught the eye. *Rhododendron fastigiatum* (a miniature with lavender-blue flowers) was among the choicest things.

Messrs. Piper, Bayswater and Barnes, contributed an extensive group wherein a wealth of Primulas was noted. The more important of these were hybrids of *P. viscosa* or nearly allied species, as *P. v. hybrida* (red), *P. v. Mrs. J. H. Wilson* (bluish, with white centre), *P. The General*, and *P. The Admiral* (reddish-crimson and dark crimson respectively). All are remarkably free-flowering. *P. Willmottæ* is a dainty novelty of recent introduction with lilac flowers.

Messrs. T. S. Ware, Limited, Feltham, showed excellent groups of *Trillium Snow Queen* and *T. erectum*, though without doubt the superbly-flowered pan of *Epigæa repens* was the gem of the whole. *Silene pusilla* (white) is a plant of great charm, if less showy than many Primulas on view or the lovely white-petalled, blue-backed



A single plant of Saxifraga Boydi alba at Lilford Hall, Oundle, Northants.

illustrated is growing in slightly more shade than is *S. B. Gloria* referred to above.

F. W. G.

Lilford Hall Gardens, Oundle.

DISEASE IN SAXIFRAGA BURSERIANA.

"AN AMATEUR OF HARDY FLOWERS" (page 159) suggests that probably I "may have something to say about this disease (if disease it be), which causes the plants to grow bare in the centre and gradually die off unless broken up and the best bits replanted." I very much fear, however, that I can throw but little light on the subject, though an examination of some of the surrounding circumstances might prove helpful to cultivators generally. Unfortunately it is not confined to the above-named species and its varieties, but affects the majority of the Cushion Rockfoils—thus dealing a rather severe blow at some of the choicest and best of these plants. I lost my unique specimen of *S. aretioides primulina* some fifteen years ago quite suddenly, after growing it for at least a like period, filling a 6-inch pot, and carrying at the time it received

fact that the wilding is not immune, and those who have handled large importations will recall the half-dead look of not a few rosettes in many tufts. I have twice or thrice spoken to Mr. Massee on the subject in the past, but that gentleman invariably declared he could find no trace of fungus on the stricken plants. Where then do we stand? Were the wilding but immune, and with no trace of disease in the younger-cultivated examples, we might accept the failure as a species of resentment to lowland climatic conditions or cultural error, or both. In existing circumstances we cannot. One cultivator of my acquaintance puts it down to overhead wet. Yet my fine specimen *primulina*, already referred to, bore sixteen years of it without any protection whatever. Then, too, if only old plants failed, the way would be more clear. It is not so, however, when the yearling or two-year-old from the cutting goes the same way. The silvery or encrusted set appears practically immune, though some of the *Cotyledon* varieties, and more rarely *longifolia*, suffer from a leaf-rust which is quite distinct from the disease under review.

The burning of the mossy kinds in the

Anemone blanda scythica, a plant for all.

In a small group from

Mr. Clarence Elliott, Stevenage, a batch of *Anemone vernalis* claimed attention. We do not remember to have seen so much of it so well shown before. A score of well-flowered *Primulas* Mrs. J. H. Wilson, of the *viscosa* set, blue with white centre, made a big show.

Messrs. Tucker and Sons, Oxford, brought rare and choice things well grown. Of these we selected the all-too-rarely-seen *Saxifraga Vandelli* (a valuable late, white-flowered species). Then the brilliant blue of *Gentiana verna angulosa* caught the eye. *Douglasia laevigata* (rosy), *Saxifraga Irvingi*, the beautiful *Androsace helvetica*, and *A. pyrenaica* were also well shown. From

The Society's Gardens, Wisley, was sent a variety of alpine in pans, the pride of the collection a unique specimen of *Saxifraga Griesbachi* bearing a score of its inflorescences. Smaller examples displayed much promise. Another rare species was the Himalayan *S. lilacina*. A big pot of *S. Burseriana* was full of bloom. *Androsace Lageri* and *A. L. alba* were also noted with *Primulas* and other plants.

Mr. James Douglas, Great Bookham, showed choice *Auriculas*, as *Klondike* (golden bronze) and Mrs. Gardner (pale lilac). Admiration (one of the best of the blue shades) and *White Czar* were others of note. There were some notable seedlings, a white-edged florist variety among them, which the raiser regarded as perfection.

CARNATIONS.

Messrs. Wm. Cuthbush and Sons, Highgate, N., staged an admirable lot of flowers, notably their new perpetual-flowering scarlet *Malmaison Sabina*, which was very fine. It is the most handsome and most refined-looking of its class we have seen. Mrs. L. D. Fullerton is a remarkably good lavender and red fancy. *Lady Ingestre* is one of the most charming of the pinks. Among greenhouse plants the firm showed the fragrant *Boronia megastigma* in plenty.

Messrs. Stuart Low and Co., Enfield, included great stands of *Gorgeous*, *Pink Sensation*, Mrs. C. F. Raphael, and *Baroness de Brien* in a handsome exhibit.

Messrs. Allwood Bros., Haywards Heath, had the new perpetual-flowering *Malmaisons Dragon* and *Terrific*, the bigger vases of *Fairmount* (fancy), *Mary Allwood*, *Champion*, and *Wivelsfield White* among others being shown to perfection.

TULIPS.

A double-width table of Darwin Tulips, grown in bowls of fibre, staged by Messrs. R. H. Bath, Limited, Wisbech, attracted everybody. It was one of the finest exhibits so cultivated yet seen, and was much admired. From the representative character of the exhibit, it was clear that all varieties were alike responsive to the treatment, hence we refrain from a list of names. In addition to the Darwins, Mrs. Moon and *Bouton d'Or* (yellows of the May-flowering set) were also remarked. Messrs. R. and G. Cuthbert, Southgate, N., showed an extensive collection of bedding Tulips in pots.

SHRUBS.

There was but one exhibit of these, that from Messrs. J. Cheal and Sons, Crawley, who arranged a highly meritorious group consisting of *Prunuses*, *Cerasus*, *Viburnums*, *Cytisus*, and others, in conjunction with a groundwork of Japanese *Acers*. The centre was a wealth of the pretty white-flowered *Spiraea arguta multiflora*,

over which appeared *Prunus serrulata pendula Chealei*, and *P. p. Hisakusa*, followed by a galaxy of *Prunus pseudo-Cerasus Sieboldi* fl.-pl. *Rhododendron Pink Pearl*, *Viburnum plicatum*, *V. tomentosum Mariesi*, and the lovely white *V. Carlesi* were all in good form. The margin was of *Senecio Grayi* and pans of alpine.

GREENHOUSE FLOWERS AND PLANTS.

Messrs. Sutton and Sons, Reading, contributed a collection of *Star*, *Cactus*, and florists' *Cinerarias*, a full table length being occupied by the plants. Of the former, *Feltham Beauty* (blue) and *Feltham Beauty* (white) are singularly beautiful. The former is of an excellent shade of colour. In the last-named set the pink shades were very fine, a rose-pink being very effective. Messrs. Sutton also displayed a choice lot of Darwin Tulips in the cut state, many fine sorts, as *Clara Butt*, *Queen of Roses*, and *King Harold* (glowing crimson) being some of the best.

Messrs. H. B. May and Sons, Edmon-ton, arranged groups of *Hippeastrums* (*Amaryllis*) with *Clematis montana grandiflora* and *C. indivisa lobata*. Among Ferns, of which there were many, the rare *Adiantum sulphureum* was one of the most important. Well named, it is an elegant and beautiful kind from the mountains of Peru, lost to cultivation for many years. It is reputedly as hardy as the British Maidenhair, and, therefore, all the more valuable.

ROSES.

The group of these from Messrs. B. R. Cant and Sons, Colchester, was very finely displayed, the blooms in boxes equal to those of a summer exhibition. *Lady Roberts* was particularly good, also *Pharisæer* and *Hugh Dickson*. The new Hybrid Tea *Hon. Mrs. R. C. Grosvenor* (gold and pale flesh-pink) was very beautiful. *Captain Cant* and *Juliet* were others of note in an excellent fresh-looking lot.

NARCISSI.

Mr. Alex. M. Wilson, Shovell, Bridgewater, showed many choice novelties. Two of his best, *Palermo (Barri)* and *Ozan* (bicolor *incomparabilis*) secured Awards of Merit. In addition, we selected *Cresus*, *Mistral* (a giant even amid giant *Leedsii* forms), *Robespierre* (with brilliant crown), *Duessa* (white), *Volvic* (a fine *Englehearti*), and *Cranbourne* (rich golden-yellow *Ajax*).

Messrs. Barr and Sons, Covent Garden, W.C., also had a formidable lot of flowers, from among which we selected *Ruby (Barri)* (fine cup), *The Czar* (giant *Leedsii*), *Basilia* (of the same set), *Anzac*, *The King*, *Lord French*, and *Golden Sovereign* (all yellow *Ajax* sorts of outstanding merit and distinction). *Ixion* is a notable *incomparabilis* and a great *Daffodil* withal.

Messrs. R. H. Bath, Limited, Wisbech, received an Award of Merit for *Double Sir Watkin*, said to be a sport from the original. *White Knight* (white *Ajax*), *Flame*, *Golden Sunrise* (very early), *Decorator* (big golden *Ajax*, with remarkable crown), and *Eastern Maid* (*incomparabilis*) were others of merit. In a collection from

Messrs. H. Chapman, Limited, Rye, *Statuesque* (bicolor *incomparabilis*), *Shrove* (*Englehearti*), *Downeast* (a good name for an exceptionally drooping bicolor *Ajax*), and Mrs. *Welesley* (*Leedsii*) were some of the best-named sorts. High-class seedlings were, however, prominent.

ORCHIDS.

Two good things from Messrs. Charlesworth, Haywards Heath, were *Odonto-*

glossum Jasper and *Dendrobium Jamesianum*.

Messrs. Cypher had *Vanda coerulescens*, *Epiphronitis Veitchi*, and *Cattleya Robert de Wavrin*.

Messrs. Sander and Sons, St. Albans, had an excellent specimen of *Odontoglossum Polyphemus* (gold and crimson), *Lycaste Skinneri* Mrs. G. Hamilton-Smith, and *Cologne Lawrenceana* were also noted.

Messrs. J. and A. MacBean, Cooks-bridge, showed many good *Odontiodas* and *Odontoglossums*. *Cattleya Schroderae* was very fine.

Messrs. Felton and Sons, Hanover Square, W., employed *Cymbidiums*, *Odontiodas*, and *Odontoglossums* lavishly in the cut state in bold vases.

A complete list of the plants certificated and the medals awarded will be found in our advertisement pages.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM APRIL 6TH.—*Cydonias* (various colours), *Chinese Quince*, *Rubus spectabilis*, *Magnolia stellata*, *Berberis* (in variety), *Azara microphylla*, *Ericas* (in variety), *Daphnes* (various), *Alnus cordifolia*, *Spice-bush* (*Laurus Benzoin*), *Andromedas* (in variety), *Prunus triloba*, *Myrobalan Plum* (*P. cerasifera*), *Periwinkles*, single and double *Camellias*, *Skimmia fragrans*, *Phillyrea decora*, *Rhododendron Jacksoni*, *R. venustum*, *R. ciliatum*, *Forsythias*, *Ribes sanguineum*, *Caltha palustris*, *Caltha polypetalata*, *Arenaria balearica*, *Anchusa myosotidiflora*, *Viola graecis*, *Chionodoxas* (in variety), *Wall-flowers*, *Anemones* (in great variety), *Fritillaria Melcagris*, *Synthlipsis reniformis*, *Dog-tooth Violets* (in variety), single and double *Arabis*, *Aubrietias* (in variety), *Primroses*, *Narcissus* (numerous kinds), *Crocuses*, *Snowdrops*, *Grape Hyacinths* (in variety), the *Algerian Iris*, *Primula rosea*, *P. viscosa* Mrs. Wilson, *P. Julia*, *P. casimeriana*, *Collinsia grandiflora*, *Rosemary*, *Polyanthuses*, *Lithospermums*, *Saxifrages*, *Gentiana acaulis ex-cisa*, *Lenten Roses*, *Hutchinsia alpina*, *Anemone Hepatica* (in variety), *A. angulosa* (in variety), *Scillas* (in variety), *Puschkinia scilloides*, *Narcissus odoros* (*Campernelle*), *Barrenwort* (*Epimedium sulphureum*), *Forget-me-nots*, *Violet Cress*, *Hyacinthus azureus*, blue and white *Omphalodes verna*, *Summer Snowflake*, *Veronica filiformis*, *Candytuft*, the *Bardfield Oalip* (*Primula elatior*).

WORK OF THE WEEK.—Pruning of dwarf *Roses* continues. The beds have been forked over, and such plants as are available and likely to last through the summer are being used to carpet them. *Carnation* beds have been cleaned and forked over to encourage growth. The past winter has been most unfavourable to *Carnations*. A long border raised above the ground level has been prepared and planted with *Aubrietia Peter Barr*. To carry this through it was necessary to shift some large plants of *Muhlenbeckia complexa*, which although very attractive when falling over this low wall, were too rampant, and threatened to take possession of the path. These have now been given a more open place where their long, graceful trails may ramble freely. A support of some rough poles or similar material may be given them later, as they are rarely seen to better advantage than when furnishing tall poles. The winter protection has been removed from the *Wand-flower* (*Sparaxis pulcherrima*) and the plants relieved of old, disfigured foliage. Seedlings of this most graceful plant from seed sown in February are growing freely. A few plants of *Raoulia australis*, *Sedum Sempervivum*, *Rosy Arabis*, and *Saxifrages* have been planted out on a sunny border, and a group of *Lysimachia ciliata* has been planted by the water-side. *Cornus Nuttalli* has been given a place in the Heath garden, and a further batch of the little *Sand Myrtle* (*Leiophyllum buxifolium*) has been added to an existing group near by. *Tree Lupins*, which were severely damaged by the recent sharp frosts, have been pruned hard back to encourage growth from the base. A few *Roses* have been planted and edgings of dwarf trailing plants, such as the dwarf *Gypsophilas*, have had to be cut hard back. The earliest-sown *Sweet Peas* are now thoroughly exposed, and will be planted out on specially prepared ground immediately they have been hardened off. Seedlings of perennials and hardy annuals have been removed to cold frames, where they are kept on the dry side as the nights are very cold, and damping is liable to occur if the seed-pans are kept too wet. A quantity of the *Balearic Box* and the *Handsworth Box*, having come to hand, a place has been provided, where they will form a shelter and clothe a border beneath *Pine-trees*, where choicer shrubs are not happy. E. M. Sussex.

SOUTHERN COUNTIES.

Sweet Peas.—Should the milder conditions now prevailing continue, the seedlings raised in pots in January will be set out in rows on ground which was prepared for them some time ago. Moulding and staking will follow after the planting, and to shelter the plants from cold, cutting winds the spray taken from the upper part of the boughs when they were being prepared for the purpose will be worked in between the stakes at the base on either side of the rows. More seed will now be sown outdoors in rows 12 feet apart.

Antirrhinums.—These are now ready for pricking off. A couple of pits will accordingly be prepared for the purpose, some fresh loam and leaf-mould being added to the soil already present in them. This when forked over will afford a good rooting medium for the plants, and from which they can be lifted with good balls. A distance of from 4 inches to 5 inches will be allowed between the plants either way, this affording ample space for their development, as they are lifted and planted out so soon as they grow out and touch one another. Until the plants make new roots and recover from the pricking out they will be shaded and the pit kept closed. A gentle dewing overhead serves to keep the plants from flagging and assists in their becoming the more quickly established.

Alonsoa.—The compact-growing form of *A. Warsceizii* is most useful for planting in beds and borders for summer effect. It is a slender-growing half-hardy annual, and is best raised in slight warmth in spring. The plants are now ready for pricking off, and boxes will be employed for the purpose. In these the plants will be set out 3 inches apart each way.

Phlox Drummondii.—These will be dealt with in the same way as the preceding, and subjected to slight warmth until they are established. After this a frame will provide suitable quarters.

Isleland Poppies.—These do best when treated in the same way or until the plants are large enough for setting out in lines and groups outdoors. The flowers are extremely valuable for table decoration when used in conjunction with the finer forms of ornamental Grasses. In addition to the usual white, yellow, and orange forms, intermediate shades, which are very beautiful, are now to be had.

Ten-week Stocks.—These will now be sown and pricked off as soon as large enough to handle. If allowed to remain in the seed-boxes until they get leggy and starved before this is done the results are very disappointing.

Asters.—The present is quite early enough to sow the single varieties if they are not required for creating a display before September next. Raised in gentle heat and pricked out as soon as large enough, they make good plants for setting out finally in the middle or end of May. The variety named Southcoate Beauty, which can now be had in several distinct colours, is the finest of the single kinds.

Canterbury Bells.—To obtain good plants for planting in autumn it is necessary to raise them in good time. If seed is sown in the middle of the present month and allowed to germinate in a frame the plants are more robust and can be pricked out on a border when ready without risk. All are very beautiful when in bloom, but the single varieties are the more adapted for the wild garden. The Cup and Saucer varieties in various shades make excellent pot plants for greenhouse decoration. They should be potted in time to get thoroughly established by the end of autumn.

Protected wall plants.—Of these, Myrtles, Ceanothuses, Pomegranates, Magnolias, and the Scented Verbena will be uncovered, as frost likely to do them harm need not be apprehended after this date. The last-named is spurred in close to the old wood, unless there are any vacant spaces present, when the most conveniently situated of last season's growths are left for furnishing them with. Severe pruning is necessary if the plants are to be kept close to the wall, as they grow rampantly. Magnolias require no pruning, the principal thing in their case being to see that the main branches are properly secured to the wall by making good all faulty ties. Myrtles also require but little attention, but Ceanothuses need a slight shortening of the wood, care being taken that the branches generally are securely fastened to the wall. The Mexican Orange-blossom (*Choisya ternata*), although sufficiently hardy not to require protecting like the foregoing, needs to be overhauled every season, as weight of branchlets and foliage is such that the ties, unless frequently renewed, soon give way, with the result that the plants come away from the face of the wall and become badly damaged.

Sowing vegetable seeds.—A general sowing of these, comprising Turnips (in three varieties to form a succession), Globe Beet, Spinach, Radishes, Lettuces of both Cos and Cabbage kinds, maincrop Peas, and Broad Beans will now take place. Small seeds, such as Cauliflowers, autumn, mid-winter, and spring Broccoli, early and maincrop Savoys, Cabbage for summer and autumn cutting, Kales in variety, and Sprouting Broccoli will also be sown. For convenience in netting—to render the foregoing safe from bird attacks—all will be sown together on a border in drills drawn 9 inches apart.

Autumn-sown Cauliflowers.—As these have not, owing to the nature of the season, yet been planted out they have, as a result, become rather larger than is desirable. They will now be planted out without further delay on ground in good heart, watered and sheltered for a time when necessary from cold winds and on frosty nights. A second batch of plants now being hardened off will be ready for setting out in a fortnight's time.

Brussels Sprouts.—The earliest plants raised under glass are being exposed to the outer air daily with a view to getting them properly hardened so that planting out may be effected before the end of the month. They will be planted in rows 3 feet apart with a distance of 2½ feet between plant and plant.

A. W.

MIDLAND COUNTIES.

Strawberry beds.—The beds should be hoed through during dry weather so that the land may be thoroughly cleaned before it is time to put on a mulch. Perennial weeds, as Docks, Dandelions, etc., should be removed by extracting the roots before they have time to establish themselves. Care must be taken when doing this not to injure the roots of the Strawberries. When Strawberry plants have become established all the cultivating that is required may be done with the hoe. To obtain good runners for early planting a number of strong, healthy plants should be reserved for this purpose and the flowers pinched off as soon as they can be seen, which will cause the whole of the plant's strength to be diverted to the production of runners.

Peaches and Nectarines have made little progress in the Midlands during recent cold weather, but attention to the means of protection, previously advised, has preserved the flowers from injury, and the fruits promise to set well. As soon as the petals fall, disbudding is commenced and completed in several operations at intervals of a week or ten days, according to the growth of the trees. Disbudding requires much judgment, for if too many buds be removed at one time a check will result and many of the fruits will turn yellow and fall off. The shoots at the back and front of the branches should be first removed, any young fruits found at the base of the shoot being left if it be thought desirable to retain them. It is a better plan to nip off the point of the shoot in this case, leaving the base of the shoot with the young fruit on it. The points of the shoots should for the present not be pinched. It may be necessary with some of them later on to avoid crowding, but the third disbudding is the best time to do this. If fruits have set thickly, the worst placed should first be removed, and the others left on the branches, and shoots at 3 inches apart, always removing those that are small and weak.

Ventilating.—By the time these notes appear the weather should have become more genial, so that freer ventilation will be necessary. Most plants derive much benefit from a good circulation of air during the earlier part of the day, followed in the afternoon by a good syringing at the time the ventilators are closed and the temperature allowed to run up with sun heat. It is necessary to be cautious in ventilating Roses and other plants liable to mildew or in creating draughts in any way when the air is cold.

Euphorbia jacquiniæflora should be propagated as soon as cuttings are obtainable. When the new growths reach a length of about 3 inches they should be cut off close to the old wood and inserted in small pots filled with a mixture of peat and sand. Water well in and plunge in the propagating pit with plenty of bottom-heat. The lights should be kept close (except for a few minutes daily to expel excessive moisture) until they strike.

Poinsettias.—The present is a good time to start a batch of these for early cuttings. I prefer to begin now by putting the cut-back stools into an intermediate temperature rather than waiting till later and then forcing them on in more heat. At first these plants will require no water at the roots, what they receive from frequent syringings being quite sufficient to begin with.

Violets.—If really good flowers are required it is not wise to allow the plants to occupy the same place for a longer period than three years. At the completion of flowering is the best time to make new beds and borders. The position will be determined by the soil and locality. In light soils the single Violets thrive on a north border, but in a colder heavy soil a more sunny position is desirable. Before planting, the soil should be worked into a friable condition, and if very heavy should be lightened by the addition of sand, leaf-mould, decayed manure, etc. General work in this department now consists in sowing and planting out the various crops which have been wintered under glass, and giving constant attention to those already established in the open and growing in frames, pits, etc. Severe frosts may occur at any time during the next month, which would ruin many of the more tender subjects if left to chance, whereas a small amount of protection will make them safe. The ground should be cleared of all winter crops, such as Brussels Sprouts, Kales, Broccoli, Turnips, etc., as they can be spared, to prevent them starving the ground. Well manure and trench the various plots, and

allow the ground to rest as long as possible. The soil should be kept well hoed among all growing crops. The more often it is moved among such crops as Cabbage, Cauliflowers, Spinach, Turnips, and Lettuce, the more rapid will be the growth, and at the same time the ground will be freed from weeds.

Broad Beans.—When the plants have reached a height of about 4 inches the rows are moulded up to steady the plants. Another sowing will be made now of Green Windsor and Beck's Green Gem for furnishing pods in July and August.

Peas raised in pots under glass, after thorough hardening, have been planted out on a well prepared and sheltered piece of ground. The stakes were placed in position, a little soil drawn up to the plants, and small branches of Spruce stuck along the rows to give shelter against wind and frost. To ensure a constant and regular supply of Peas from the end of May till late September sowings will now be made every fortnight. The large Marrowfats are always most appreciated. These must be sown thinly—1 quart should sow about 120 feet. The best land available should be chosen for this important crop. Make the soil firm before sowing. The drills should be flat at the bottom, 6 inches wide, and 3 inches to 4 inches deep.

F. W. GALLOP.

SCOTLAND.

Beds of spring flowers.—In the course of the week all the beds of spring flowers have been looked over. Growth is now advancing steadily, although the season is by no means an early one in respect of many spring-blooming subjects. Tulips and Narcissus, being planted chiefly with a view to cutting, the bulbs are put out rather thickly, and it is in some cases difficult to stir up the soil without doing damage. Wallflower is later than usual, and, on the whole, has not done so well. The reason may be found in the exceptional rainfall and the prevalence of east winds, which knocked the plants about to a considerable extent. Plants which had become loosened were made firm, and with the much milder weather now prevailing progress will be more rapid. Chionodoxas in variety are bright and effective, and Anemones (both *A. coronaria* and *A. stellata*) will not be much longer delayed, while *Myosotis* will shortly be in bloom.

Wall shrubs.—Some time was devoted to looking round flowering and other shrubs on walls. Forsythias are very effective just at this time, and need but little attention at present, with the exception of securing any sprays loosened by wind. *Pyrus* (*Cydonia japonica*), as usual, is flowering freely. On the same wall an old piece of *Wistaria* will soon be in bloom. *Kerria japonica* fl.-pl. is full of buds which will expand before long. This shrub, if the soil is at all rich, is apt to get a little out of hand, but as its blooms are always welcome it is not pruned too severely. The growths of *Ceanothus* (principally *C. Gloire de Versailles*) have been regulated. A little pruning in the case of the Winter Sweet (*Chimonanthus fragrans*) was done. If the shoots are spurred back to three or four eyes, plenty of young wood which will flower freely next season is produced. *Fuchsias* on a south wall are already breaking into leaf. The flowering season of *Jasminum nudiflorum* having ended, the usual pruning will be attended to shortly. This is never done too severely. *Escallonia macrantha* makes a useful wall shrub were it only for the beauty of its glossy green foliage. This can be confidently recommended to those whose gardens are near the sea, as is the case here. *Garrya elliptica*, highly satisfactory in its season, will also be lightly pruned in a short time.

In the woodland, as is customary at this time, a look round was given during the week to all young or recently-planted trees in order that any over-tight ligatures and faulty stakes might be seen to. Gorse is now a sheet of yellow, and while it tends to become too common and to increase too rapidly, yet its beauty in spring cannot be denied. Very many kinds of *Narcissi* naturalised in Grass begin to be effective, and *Crocuses* yet maintain an excellent display. The yellow varieties, however, are conspicuous by their absence. They seem to have a special attraction for voles or mice, and the corms have evidently been destroyed. Primroses are numerous. *Laburnums* and *Thorns* of different kinds promise a good display, while *Wood Hyacinths* in all the different colours are rapidly advancing.

Shrubberies.—Here, too, young or recently-planted stuff was looked over during the week. Despite the rather unfavourable winter, the majority of shrubs appear to be in robust health. Lavish displays of bloom will shortly be afforded by the various *Barberries*, *B. Darwini*, as usual, being literally covered with flowering sprays, as is *B. stenophylla*. Some stray pieces of *Mahonia* are planted chiefly for their fragrant blossoms, but they do not, in the situation where they are grown, get out of hand—a state of affairs which sometimes happens when *Mahonia* is injudiciously planted. *Choisya ternata* is well budded, and, suited by exposure and soil, is developing into fine pieces. *Ribes sanguineum* is very free, and *Azaleas* are moving rapidly. *Rhododendrons* will be very fine. The deep, rich, peaty soil suits them, and the individual plants are very large. *Deutzias*, both *D.*

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of confers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Treatment of Camellias whilst flowering (C. B.).—Keep the structure as cool as possible from now onwards, shading against hot sun. The more gradually the blooms expand, the larger and finer they will be. Give plenty of air in the daytime, and take care that the plants do not at any time experience the want of moisture at the roots. Be careful to never wet the blooms in syringing.

Stunted Abutilons (Abutilon).—The best thing to do with the Abutilons that have become pot-bound, stunted, and starved, is to cut them somewhat hard back, and when fresh growth commences, turn the plants out of the pots, disengage and shorten the ball of roots, and shift them into larger pots than those they came out of, using some fresh loam mixed with well-rotted manure and a sprinkling of sand. When the plants have made fresh roots and growth they will bloom plentifully. Syringe freely in the summer to keep down red-spider.

Treatment of Ericas (Heath).—The proper way of treating such soft-wooded Ericas as bloom in winter is to cut them down to just below the blooms as soon as the latter fade. They are watered carefully until they begin to make growth, and are then shifted into pots one size larger. The best peat must be used, with plenty of white sand and good drainage, ramming in the compost well round the ball. The plants are kept in a cool-house until the middle of July, and are then stood in the open air till the middle of September. Attention to watering is all important.

Propagating Plumbago capensis (Plumbago).—This Plumbago strikes readily from cuttings made of the young shoots taken off in spring, when 4 inches or 5 inches long; these will be forthcoming from plants that have been cut back early, and if they have a heel of old wood attached all the better. Put them singly into little pots filled with loam and sand, the surface all sand; keep under a bell-glass, or in a propagating frame, moist, and shaded in a moderate heat (bottom heat is not essential). They will soon root, and after which inure them to the full air of the house.

Old Zonal Pelargoniums and Heliotropes (A.).—In the case of old leggy specimens of either of these plants the best plan will be to cut them down to within a few inches of the base of the old branches at once if there is a comfortably warm house at command in which to place them. As soon as fresh growth of about an inch in length has been made the plants should be repotted, shaking a good portion of the old soil away from the roots, and putting them into as small sized pots as possible. Use a loamy compost for the Pelargoniums, and a rather lighter one for the Heliotropes. The after-treatment for Pelargoniums will mainly consist in moderate waterings, and abundance of light and air. The Heliotropes require more moisture and a closer atmosphere.

Culture of Kalosanthos (L. K.).—Pot off the cuttings at once into small pots, in a compost of two-thirds turfy loam and one-third leaf-mould, keeping them rather close for a time until the roots are working freely. Stop the points of the shoots to induce a bushy

habit, and shift, when necessary, into 4-inch pots, placing the plants in a sunny, well-ventilated position in the greenhouse. The Kalosanthos, being of a succulent nature, requires a considerable amount of sun heat to mature the wood, without which the flower-heads do not form. During the early part of September the plants will be benefited by fuller exposure to sun and air, wintering them in a cool-house, and ventilating freely during the early spring months.

Treatment of the Scarborough Lily (Val-lota purpurea) (Inquirer).—This blooms best when root-bound. In a general way, repotting is only advisable when the plants have been several years in the same pots. Small bulbs should be annually repotted until they come to blooming size, and then it is better to let them alone for several seasons. If allowed to remain undisturbed the bulbs will raise themselves and the soil above the level of the pot, but this does not matter if they only get enough water when growing. When old specimens are broken up the young bulbs are best put into 2½-inch pots, half-a-dozen together, to remain thus till the following spring. Good loam, with some leaf-mould, is what they like. Pot firmly, bury the bulbs to half their depth, and drain the pots well.

Culture of the African Hemp (Sparmannia africana) (J. A.).—Established plants of this should be cut in somewhat at this time, as unless this is done they are apt to get leggy by the autumn. Keep them for a time on the dry side, merely watering until fresh shoots some 2 inches long are formed. Then water more freely, and if the pot is full of roots shift into the next sized pot, in a compost of equal parts turfy-loam and well decomposed leaf-mould, adding thereto some coarse silver sand. Keep rather close for a time, syringing on fine days and ventilating when the weather is mild. As soon as the plant has become well established apply a top-dressing of manure which is better than shifting again, as this plant, like many others, blooms most freely when the soil becomes thoroughly packed with fibres by the beginning of the winter. Give abundance of air during the summer months, and about the middle of August turn the plants out into the open air in a sheltered situation, there to remain until the middle of September, when they should be placed in their winter quarters. The Sparmannia blooms in winter if placed in a light structure where the temperature ranges from 50 degs. to 60 degs. When wintered in a cool house it blooms later. Cuttings taken off in the summer strike freely in a shady close frame, inserting them in sandy peat.

TREES AND SHRUBS.

Insects on Myrtle leaves (A. B. P.).—The Myrtle leaves are infested with brown-scale. The plant should be thoroughly and frequently washed with soapy water and Tobacco juice, applied by a syringe. If the scale is dislodged by a piece of pointed stick it will the more readily be washed off. The plant should be laid on its side when washing it, to prevent the mixture reaching the roots.

VEGETABLES.

Bottling Green Peas (L. C. D.).—Green Peas for bottling should be quite young, and also of one size. Put them into wide-mouthed bottles, with a pinch of salt on the top. Stand the bottles up to their necks in a large pot of water, which stand over a fire and boil slowly. So soon as the Peas seem to be soft, take the bottles out, cork them up, seal them over, and keep them in a cool, dry place. Bottling of Green Peas is work that is best done by someone who has intimate knowledge of the business, as a slight mistake may lead to failure.

MISCELLANEOUS.

Leaf-mould (R. W.).—There is no special process of any kind needed to make leaf-mould. All that is required is to collect the leaves as soon as they can be obtained after being shed from the trees in the autumn. The heap must be turned over until the violent heat caused by fermentation has passed away. The heat becomes so violent sometimes as to cause the leaves in the centre to become quite scorched, as it were; when this happens, turning the heap over will bring these over-heated leaves outside, and the outer portion will be turned inside. They require to be turned about three times before the heat is sufficiently subdued.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*H. J. W.*—*Prunus japonica* flore-pleno.—*Miss A. Donovan.*—*Berberis huxifolia* (syn. *B. dulcis*).—*A. B.*—1. *Sedum Sieboldi* variegatum; 2. *Caltha palustris*; 3. *Anemone nemorosa*; 4. *Pulmonaria officinalis.*—*Rose.*—1. *Diplacis glutinosus*; 2. *Choisya ternata*; 3. *Aubrietia Cambelli*; 4. *Narcisse Telamonius plenus.*—*F. J. R.*—1. *Clivia miniata*; 2. *Habrothamnus elegans*; 3. *Francoa ramosa.*—*M. C. B.*—1. *Scilla hifolia*; 2. *Ornithogalum nutans*; 3. *Narcissus Telamonius plenus*; 4. *N. Barri conspicuus.*—*T. D.*—1. *Ribes sanguineum*; 2. *Doronicum austriacum*; 3. *Cydonia japonica*; 4. *Kerria japonica* fl.-pl.—*L. F.*—1. *Anemone pennina*; 2. *Anomatheca cruenta*; 3. *Berberis Darwini.*—*S. B.*—*Chionodoxa Lucilii grandiflora* (syn. *C. gigantea*).

gracilis and *D. crenata* fl.-pl., are freely planted, and, although they occasionally get nipped by a late frost, yet, as a rule, these delicate shrubs flower well. Fuchsias in variety, in all possible exposures, are looking well. *Andromedas*, *Kalmias*, and *Viburnums* will assist in the display, and the shrubby *Spiraeas* of many kinds are effective over a long season. Among fine-foliaged shrubs, *Aucubas*, *Box*, *Hollies* of many kinds, *Veronicas*, and *Bays* give relief and variety.

Sweet William.—During the week, a large quantity of Sweet William was put out from nursery beds. This ought to have been planted long ago, but the untoward weather proved an obstacle, and it was decided to wait till early spring before moving them. The soil is now in excellent condition, the plants are thrifty and robust, so that there seems to be no reason why they should not succeed.

Bedding plants.—With the potting of a final lot of *Salvia* *Pride of Zurich* from the propagating pit, the increasing of hedding plants has terminated. More Zonal Pelargoniums have been mossed up, and meantime placed in heated pits. Pricking off is regularly done as occasion requires among seedlings; and in the course of the week full sowings of Ten-week Stocks and of Asters were made. The latter sowing included the popular single varieties which are appreciated for cutting. Further and final sowings of Antirrhinums were made. Plants from such sowings are valuable for late flowering.

Hardy-flower borders.—A beginning was made in the course of the week with the tidying up of the hardy-flower borders. These are rather extensive, and entail a good deal of work at this time. Stakes of a suitable length are placed in position, and afterwards the borders are hoed and raked. When this is completed it is possible to see where a colony of hardy annuals would be effective, and sowing is done without delay in such places. Bulbs in these borders at present make an excellent show, and when their season is over and the foliage ripened off the vacant spaces are temporarily filled up with any left-over hedding plants which will not unduly exhaust the soil. Among other things just now in bloom may be mentioned the *Pulmonarias*. Any stools of *Delphiniums* or of similar rather gross-growing subjects may with advantage be thinned at present. This makes the flowers upon the shoots which are left much finer, and the cut-back stems very often break again and provide a second show. This, if not so fine as that early in the season, is always useful and prolongs the season of these favourite hardy plants.

General work.—With the exception of China Roses the pruning has been completed. Plants in cold-frames are being freely exposed with a view to placing them outside in a sheltered place at an early date. The borders intended for Dahlias and Sweet Peas were stirred up after being dressed with soot, and a beginning was made with the trimming of Grass verges.

Vegetable garden.—No work of any importance was carried out during the week; sufficient sowings and plantings have been made for present requirements. A quantity of Leeks was lifted and laid in, and the break prepared for digging. Cauliflower plants raised in heat are now being hardened off. By planting in trenches and covering the plants with inverted flower-pots at night, Cauliflowers may now be risked in the open air.

Under glass.—The work under glass has again given way to the more pressing work out-of-doors. The usual attention in respect of watering is increasing daily, and takes up more time. Ventilation is freely given alike in fruit and plant houses on all suitable occasions. Rather attractive in a greenhouse just at present is a number of pans of *Myosotis*. The variety, *Royal Blue*, is a dwarf one, and, like *Primula malacoides*, is much more effective in good-sized pans than in pots.

W. McGUIFFO.

Balmoe Gardens, Kirkcudbright.

The late Mr. F. C. Drew.—Trustees have been appointed by the University College, Reading, to administer funds given and accruing to the late Mr. F. C. Drew, on behalf of his wife and family (eight children all under the age of fifteen years). The trustees, who consist of the Registrar at the College, Mr. Herbert Sutton, and Miss Lucy Ashcroft, Professor of Education and Mathematics, will do their best to help Mrs. Drew, and assist in placing the children in suitable schools and positions in life and administer to the funds for their benefit. Subscriptions have been sent to the trustees by his present and past pupils, and it is thought that many of his old friends would like to send a contribution, which they can rely upon the Trustees using to the best possible advantage. Donations may be sent to the Registrar, University College, Reading.—LEONARD SUTTON.

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NOTES OF THE WEEK.

Botanical rigmaroles.—I notice in the paper some people use Latin names for Elwes' and Whittall's Snowdrops. I have grown both and many others, and I think they are two forms of one species. It is much simpler to say the Elwes or the Whittall form than use a double-barrelled Latin name.—W.

Cytisus Hildebrandti.—This has been finely in flower in the Royal Botanic Gardens, Edinburgh, under glass this spring. It is an early bloomer, and should have the shelter of a cool-house. In Edinburgh it is planted out, and makes a good bush 4 feet high or a little more, covered with bright yellow flowers. It promises to make an excellent pot plant.—Ess.

Double flowers.—When "W." was finding fault with double flowers, he might have included Cinerarias. Surely of all doubles, double Cinerarias are the worst. For double Camellias, there is this to be said: A relation of mine who lived in Brittany, and in whose garden Camellias took the place of Laurels with us, told me the double Camellias were harder than the single.—F. G. DUTTON, *Bibury Vicarage, Fairford*.

Narcissus nanus.—I think J. Cornhill's note as to the above being "easily grown" is a little misleading. Here (Co. Cavan, Ireland) I cannot keep it alive, although almost all other Narcissi grow and bloom magnificently, and increase almost too rapidly. I have bought bulbs of nanus again and again, but they rot away, so I have given it up, although with extreme regret. My garden is rather too flat and the soil heavy clay, which is very wet and sodden in winter.—A. B. M.

Iris reticulata.—As "W.," page 189, asks for experiences with regard to Iris reticulata, I will give him mine. I am on oolite limestone, and the rock is about 6 inches below the surface. So the garden has had to be made. It slopes to the south. I. reticulata used to do very well. Now I have one strong clump, and the others do not seem to increase. When they succeeded I had a gardener whose strong point was not watering. Now the borders are carefully watered, and, though I give instructions to avoid watering the Iris, it is not very easy to observe it in the case of the small clumps. I have inferred that a fairly deep soil and no watering are what I. reticulata likes. My I. stylosa began flowering on September 12th, and is

still going on, which I think is pretty good.—F. G. DUTTON, *Bibury Vicarage, Fairford*.

Heloniopsis umbellata.—Of this I saw a very good plant in bloom in the Royal Botanic Gardens, Edinburgh, on April 5th. It was growing in one of the borders in the front of the range of houses. The long, rather strap-shaped leaves were surmounted by a number of flowers of a pleasing pink, arranged in umbels on the short stem. It is far superior to H. breviscapa, and a good rockwork or border plant. H. umbellata comes from the Island of Formosa.—S. ARNOTT.

Anemone rupicola.—In the Royal Botanic Gardens, Edinburgh, this is evidently quite at home in the rock garden, where it is now in flower. At the Chelsea Show of 1915 its value, when shown by Bees Limited, was recognised by an Award of Merit. Its height is barely 9 inches, and above the Apple-green leaves are borne the silky flowers of pure white, tinged in the young buds and in the flowers which have been longest expanded with a pale blue. Sandy loam in the border or a well-drained spot in the rock garden would appear to answer well for this fine Himalayan Windflower.—Ess.

Polyanthus Munstead strain.—We have this in Sheffield, but down here (Surrey) it seems to do much better, and is now (April 12th) covered with bloom, and has been so, I understand, for a month or more. The flowers are white, cream, yellow, and orange, and whole beds are planted with them. Seed should be sown in a shady border now, and the plants pricked off and grown on rapidly. They should be planted in their flowering quarters in October. The soil should be moist and fairly rich, and the plants should be set out 1 foot or 9 inches apart each way.—E. T. ELLIS, *Moor Edge, Walton-on-the-Hill, near Epsom*.

Trees and the storm.—A great number of fine old Elm-trees and several Beeches were uprooted by the blizzard on March 28th. In other cases the trunks have been snapped off about 10 feet from the ground and some of the strongest boughs broken like matchwood. Cedar-trees also suffered badly, and in some cases are completely ruined. Some fine trees of Cupressus Lawsoni erecta viridis, 30 feet to 40 feet in height, were uprooted. A most picturesque old Yew-tree, standing in the centre of the rock garden, was badly damaged, quite half of its very large branches being snapped off close to the

trunk. I hear that the Cedar at Titchmarsh Rectory, reputed to be the finest in the country, is completely ruined.—F. W. GALLOP, *Lilford Hall, Oundle*.

Flowering Cherries.—Mr. E. H. Wilson's notes on these on pp. 167-8 are interesting and should prove useful. Regarding those which are frequently grown the following may be useful:—P. Sieboldi, of Wilson, generally called Watereri in nurseries and gardens, comes into flower about a fortnight before James H. Veitch. These two are followed by what one would consider a variety of the latter and called "New Rose" by the French nurseryman from whom I obtained it. This last-named is not so free-flowering as the other two, and the blooms are but little darker than those of James H. Veitch, which are deeper in colour than those of Sieboldi.—S. ARNOTT.

Glory of the Snow (*Chionodoxa Lucilæ*).—Few hardy flowers have attained to such popularity in so short a time as this. The lovely colour of the flowers, and the early season at which it blooms, render it one of the most precious among hardy bulbs. To see this little gem at its best it should be planted in colonies of half-a-hundred or more bulbs. Fortunately, bulbs can be procured at a very moderate outlay, and, once planted, they are a joy for ever. The Snow Glory is as hardy as the common Snowdrop, and will flourish in almost any kind of soil. It comes into flower with the little Siberian Squill, for which it is an admirable companion. The colour of the Squill is richer, but the Snow Glory is, I think, the more effective of the two, being of more robust growth, while the flowers have a white centre, which renders them very conspicuous.—T.

Notes from Surrey.—Things are much more forward down here than they are in Sheffield gardens. The borders are gay with Primroses, Polyanthus, Anemone apennina, and Hepaticas, as well as the fine, large, double Daisies, Wallflowers, and Hyacinths, and the rock garden is full of single Arabis, Scillas, Grape Hyacinths, etc. There will soon be Tulips in bloom out-of-doors, and the Fritillarias will be out in a day or two. This is very different from our Sheffield gardens. We had plants in bloom in January and February, but March was a blank month, for we were snowed up most of the time. When I left Sheffield, however, I noticed that Arabis, Doronicums, and Alyssums were showing bud, and that Aubrietias were coming into bloom, but I consider

this very early. Usually, it is not our good fortune to have these plants in bloom till late April, and sometimes they do not reach their full glory till mid-May.—E. T. ELLIS, *Walton-on-the-Hill, near Epsom.*

Herb gardens.—I have been acting devil's advocate in regard to these, which people have been getting up meetings to promote. I have tried to point out that it is a foolish game, as the demand for herbs is likely to be a very small one. After the war there will be so many countries more suitable for growing the plants that it can never be any material gain to grow them in this country, and it would be much wiser to devote the land to the production of food. The doctors themselves tell us to use as few drugs as possible. There are, perhaps, half a dozen useful and difficult to get, but the more our knowledge of drugs grows the more do people think that the best drug is no drug. Some people also think that the use of drugs is a national danger and cause of permanent ill-health to people who doctor themselves and believe the quacks.—W.

Scented-leaved Pelargoniums.—Signs are not wanting that the merits of these are being more generally recognised. This is not to be wondered at, as Pelargoniums of this section are remarkable, not only for the fragrance the foliage possesses, but also for the many varied scents to be found among them. The Citron-like smell of *Pelargonium crispum* and some others, and the Peppermint scent of *P. tomentosum* furnish cases in point. Added to this, the flowers of some of the scented varieties are very pretty. One of the most recent of this section is *Clorinda*, which was given an Award of Merit a few years since by the Royal Horticultural Society. The rose-coloured blossoms of this variety are large and showy, and immense numbers of it have been sold since it was first distributed. A very old class, yet, at the same time, combining fragrant leaves and showy blossoms, is the different forms of *Unique*. All are of a rambling habit, and at one time used to be trained as specimens, while they are also well suited for growing as wall or rafter plants in the greenhouse.—W. T.

Cupressus Lawsoniana, var. erecta viridis.—This has suffered during the recent rough weather, the branches falling about and making great gaps in the tree. As a small tree it has some value, and will then stand storms with immunity. Its dark green colour, too, at all seasons of the year, is not without value. I pity those who have many old specimens, for they are a continual source of expense and trouble. I have spent hours after a storm lacing in the branches in order to give it a respectable appearance, but this always seems wasted labour and material. I saw this tree used in quantity when visiting a Sussex garden during the past summer. It had been planted in two rows along the side of a raised terrace fully exposed, and a more bedraggled lot could scarcely exist. The lower parts of the tree had become naked, and the lumpy branches which had broken loose showed great, dead-looking holes which had been caused through the excluding of light and air by the thick habit of growth. With such a number of these it would be almost impossible to keep them laced in, with the result that they become fitting subjects for the fire. The species in a wild state reaches 200 feet in height, and is one of our most valuable trees, and perhaps one of the most planted of the Cypress group. When breaking into new growth in early summer it is very attractive; also when in flower; and lastly, is immune from all the troubles associated with this fastigate variety.—E. M.

FRUIT.

TAKING CARE OF THE FRUIT.

The present price of sugar, with an ever-upward tendency, is regrettable, and will, I fear, press rather hardly on cottagers, lessening the prospects of home jam-making and the sale of fruit not required for home consumption. The various jams will be greatly missed, especially where there are children, and under the circumstances it will be advisable to direct increased attention to bottling the fruit, also to have it riper than usual, so that when required for use only a very little sugar will be required. This applies to the different Currants, also Gooseberries and Plums, which are not much appreciated if too sharp. Any measures that can be taken to ensure the keeping of fruit and having it at its best will be welcome—a fact that was emphasised the other day (April 10th) when some nice baskets of Blenheim Apples were removed from their winter quarters in first-rate condition. I determined to let them hang last autumn as long as possible, the result being that they have kept sound and plump with no shrivelling. A few of the best fruits that had been tapped were treated with plaster of Paris, and have come through equally well. Fortunately, however, the birds are nothing like so fond of Blenheims as of some varieties. The above fruits are those mostly represented in small gardens. An occasional Pear furnishes material for dishes of stewed fruit, but these old kinds take an extraordinary time in the cooking, and are most acceptable for the purpose after they have been bottled. It is probable that the price of sugar will also have a prejudicial effect later on on the use and sale of Blackberries. E. B. S.

Hardwick.

ECONOMY IN THE GARDEN.

It is only fitting that all those who have charge of gardens should see to it that there is no waste at such a time as the present. It is not possible to lay down strict rules as to how this is to be effected, for what is applicable, and at the same time most suitable, in one garden is not so in another. In several cases the same rule will apply. Paths and roadways will not come to much harm if some of the labour in upkeep be withdrawn for the time being. Keep the gullies and drains in good working order by all means. It is also possible to dispense with the cutting of turf verges for one or two seasons; in fact, it is my opinion we do too much of this work. Again, dispense with the use of stakes for all herbaceous plants. This has been done, I know, in one instance, and with manifest advantage, and at least a fortnight's labour for two men has been saved. If any support be needed, use a few old stubby Pea boughs for the tallest plants, and stubby, worn-out brooms for shorter kinds. In this way the effect is much better and far less formal. Avoid any renewals of turf if possible, as this means labour; rather scatter a little lawn Grass seed and trust to its effect. Defer for another season, at least, the removal of shrubs of any considerable size. This, too, makes a lot of labour, not only in the proper and safe removal, but in the after attention to watering. Dispense for one season with the replanting of herbaceous borders by the division and planting afresh of the stock thereof. These are a few instances of what may be avoided in the general upkeep of the pleasure grounds. On the other hand, do not, if it be at all possible, neglect the forking over in the winter of the ground among shrubs.

When the work is neglected the shrubs will feel the effect when dry weather again sets in. Do this work and also prune all shrubs as usual that are known to be more effective when this is done annually and in its proper season. Climbers have often far too much labour bestowed upon pruning and nailing, just for the sake of formality. Some economy, too, may be carried out in the

KITCHEN AND FRUIT GARDENS. Here but little harm will come to any crop if the trenching two and three spits deep be reduced in its extent for a season or two. A few crops do better under deep trenching, but many others do not need it every year. Aim at rather small or moderate-sized examples of culture in preference to overgrown specimens, such as find favour on the exhibition table. We should do better if we grew more of the dwarf or semi-dwarf Peas that require but little staking. Here, again, is an instance of saving labour both in staking and in the preparation of the stakes. Runner Beans may be grown as the market gardeners grow them; true, the pods will be smaller, but they will be all the better, if gathered early. With both Peas and Runner Beans what is needed is more seed, and so let the rows be as close again. This will be in favour, surely, of the seed merchant! With respect to Lettuces, let the smaller varieties be grown rather than the big examples. Depend upon the small Carrots rather than upon the big examples. The same applies to Onions and Leeks for home consumption. Grow more of the smaller varieties of the Cabbage family. Make every effort to keep the hoe in use, even if some things are for the time passed by.—J. HUDSON, in *The Garden.*

MELONS IN FRAMES.

With but little time to spare for the making up of hotbeds specially for the growing of a summer crop in frames, some of the latter, now filled with Potatoes, will, as soon as they are cleared, be used for the purpose. The soil will be removed and the portions of the existing bed covered by the frames will then be renovated by the addition of some fresh stable litter. This, when fermentation has set in and the heat begins to subside, will be trodden firm and a mound of fibrous loam enriched with a little bone-meal, and a sprinkling of lime-rubbish added to ensure a firm, fruitful, rather than a soft, long-jointed, growth placed on the bed under each light and well rammed. Each mound will be of sufficient capacity to accommodate and support two plants—one to fill the top and the other the lower portion of the bed under each light—until "setting" of the fruits has taken place, when they will be added to. To prevent heat rising and filling the interior of the frames with steam charged with ammonia, the surface of the bed, after the mounds have been made up thereon, is covered with loam about an inch in depth and trodden down. Whether linings will be required will depend on the amount of heat which will result from addition of the stable-manure to the old material and outer climatic conditions also. In the meantime, the necessary number of plants will be raised, the seeds being sown singly in small pots filled with loam in a moist condition to obviate the necessity for applying water until germination takes place. To strengthen the plants the first rough leaf will be pinched off, and planting take place as soon as the pots are well filled with roots.

Early Melons.—Wintry weather and economy in regard to fuel have not been

conductive to the hastening of the growth of early Melons; still, with lengthening daylight and a prospect of brighter weather, a certain amount of leeway can be made up if the utmost use is made of sun-heat. Plants developing laterals will, if they fail to show a sufficiency of female flowers, be pinched to make them break, as the resulting growths are then invariably fruitful. The points of the main stems should at this stage also be stopped, as this leads to the production of a further relay of laterals, which may be depended on to fruit also should they be required in consequence of those first produced failing to do so satisfactorily. The main object is, of course, to obtain a sufficiency of laterals carrying female flowers that will open simultaneously, and unless this follows, a good crop will be looked for in vain. These fruit-bearing laterals are pinched at the first leaf beyond the flowers, which tends to strengthen and hasten their expansion. With the soil at this stage kept rather on the dry side, the female flowers, when fully expanded, set freely

PLANTS AND FLOWERS.

ROSES.

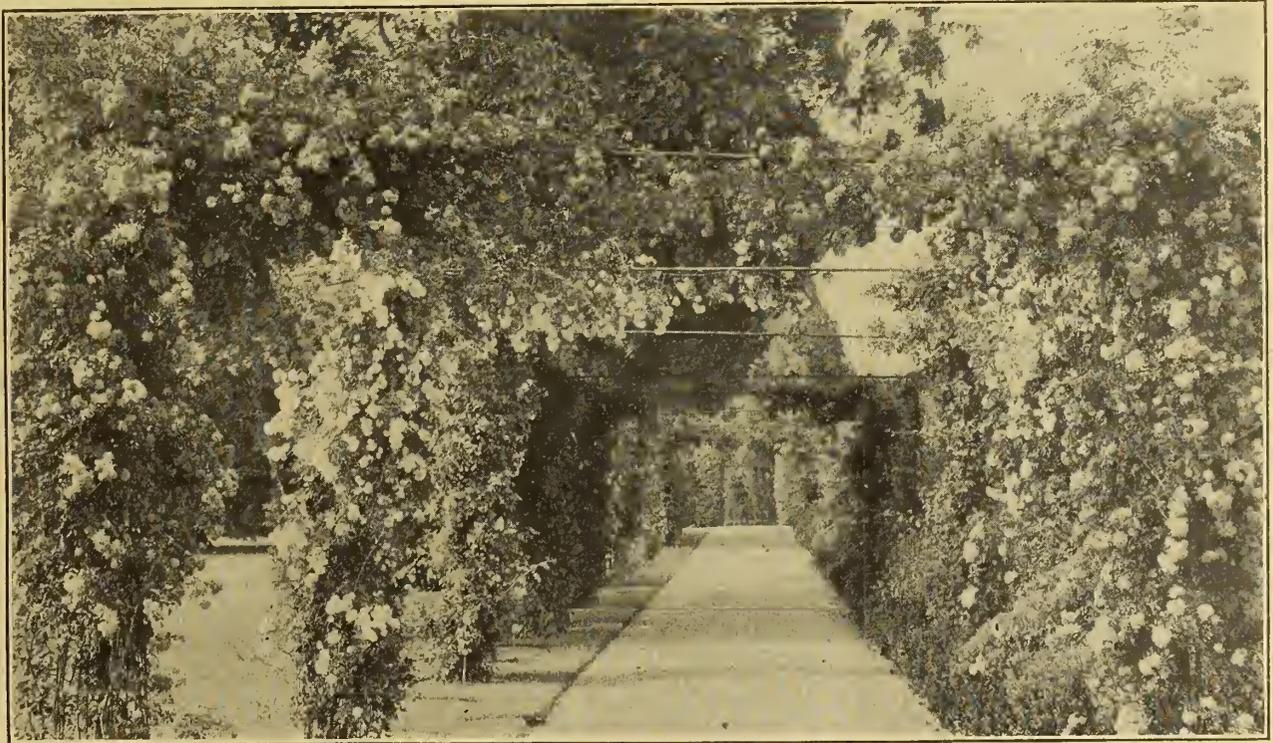
CLIMBING ROSES AT KEW.

ARCHES, pergolas, pillars, and trellises are among the most favoured methods of displaying the beauties of the Climbing Roses, and something answering one of these descriptions is generally to be found even in the smallest of flower gardens. The long, straight walk, spanned at intervals of 4 feet or so by iron arches, covered from end to end in the summer with a wealth of Rose blossom, is a feature in any garden. The illustration we give to-day shows the Rose pergola at Kew, which runs for a distance of nearly 250 yards between the rock and Iris gardens on the one side and the herbaceous ground and water garden on the other. The pergola is constructed of light iron bars. On it most of the best of the old and new varieties are thriving well, and in the season of bloom are

cases hard pruning will have to be resorted to in consequence of so much of the young wood having been killed by the frosts in the early part of March. At the time this occurred, the buds on the upper portion of the majority of the best of the growths had started, and in many cases had made as much as 2 inches of growth. Both these and the wood on which they originated succumbed when overtaken by the frosts alluded to, and have since presented a rather melancholy spectacle. Care will be taken to cut back in every case to live wood, and although the result is that the pruning is of a more severe nature than usual, the bushes will no doubt in the long run benefit by it. When finished the beds will be dressed with an artificial Rose manure, which will be pointed in.—G. P. K.

THE LATE PLANTING OF ROSES.

OWING to the unfavourable weather during March many growers have been obliged to delay planting their Roses until



Climbing Roses in the Royal Gardens, Kew.

after having been pollinated about mid-day, the fruits swelling off at once when well watered two or three days afterwards. After this, flowers of either sex are suppressed and the laterals and sub-laterals kept pinched at the first leaf. Ample supplies of tepid water alternated with stimulants are then necessary, and to encourage the increase of feeding roots additions of compost are from time to time required. For the benefit of the uninitiated it should be stated this is not applied in the same way as for Cucumbers—*i.e.*, on the surface of the soil in which the plants were set out, but at the outer edges in the case of mounds and raised borders, and round about the mound in the centre of pots, provision for which was made at planting time. This preserves the stems from risk of canker, which might possibly ensue if they were surrounded with fresh compost. A humid atmosphere is at all times essential from now until the fruit matures, and embrace the opportunity whenever possible and secure a temperature of 90 degs. with the aid of sun-heat by closing early.—A. W.

wreathed with flowers, the view from end to end being a continuous display of changing colour. Among those planted are Tea Rambler, Queen Alexandra, Leuchstern, Dorothy Perkins, Hiawatha, Carmine Pillar, Una, and others. Much has been written against the employment of iron arches, but where these consist of simple rods and so stayed together that they are secure against the effects of gales, they are so speedily covered by foliage and flower as to be entirely lost to sight. Another merit possessed by such arches is that being so slight they throw no shade, and, if not set too close together, the sunlight filtering through the loosely-trained growths permits Roses to form and expand beneath the arches as well as above them.

Rose pruning.—With the exception of Teas and their hybrids this has been brought to a close, and the beds are now being manured and lightly dug over. The pruning of the above-mentioned will be taken in hand forthwith and completed without delay. In the generality of

a very late date, and some have possibly not been able to complete the planting even yet. The question arises, "How late in the year can Rose-planting be done with a chance of success?" This depends upon the condition of the soil at the time of planting, the method of doing the work, and the attention given to the plants afterwards. I have planted large numbers of Roses as late as the last week in May and have lost only a very small percentage. To be in good condition for planting, the soil should be fairly dry and friable, for if it is at all sticky it is sure to bake hard in the sun, and this will hinder the formation of new roots. Where the soil is naturally very heavy it should be ridged, or thrown up very rough, early in the season, when the frosts, winds, and rains will pulverise it and get it into good planting condition for the spring. Where this has not been done it would be advisable to have a barrow-load of fine, loamy soil at hand, a shovelful of which should be worked in among the roots when planting. For spring planting "retarded" plants, that is, plants that have been dug up early

in the season and "heeled in," are far superior to those taken straight from the ground.

Before planting, cut the bushes back hard, leaving only two eyes or three eyes to each shoot, and carefully trim off the bruised ends of the roots. Open a fairly wide hole, so that the roots may be spread out and not cramped, dipping the plant into a bucket of water before planting. Roses like firm planting at all times, but especially in the spring. The actual surface-soil should not be trodden down, but be left fine, to form a tilth. Give a good watering immediately after planting. Subsequently water when the young shoots seem to be flagging, this attention being more necessary in light than in heavy soils. The moisture will be retained much more readily in the beds if a fine, loose surface is kept, and this can only be done by frequent hoeing, especially after rain and the application of water. Given such treatment there is no reason why dwarf Roses planted as late as May should not give quite a good show of blossom in the late summer and autumn. Climbing Roses planted now should be cut down just as rigorously as dwarfs, when they will make a lot of new wood, which will produce a grand display during the following season.

E.

PEGGING DOWN ROSES.

It is surprising that the pegging down of Roses is not more generally practised. The finest varieties for pegging down are those that every year make long, sturdy growths, which should be left full-length when pruning, all the smaller wood being removed. These long rods are then bent over gently and fixed about a foot above the ground-level by means of a peg. The pegs should be of good length, so that they may be driven well into the ground, for the bent shoots exert a considerable strain. Cultivation, too, should be of the best, a quantity of good old manure being forked into the beds each spring immediately after pruning is done. The pegging down of the shoots induces the plants to blossom so profusely that unless given plenty of nourishment they cannot possibly stand the strain many seasons and continue to produce new growth at the same time. It is likewise necessary to remove all useless wood, and also the pegged-down shoots directly they have done flowering, so that the energies of the plant may be utilised in the production of strong new rods for the following season. Those who have never tried this way of growing Roses should pay a visit to Kew Gardens during the Rose season, where several fine groups are to be seen, the plants literally smothered with bloom. When planting Roses for pegging down, place them at least 4 feet apart or the bed will become over-crowded very quickly. Equally effective groups may be formed by planting some of the perpetual-flowering climbing Roses, but these will need to be at least 6 feet from plant to plant.

D. N. E.

NOTES AND REPLIES.

Rose-trees unhealthy.—Kindly inform me what is the matter with my Rambler Roses, of which I send a few pieces. There is a growth round each shoot, and three trees which are within about 10 yards of each other, and in a sheltered position, are affected. Would you give me your advice as to how to treat them, and whether the peculiarity is likely to impede the flowering?—B. S. HUGHES.

[The Roses are forming great numbers of adventitious buds (as supplementary buds are called) about the base of each growth. This will probably prevent or interfere with the flowering of these shoots very seriously, and we think it would be well to cut down all the affected shoots so

as to induce new growth, and at the same time to top-dress the soil with manure or with good loam and manure, so as to encourage root growth. Is the drainage all it should be?]

H. T. Rose H. E. Richardson.—Growers in Scotland with whom I have come into contact have been very pleased with this Rose. It is a vigorous grower, bearing its flowers well on short, erect stems. The colour, a deep, rich crimson, is combined with charming form.—SCOTCH ROSE.

FERNS.

THE COMMON POLYPODY.

I AM pleased to see that I am not alone in estimating the common Polypody at its true value. I cannot say that I have seen it used in the way "E. M." describes as a carpet for bulbous flowers, but I can well believe that it is one of the best things that can be employed for the purpose. "E. M." alludes to the influence of shade on the growth of this Fern. I have grown it in all positions, and certainly in partial shade the fronds are larger and deeper in colour. On the other hand, they are more lax, are not so erect, and do not show the yellow spore-cases. The more open the position the more is the fructification displayed, and as it is so abundant it adds to the attractions of this Fern. Wherever I have seen it growing naturally it has invariably been on dry banks in a more or less open position. It does not seek the shade and moisture which nearly all other native Ferns do. I have seen it on a bank in very sandy soil and far removed from anything that could afford shade or shelter, but it is possible that there may have been trees there in former days. The fronds were very short, but perfectly healthy. The ability of this Fern to resist long periods of heat and drought in full exposure to the sun is very great. I have a lean-to greenhouse facing south which was built some forty years ago. The woodwork has been renewed, but the wall has never been pointed, and has, therefore, become a bit crumbly and Mossy. Some years ago one little plant of the Polypody appeared, and this in time became a fruiting plant and was the beginning of colonies which increase annually in strength and numbers. I suppose that if I lived long enough I should see that wall pretty well covered with verdure. How that Fern lives in a time of great heat I cannot imagine, and apparently without moisture at the roots, but it does. It certainly looks at times rather shrivelled, but in early autumn new fronds are made, and from that time all through the winter the fronds remain of a rich green, as deep in verdure and as large as is the case when in apparently more favourable circumstances. Some of the fronds are quite a foot long.

I do not think that the most is made of our British Ferns. I do not mean the crisped and tasseled varieties, which, we know, get their full meed of attention. It is the typical forms I am thinking of, and which, so vigorous and enduring, so easy to please, are at home among a stronger vegetation and can be used freely and will create an effect where so many things would fail, either partially or completely. The effect which these common Ferns create when judiciously planted is remarkable; they put quite 30 per cent. on the appearance of any garden in which they may be used. I had occasion to note this in the case of some villas the gardens of which were of the ordinary stereotyped style—Grass lawns with flower beds and shrubberies composed of the usual assortment of Laurels and similar cheap, common things for which selection we have to thank the speculative builder,

who, in a general way, knows little and cares less about the many beautiful trees and shrubs in cultivation, and whose sole object is to furnish the place at a minimum of cost. It makes me feel sad when I see how nice gardens have been, in a measure, spoiled in this manner, and how little variety is to be found in them. In contrast to its fellows there was one on which the eye rested with pleasure and which owed its superior attraction and distinction to the presence of large clumps of the Male and Lady Ferns which were rather freely used. These Ferns impart brightness and informality where more rigid forms of vegetation predominate, and they are so inexpensive that they come within the reach of the slender purse.

J. CORNILL.

OUTDOOR PLANTS.

HARDY FLOWER NOTES.

SAXIFRAGA COCHLEARIS MAJOR.—The true variety of this is a handsome Saxifrage, and by reason of its very bright encrustations quite a prominent feature in the winter. During the winter I know of no other encrusted kind that so well resists frost, snow, and heavy rainfall. Some kinds are, of a dull colour, and all seem to be more or less affected by weather influences, but *S. c. major* has gone through the most inclement time experienced for many years, and is quite unaffected. Small though this Saxifrage may be, there is a nobility about it which distinguishes it from the generality of its kind, and it is certainly much superior to the type, which sometimes does duty for it. In fact, I grew the latter some years under the name of major, and my plants were obtained from one of our leading hardy-flower specialists. There is no mistaking the two when seen together, the variety being considerably larger and much more silvery. My stock is very limited, and I have never seen it in the form of large clumps, but should say that for winter effect it must be one of the best dwarf-habited plants in cultivation.

PYRETHRUM ULIGINOSUM.—An inmate for many years of English gardens, this useful hardy plant remains the same. It is a pity that the same improvement cannot be made with it that has been effected with the Moon Daisy. The typical form of this was never in the true sense of the word popular. It was too coarse, the disc being too large. Now we have a number of varieties ranging in height from 2 feet to 4 feet and differing considerably in form. It is a pity that the same improvement cannot be effected with this Pyrethrum, and doubtless it could be done, but it would be a matter of raising a number of seedlings annually and taking advantage of any break, however slight, that might appear. When the autumns are sufficiently fine to allow seeds to ripen, this might easily be done. This plant, on account of its late blooming and the ability to withstand climatic vicissitudes, is most valuable, but it is wanting in refinement.

CEPHALARIA MONTANA is a good thing for the wild garden or for planting among low-growing shrubs. In the herbaceous border it is out of place, being of rank growth, and, therefore, liable to encroach on the ordinary inmates of a flower border.

ASTER THOMSONI.—Notes on this species have appeared recently in GARDENING ILLUSTRATED, and it certainly deserves a good place in the flower garden. It cannot compare in decorative worth with *A. Amellus bessarabicus*, which it somewhat resembles in habit of growth, but it has a long season of bloom, and from what

I have seen of it it does not need frequent transplanting. My experience is that it is rather impatient of removal, and takes a season to recover when divided. Being of dwarf growth and unlike its near relatives, the Michaelmas Daisies, not spreading rapidly from the roots, it is a good thing for the owners of small and medium-sized gardens. This Aster is worthy of more extended cultivation.

J. CORNHILL.

VIOLETS.

In addition to the interesting information on the cultivation of Violets given in a recent number, it may be noted that a border facing somewhere between north and west is the best place for the cuttings, as under such conditions they are shaded a bit when the sun is at its strength. Failing such a position, I have found it advisable to shade a little artificially. The foliage of Violets is very susceptible to the attacks of red-spider, and this is aggravated when the plants



A way of staking Delphiniums. From a photograph sent by Mr. C. Turner, 3, Kenwood-road, Highgate, N.

are exposed to very hot sun and allowed to get dry. It must not be allowed to make headway or the foliage will be crippled and the number and quality of the flowers considerably lessened. One of the best remedies I ever found, to be applied as soon as the attack was noticed, was to knock up some fresh horse-droppings with a fork, mulch the surface of the ground with these, and give a good soaking of water. An examination of the foliage the day after the application found it free of red-spider, which evidently cannot stand the aroma that rises from the saturated droppings. Bearing in mind the susceptibility of the Violet foliage to such attacks, it is not advisable to put the plants in close proximity to anything that might be similarly affected.

I think it probable we might learn some useful lessons in the cultivation of garden Violets by a consideration of the circumstances under which, in some districts, the wild forms show to the best advantage, notably in the way of soil and situation. It seems strange and a little difficult of explanation why the blue and white forms

should individually be strongly represented in certain districts. Here, for instance, in mid-Bucks, I should think the white is in the proportion of fifty to one—indeed, on long stretches of bank one hardly sees a blue flower. E. B. S.

Hardwick.

STAKING HARDY PLANTS.

The illustration we give to-day shows an original way of staking Delphiniums, by using branching Pea-sticks, thus giving a far more natural effect than is possible by tying each flowering shoot to a stiff stake. In one garden we know, the owner always uses spray branches for supporting his Carnation flowers, all of which are then seen to advantage, while it is far easier to gather any blooms that may be required for the house.

ANNUALS.

THESE will be largely employed to take the place of half-hardy annuals and many other subjects used in previous years.

form of *Nigella*, named Miss Jekyll, should be grown in good-sized clumps, and the same with regard to *Lavatera rosea splendens*. *Layia elegans* is well worth growing, and *Phacelia campanularia* is a gem for the front of a mixed border. Though the flowers are not very showy, and close up in the day time, good large breadths of the Night-scented Stock, *Matthiola bicornis*, should be found room for.

Though the fringe of the subject has, so to speak, only been touched upon, enough has been said to show what a fine floral display and what a great amount of pleasure may be derived from the growing of annuals alone. Sowing generally should be done at once, first raking the soil down to a fine condition and covering the seeds with fine soil, little or much, afterwards, according to requirements.

G. P. K.

NOTES AND REPLIES.

Arum Lilies in the open.—Would you kindly give me advice about my Arum Lilies? Having too many under glass, I want to grow them in the open. Is this possible without taking them in at all? I have seen splendid masses of them grown in the garden, and in flower in September or October. How am I to treat my plants to get this result?—LOUIS BARTON, Dundalk, Ireland.

[These plants can only be grown in the open in the more favoured parts of these islands, and then preferably in water. From your letter it appears you wish to grow them in the open garden, and unless you have proof of their success in your own immediate locality all you can do is to experiment with some of your surplus stock. In any case they would require a wet or moist, well-sheltered position, and a good deal of protection in winter. Submerged in water to a foot in depth they pass the winter fairly well, and flower during the summer. In your case you had better shake the plants out of the soil, divide them if necessary, and plant out at once, observing the hints given above. You say you have seen "splendid masses grown in the garden and in flower in September and October." You do not say whether they were permanent there or only temporary. If the former, and you are like circumstanced, you could not do better than copy it.]

Dividing Crown Imperials and Iris Kämpferi.—Can you tell me if I should divide my Crown Imperial roots this year? They are not flowering freely, and to my knowledge have not been divided for five years, also some of the clumps are producing variegated leaves. How often should Iris Kämpferi be divided?—J. L. NICHOLSON.

[The only safe guide as to how often the above-named plants require dividing is their behaviour in individual circumstances. No rule-of-thumb method can be laid down. Crown Imperials are impatient of frequent disturbance, and take some time to recover. As they are not flowering well and have been some time in the position, they may require replanting and new soil. They prefer a rich calcareous loam, and should be planted not less than 6 inches deep, manuring the ground well at some inches below the bulbs. July is the best time to transplant. The Iris question is answered above. If you can give us particulars of the size of the plants and their general behaviour, we may be able to advise you more definitely.]

The Mayflower (*Epigaea repens*).—In answer to "Surrey's" question respecting the failure or success of *Epigaea repens*, I think he has unconsciously given the answer, as he says: "In its own country acres of it may be seen in dry, sandy soil under Pine-trees." If after planting in peat it is covered with Pine needles during the winter the plant will grow through these and thrive and flower quite happily.

Among hardy annuals are many subjects which, if allowed space for proper development, continue to bloom for a very long period. Of these the *Godetias*, especially the double varieties, are a host in themselves. The same remark also applies to *Clarkias* of the *elegans* section, as the varieties salmon-scarlet, salmon, delicate pink, Snowball, and Firefly are all double flowered, and make an imposing display when well grown.

Convolvulus minor in two shades of blue, also of pink, is very effective when massed. *Linum grandiflorum rubrum* is also very fine when grown in a mass, and the same may be said of *Viscaria cardinalis* and a delicate pink-flowered variety which is also effective. The *Collinsias* are very free blooming and lasting, while *Saponaria Vaccaria*, with its pretty pink flowers, must not be omitted. This attains a height of about 2½ feet. *Dimorphotheca aurantiaca* and its hybrids are very showy and telling, while the *Eschscholtzias* furnish various shades of colour, varying from ruby-red, rose, pink, orange, to yellow and white. The improved

In the same way, those who have failed with *Linnaea borealis* have achieved success by adopting the above plan.—C. P.

—“Surrey,” page 189, asks about *Epigaea repens*. It does well in Bucks in peat among small Heaths and *Rhododendrons*. It is in a dry situation, and forms a dense mass. Last year a great deal of it was divided up and spread about, and has become firmly established. There is no doubt it likes a bit of shade, though not too much, I think. The last gale did a lot of damage, forty-two trees down in all, some of them fine specimens, though, luckily, none in what I call really important situations.—MAURICE YORKE.

—In the early spring of 1905 I planted three good roots. A hole 3 feet in diameter and 18 inches deep was dug out on the north side of a very large Douglas Fir, between the huge roots which run here on the surface. The soil was a mixture of sandy peat and Fir needles, and some charcoal was added. The plant increased very rapidly, and in a few years covered the whole bed, and flowered freely from February to April. In 1914 I was foolish enough to remake the bed, and nearly all the plants died. I have now three strong tufts, which are running freely, but do not think they will flower this season. The natural soil where the *Epigaea* succeeded is little else but great boulders and chips of slate or granite. It is very dry in the summer, but there is a heavy rainfall in the autumn and winter.—E. C. BUXTON, *Coed Derw, Bettws-y-Coed*.

Germination of old seed.—I quite agree with all that “E. H.” says at page 136. Those who have had much to do with seeds know that much depends on the harvesting and storing. The seeds of many are just as good the second year as the first, if they have been well stored. Some years ago a friend in the seed trade assured me that he preferred for his own use Beet seed two years old. I tried it, and now I always use this in preference to new seed. This spring I tried some of this age in a pot put into a dung frame, and found 90 per cent. grew. In the autumn, having seed of a special stock two and three years old of *Polyanthus*, which I wanted to breed, I sowed it, and found 90 per cent. grew. The two-year-old seed was only a week longer in coming up than new.—DORSET.

Herbaceous plants.—Many of these will be sufficiently advanced for the crowns to be thinned, an operation that should not be overlooked in old-established plants, for they mostly show far more growths than they can bring to perfection. The extent to which thinning may take place must be judged by the nature of the plant and its growth. No exact rule can be laid down for all, but the thinning should be ample, and, as a general rule, the best and strongest growths will be found around the outside of each clump. Vacant spaces in the herbaceous borders may be tastefully filled with choice annuals, and care should be taken to thin them sufficiently. Many people sow their seeds too thickly and injure the plants by delaying the thinning.

The Dyers's Chamomile (*Anthemis tinctoria*) grows about 18 inches high, and is excellent for a mixed border in any soil but stiff clay. It blooms for a long time in summer, its main defect being that at dusk or in the late afternoon the ray petals hang down just as in a half-closed umbrella. It flowers for a long period, and the succession is prolonged if the decayed blooms are picked off as they go past their best. The typical flower is of a golden-yellow, but several varieties have been raised, including *A. t. Kelwayi*, with larger and deeper-yellow flowers, and *A. t. pallida*, whose blooms are of a sulphur-yellow. The white variety, *A. t. alba*, is not so desirable as the others.—ESS.

The Scarlet Twin-flower (*Bravo geminiflora*).—Where *Tigridias* succeed in the open, a trial ought to be given to the equally charming *Bravo geminiflora*, one of the finest of the summer-flowering bulbous plants. The flowers, resembling somewhat those of the *Tritonia*, are, as its name implies, arranged in pairs, often to the number of thirty, along the slender stem, and are of a good shade of coral-pink. *B. geminiflora* must have a sunny exposure on a warm border, and, to make quite safe, ought to be protected in winter.—KIRK.

Crocus biflorus Bowles's Blue.—This is a charming blue variety of the valuable *Crocus biflorus*. It is much deeper than any Welden form that I know. Nothing in the illustrations in Maw's wonderful “Monograph” approaches this variety in depth of colour-tone.—S. ARNOTT.

GARDEN FOOD.

CHINESE CABBAGE.

THE following from *The Rural New-Yorker* issue of January 1st, 1916 :—

This has peculiar cylindrical heads, rather suggestive of Swiss Chard or Cos Lettuce. It is a Fall Cabbage, which should not be sown in spring, or it will go to seed. Sow in July in rows; begin manuring heavily when 4 inches high. Harvest after first light frost. By cutting off all green leaf tips it can be cooked without penetrating Cabbage odour. It is very tender and mild-flavoured. As served in soups in some of the Chinese restaurants here this Cabbage appears very slightly cooked, being chopped and added to the soup just before serving. Poultry seem extremely fond of this Cabbage—

will, I think, answer your query about the “Celery Cabbage.” I have grown the *Pai-tsai* a number of years. It is very easy of culture, but our New Jersey summers are, I think, too dry and hot for it, as a rule, and it becomes tough. It is also a favourite prey of the flea-beetles in a dry season. Earlier importations of the seed were evidently of a poorer type, the mid-rib being less developed and the leaf flimsier in structure. The Chinese gardeners in this country have evidently had the better form, as I have often seen it on sale in Dayers Street, in New York's Chinatown, and at Chinese restaurants in the same quarter. The Chinese cooks make a very rich chicken soup, to which chopped *Pai-tsai* is added just as it is served, so that the Cabbage is crisp and succulent, and without the rank flavour of ordinary long-boiled Cabbage.

That recipe for cold slaw or Cabbage salad sounds a little vague, for usually pepper, salt, sugar, and butter are added to this boiled dressing of eggs and vinegar. It is not a favourite with me; I prefer hard white Cabbage, crisped in ice-water, shredded fine, to which may be added shredded Onion, chopped Chives, Celery, or green Sweet Peppers (Chillies), served with French dressing. It is excellent with fish, and is very often served with fried oysters. My Jersey Dutch neighbours also make hot slaw (cole or cold slaw is a Dutch invention), which is shredded Cabbage heated in the vinegar before the egg dressing is added.

EMILY TAPLIN ROYLE.

Maywood, New Jersey.

—Reference may be made, as to this, to “*Le Potager d'un Curieux*” at p. 464, seq., where there is a long account of the *Pé-tsai* and also of the *Pak-choi*. They are also described in “*The Vegetable Garden*” at pp. 170-171. The seed of *Pé-tsai* can be obtained from Messrs. Vilmorin-Andrieux et Cie., of Paris.—T. V. ROSTON, *Godalming*.

COOKING VEGETABLES.

YEAR in, year out, the average wife continues to cook the fresh English vegetables in the same old way; no change, no variety. We are put to shame by the tireless little Belgian wife, whose vegetables are a joy to look upon by the time they reach the table. Here are some of her favourite recipes :—

COATED LEEKS.—Remove the tops and outside leaves from the Leeks. Wash them thoroughly and leave to soak in cold, well salted water for at least ten minutes. Tie the Leeks in bundles, and put into a white-lined pan, with boiling salted water to cover. When quite tender, drain thoroughly. Have ready one large slab of toast, put this in the bottom of the hot vegetable dish, range the Leeks in a

neat pile, and coat with the following sauce: $\frac{1}{2}$ oz. of flour, $\frac{1}{2}$ oz. of butter, $\frac{1}{2}$ pint of milk and water mixed, or the water in which the Leeks have been boiled. Melt the butter, add the flour, stirring it well in away from the heat, add the liquid, and stir well until the sauce thickens, and use. When vegetables have been thoroughly cleaned and washed, the water in which they have been boiled can always be used for making a coating sauce; of course, milk makes the sauce a whiter colour, but otherwise the liquor can be substituted with excellent results.

BAKED PARSNIPS AND TURNIPS.—We get so used to these two vegetables coming to table boiled, few of us know how delicious they can be when cooked in this way. Peel and scrape the Turnips, and cut into thick slices, then boil them in water until nearly done, drain the water off, put the slices in a baking-tray or a fireproof dish, and pour over a little milk. Put a few flakes of butter or dripping on the Turnips, sprinkle with a little finely chopped Parsley and seasoning of salt and pepper. Bake until the Turnip is quite tender, dish and serve at once. Parsnips should be par-boiled in the same way, and baked till brown in a tin with a little melted dripping or cooking butter at the bottom. If the joint is being baked in the oven, the Parsnips can be cooked underneath the meat trivet. This will give them a delicious flavour and will entirely alter the peculiar sweet taste of this vegetable.

—*Mother and Home.*

NOTES AND REPLIES.

The “Spice” Apple.—I hope your readers will not call this very interesting Apple the “Spice,” a name which has no meaning or use. The right name for it is the *D'Arcy* Apple. There are other names, such as *Baddow Pippin*—none so good as the *D'Arcy* Apple.—W.

Strawberry St. Fiacre.—One of the best of the recently-introduced autumn fruited is undoubtedly *St. Fiacre*. It is a heavy cropper. The berries, more resembling those of *Royal Sovereign* in size, are of good flavour. The colour is bright and the fruits are borne freely. It is undoubtedly the finest of all the autumn fruited. Now is a good time to plant new beds. The plant is by no means a gross grower, but I would advise a good root-run and at least 18 inches between the rows to allow the sun to get at the fruit. I prefer a sloping south border for the latest supply. Last season it was so good in late October that I made a note of it and found it valuable when potted up for late fruiting. Grown on shelves in 5-inch pots, and not over-cropped, the fruits are excellent.—C. R.

An Eastern way of preserving Apricots.

—In the neighbourhood of Damascus Apricots are grown in large quantities, and much of this fruit is preserved for future use by a method which has been known to the inhabitants from ancient times. The fruit is boiled down, without the addition of sugar, to a thickish pulp. It is then spread out on hot stone plates to bake, or when such are not available it is baked in an oven. This process converts it into a paste, which will keep any length of time. Being drawn out into long, thin thongs, it finds its way in that form to the market, where it is known under the name of “*amardin*.” Some has been kept for fifteen years in good condition. It is easily carried about and takes up very little room. During the coming fruit season, now that sugar as well as bottles for preserving are very scarce and dear, this old method of preserving our fruit might be tried by some of our housekeepers, who are fond of experimenting. It is said that Apples, Plums, and Pears lend themselves to the treatment. The “*amardin*” can be eaten as a sweetmeat, and being absolutely pure it is better and healthier than most; or it may, with the addition of water and, if desired, a little sugar, be boiled up again for the table, and can then be eaten as an adjunct to bread and butter, puddings, etc.

TREES AND SHRUBS.

LOMATIA FERRUGINEA.

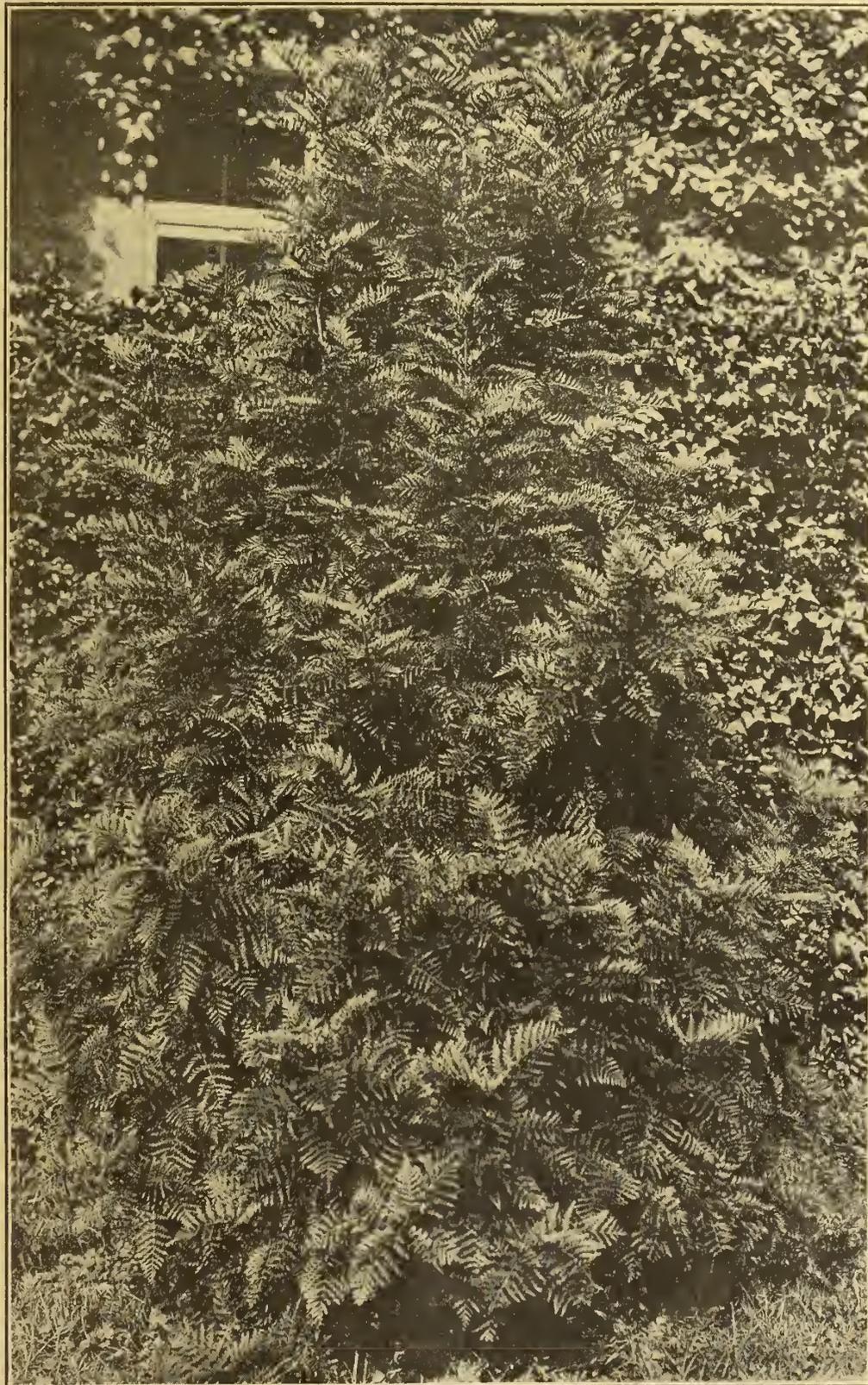
This is a handsome and graceful Chilean shrub of Fern-like character. Its leaves are very dark green on the upperside and

to sun and air, though protected from wind. It may be increased by layering.
Cork. R. H. B.

THE CRAB APPLES.

IN horticultural and botanical literature the Crab Apples are often referred to as

Apple native of this country—as *M. angustifolia*, *M. fusca*, *M. glaucescens*, *M. coronaria*, *M. ioensis* and its form, known as the Bechtel Crab, which has large and fragrant double pink flowers that look like roses and excite the interest and admiration of all beholders. The American Crab



Lomatia ferruginea at Ashbourne, Glounthaune, Co. Cork.

the red and yellow flowers are produced upon the hard wood, and therefore somewhat concealed from view by the dense foliage. When small it is susceptible to frost, but as it ages its resisting power to cold is much greater. It grows rapidly in any light soil, and must be fully exposed

“*Pyrus* (something),” but nowadays it is customary to speak of them under the generic title of *Malus* and to restrict that of *Pyrus* to the Pears, and this is followed here. My intention is to tell here of the Crab Apples of eastern Asia, but there are also several very beautiful species of Crab

Apples blossom later than their Asiatic allies, and both groups deserve the widest recognition. The Siberian, *MALUS BACCATA*, is the oldest known but one of the Asiatic Crab Apples, having been introduced to Europe in 1784. It is a tree 30 feet to 40 feet high, with stout,

spreading branches and slender branchlets which form a broad, rounded, or more or less oval crown. The flowers are pure white, delightfully fragrant, and profusely borne in clusters; the fruits small, yellowish or yellow-brown. This tree is widely dispersed in the cold northern parts of eastern Siberia, and extends southward into Mongolia, Mandshuria, and extreme northern China. It is the most northern of its class and the hardiest of all species of *Malus*, and for this reason ought to be used in the colder parts of this country as a stock for the common Apple. In the littoral regions of north-eastern Siberia, in Korea, and in northern Japan this species is represented by its variety *mandshurica*, which differs in certain technical points and has scarlet fruit. In Korea there is a form (*Jacki*) which has handsome, relatively large dark red fruit. Under cultivation numerous hybrids between *Malus baccata* and the common Apple and other species have arisen, and all of these are ornamental in flower and exceedingly beautiful in fruit. They are known collectively as Siberian Crab Apples, but many of the varieties have received distinctive names. The oldest known is the Chinese

M. SPECTABILIS, which was introduced from Canton to England in 1780. It is cultivated in the Imperial gardens at Peking and elsewhere in China, but has not yet been reported in a wild state. It is a small tree 20 feet to 30 feet high, with a narrow vase-shaped crown made up of numerous rigid ascending branches and short branchlets. The flowers are pale pink, more or less semi-double and fragrant, and the fruits are yellow, nearly globose, and about $\frac{3}{4}$ inch in diameter. The habit is rather stiff, but this old denizen of gardens with its wealth of clustered blossoms is strikingly beautiful. A lovely Crab Apple bearing in season its pale pink flowers in the utmost profusion is

M. SCHEIDECKERI. This is also a small tree, loosely pyramidal in habit and of hybrid origin, one of its parents being assumed to be *M. spectabilis*. The next species to make its debut in this country is the celebrated Parkman Crab.

M. HALLIANA, which was sent from Japan to the United States by Dr. G. R. Hall in 1861, and first cultivated by Francis Parkman, the historian, in his garden on the shores of Jamaica Pond, Boston, Mass. This is a tree-like shrub with a broad, bushy crown and twiggy branchlets and rather thick, dark green leaves deeply tinged with bronze colour where they unfold. The flowers, each on a long, slender stalk, are borne in clusters and are bright rose in colour, and these are followed by Pea-like dark greenish-red fruits which ripen very late in the fall. In a family so beautiful as the Crab Apple there is room for divergence of opinion as to which is the finest, but many (of which I am one) consider the Parkman Crab the most winsome of all the Asiatic species. The type has flowers single or nearly so, but there is a form (*Parkmani*) which has double or semi-double flowers. This lovely plant has long been a favourite in the gardens of the flower-loving Japanese, who call it the "Kaido," but like many plants cultivated in Japan it is of Chinese origin. In 1904 I had the pleasure of discovering it growing wild in thickets on the frontier of western China and Tibet, and collected seeds from which plants have been successfully raised. A very desirable plant is

M. ATROSANGUINEA, which is a hybrid presumably between *M. Halliana* and *M. Sieboldi*. It is a broad shrub growing 10 feet or more high, with thin spreading and arching branches and rose-pink

flowers. Perhaps the best known of these Asiatic Crab Apples is

M. FLORIBUNDA, which was introduced about 1853 by von Siebold to Leiden in Holland, yet its native country remains unknown to this day. Present-day Japanese botanists seem unacquainted with this plant, and both they and Japanese nurserymen confuse it with the Parkman Crab, and during my trip in Japan I never met with it. However, since our gardens are in fortunate possession of it we can waive the more academic question of its habitat. It is a broad, round-topped, tree-like shrub sometimes 25 feet high, and as much in diameter, with slender, arching, and pendent branchlets. The clustered flowers are pure white when expanded and bright rose colour in bud, and as they open in succession the contrast is singularly beautiful. The fruit is about the size of a Pea, yellowish or yellow-brown and long persistent, but not attractive except to birds, which appear especially fond of it. In gardens all the species of *Malus* hybridise freely and the group offers a field of immense interest to those who will breed and select the offspring. Some years ago there appeared in the Arnold Arboretum among a batch of presumed seedlings of *M. floribunda* a very distinct plant which has been named

M. ARNOLDIANA. It is probably a hybrid between *M. floribunda* and *M. baccata*, but whatever its origin it is certainly one of the most lovely of all Crab Apples. The habit is similar to that of *M. floribunda*, but the flowers, though of the same colour, are one-half larger, and the fruit, too, is much bigger. A friend of mine who lives at Winchester, Mass., has a fine specimen of this hybrid growing under the lee of his house, and no one has yet been able to persuade him that there is any other Crab Apple which approximates to this in beauty. At the same time as Siebold introduced *M. floribunda* he also introduced another Crab Apple, *M. Sieboldi*, better known as

M. TORINGO. This is a low, dense shrub of sprawling habit, with lobed leaves, small flowers, white tinged with rose in colour and small yellow fruit. It is really a scrubby form of a species widely distributed in Japan and horticulturally inferior to its real type, now known as var. *arborescens*, which is a small tree with ascending and spreading branches, twiggy branchlets, and fruit yellow or red on different individuals. Another variety (*calocarpa*), raised from seeds sent in 1890 to the Arnold Arboretum from Japan by Dr. William Sturgis Bigelow, has handsome bright red fruits $\frac{1}{2}$ inch in diameter and is, in fruit, the most strikingly beautiful of all Crab Apples. Differing from the tree form of *M. Sieboldi* only in certain technical matters is

M. ZUMI, which was introduced to cultivation by Professor C. S. Sargent, who collected seeds in Japan in 1892. This, too, is a very desirable small tree with fragrant white flowers and small yellow or red fruits. It is common on the slopes of Mount Fuji and on the shores of Lake Chuzenji in the Nikko region.

Most of the orchard fruits grown in the countries of the Far East have been obtained by long cultivation from species indigenous to China, and have not common origin with the same kinds of fruits cultivated in this country and in Europe. The Apple of that region is an example. It is only very recently that science has become acquainted with the source of the Apple of China and Japan, although under various names it has been in cultivation in the Occident for some sixty years. This Apple,

M. PRUNIFOLIA VAR. *RINKI*, grows wild in the mountainous parts of central China, where I was fortunate enough to discover it in the spring of 1901, and later secured seeds which resulted in its successful introduction to our gardens. Previous to this discovery it was known only from plants cultivated in Japan, and by most botanists was considered a very doubtful plant. From Japan it was introduced to Europe about 1854, and distributed by von Siebold as *Malus Ringo*. In habit this species resembles the common Apple, but its leaves are rather different, the flower-stalks are much longer, and the fruit is not impressed at the summit. As a fruit-tree the Chinese Apple is cultivated in central and western China, from river-level, where the climate is very warm, to altitudes of 9,500 feet in the more mountainous parts, where a severe climate obtains. In northern China and Korea it is cultivated sparingly over a wide area. The fruit is small, seldom more than $1\frac{1}{4}$ inches in diameter and slightly longer than broad, of a pleasant bitter-sweet flavour, and varies in colour from greenish to greenish-yellow, and is rosy on one side. Occasionally it is nearly all red. Formerly this Chinese Apple was cultivated in Japan for its fruit, but since the introduction of varieties of the European Apple its cultivation as a fruit-tree has been discontinued.

There are other species of much merit and beauty, and several new ones whose value we do not fully know, but there is one so distinct in habit and with a field of usefulness so peculiarly its own that it must not be omitted even in this incomplete enumeration, and that is

M. SARGENTI. This species is of dwarf stature, the branches rigid and spreading, and the lower ones flat on the ground, and is eminently suitable for covering slopes and banks. The flowers in umbellate clusters are saucer-shaped, round, and of the purest white, and these are followed by masses of wine-coloured fruit which is covered with a slight bloom. In its habit, its flowers, and in its fruit it is very distinct from all other species. We owe this valuable addition to Professor C. S. Sargent, who discovered it in fruit and sent seeds in 1892 from near Mororan in Hokkaido, Japan.

In this group of Asiatic Crab Apples there are trees for the avenue, park, or garden, shrubs for the lawn or border, and others suitable for slopes and banks—all absolutely hardy in the coldest parts of New England, and each and every one may be depended upon to produce every spring a wealth of blossoms in veritable cascades. The plants grow quickly in good loamy soil, and many of them begin to flower and produce fruit when only a few years old.—E. H. Wilson in *The Garden Magazine*.

NOTES AND REPLIES.

Pruning *Pyrus japonica* (*Inquirer*):—*Pyrus japonica* will always flower in a far more satisfactory manner when allowed to grow naturally than it will if closely pruned. Such being the case, the plant should be cut back only as far as is absolutely necessary to keep it within the assigned bounds. No pruning to particular eyes or buds is required in this case, the main consideration being the space at disposal. At the same time any old or exhausted shoots should be cut out, as by so doing the young, clean growth upon which depends a good deal of the future display of bloom is greatly encouraged. A good time for carrying this out is directly the flowering season is over, as the specimen has then a long growing period before it.

ROOM AND WINDOW.**CROCUS PURPUREUS
GRANDIFLORUS.**

Among the many Crocuses I have grown—and I have tried a good many—this, among the purples, is the finest, and it has the added merit of not being rare, but a rather cheap and neglected kind. The purple is splendid, especially in the buds, and it has the virtue of keeping its colour in the evening. W.

INDOOR PLANTS.**NOTES ON GREENHOUSE PLANTS.**

CHOROZEMA HENDERSONI.—The amateur who would like something out of the com-

This species is of lax habit, making shoots under good culture some 18 inches long, which make it useful, and as it must annually be pruned back rather hard to keep it within bounds, taking long sprays for decoration is not injurious. A compost of loam and peat in equal parts best suits it, adding a little coarse white sand. Repotting should be done when the young shoots are about $\frac{1}{2}$ inch long, and watering must be very carefully done until growth is being freely made. From the end of June until the beginning of September this *Chorozema*, like nearly all hard-wooded greenhouse plants, is best in the open air. Full exposure to the air gives substance to the wood.

GREVILLEA ROSMARINIFOLIA.—I wonder if this is the same as *G. angustifolia* men-

plants of the old ball of fibre becoming dry after repotting, in which case it may remain so for a time, the water given passing away through the new compost. Although repotting *Azaleas* annually is practised by those who wish to obtain the best results, it is by no means necessary to do so, as they can be maintained in health for several years without change of soil. It is simply a matter of giving weak liquid manure occasionally.

ECHEVERIA RETUSA.—This, like all members of the family, requires a maximum of sunshine when making its growth. Where the black weevil abounds it is liable to be badly attacked, the plants collapsing just as they are coming into bloom. Where this is the case the only way is to shake the soil away from the



Crocus purpureus grandiflorus.

mon in greenhouse plants should grow this. It belongs to the so-called hard-wooded class of greenhouse plants reputedly of rather difficult culture, and which, therefore, are shunned by those who have had to pick up their knowledge as best they could. The majority of them require the hand of the expert, but this *Chorozema* is as easily grown as a *Cyclamen* or *Primula*. I doubt if its value is fully appreciated by professional gardeners, for, unlike hard-wooded plants generally, it is very useful for cutting, and can be gently forced, whereas this class of greenhouse plant is very impatient of artificial warmth. The natural blooming time of this *Chorozema* is in May, but this year I have been using, early in April, sprays of it cut from plants that have been wintered in a warm house.

tioned in a recent issue of this paper. The plant I grew many years ago under the above-mentioned name did not exceed 1 foot in height, was very compact, and free flowering. I remember having a number of plants in my charge in my young days, but was told it had another name. I cannot find *G. rosmarinifolia* in any trade list. Perhaps some of your readers can afford some information in the matter. It is a charming little species not at all difficult to grow.

REPOTTING AZALEAS.—The directions given in a recent issue of *GARDENING ILLUSTRATED* are very good, but there is one detail that I have always considered as important. This consists in piercing the old ball with an iron skewer from the top down to the drainage. There is always a danger with very root-bound

roots in the latter end of June, wash away every particle of soil, and repot in fresh compost. In this way the eggs are got rid of. BYFLEET.

Statiche profusa.—Although strictly a greenhouse plant, a little moist heat proves beneficial when the plants are making new growth. A batch of plants which had seen a good deal of service during the past year, and were in need of a restorative, have been placed in a vinery, where the warmth and moisture are suiting them, as is evidenced by the amount of new growth they are making. Flowers will be suppressed until the plants have completely recovered. Then they will be allowed to push up their inflorescences and be placed in a greenhouse. On account of the length of time

the flowers last in good condition it is a first rate subject for room decoration. Once the pots are well filled with roots the plants require to be well watered.—G. P. K.

THE WINTER-FLOWERING BEGONIAS.

THESE Begonias have few equals, especially when we consider the bright and varied tints of their large flowers. B. Gloire de Lorraine, a reputed hybrid between B. Socotrana and B. Dregei, and its allies, such as Turnford Hall, are well known, and where these are grown there is no reason why some of those mentioned below should not be included. If I had to confine myself to one Begonia for winter work I should choose B. Elatior, a semi-double flower of a rich rosy-carmine shade. It is an easy plant to grow, very free-flowering, and an excellent subject for dwelling-house decoration, the colour of the blooms being extremely effective under artificial light. Ensign is another semi-double, colour light earmine toned with scarlet. The Gem is a fine rosy-red and well adapted for small pots. In striking contrast to these we have Exquisite (pink and white), Fascination (a compact-growing plant with bright orange-salmon flowers), Emita (orange-scarlet), and Optima, bearing a profusion of pale orange blooms which stand well away from the foliage. All the above were raised by the late firm of Messrs. J. Veitch and Sons, but Messrs. Clibran, of Altrincham, have also introduced numerous hybrids of a high standard, as Scarlet Beauty, Eclipse (salmon-red), Altrincham Pink, Lucy Clibran (orange suffused with rose), Splendour (reddish-scarlet), and Apricot. There are many more, but it would be useless to continue the list. A good plan is to visit a nursery where these plants are made a speciality of, or one of the London shows, then a selection could be made to suit each individual taste.

CULTURE.—When dealing with this group of Begonia the grower should bear in mind that they were raised from B. socotrana; a pretty pink-flowered species with fibrous roots, and varieties of the popular tuberous-rooted section. If this is done the difficulty of giving the plants a partial rest will be almost overcome. During the late autumn and winter months these Begonias will be in flower, and when they pass this stage the resting season begins, and continues until the end of March. At this time they require careful watering, and the temperature ought not to fall below 50 degs. Fahr. We should aim at giving just enough water to keep the stems and foliage in a healthy state. When growth commences, the plants will require repotting in a mixture of fibrous loam, leaf-mould, and sand, the first being the chief ingredient. The pots should be filled to one-fourth of their depth with drainage, over which is placed a thin layer of rough soil to secure a free outlet for water. Hard potting is not advised. To maintain a clean, healthy, and robust stock of winter-flowering Begonias it is advisable to strike a few cuttings each year. These may be taken at any time between April and August, the former month for preference, then some nice plants that will flower in November are obtained. Cuttings are made from the young shoots which form in the axils of the leaves. Make them in the usual way by cutting off the lower leaves and severing the stem immediately below a joint. Place them either singly or several around the edge of a small pot filled with sandy soil, and then stand them in a propagating-case or small frame where the tempera-

ture does not fall below 65 degs. Fahr. When they have formed roots they should be potted on in the same kind of compost as mentioned above until they are in pots 5 inches in diameter. Older plants, such as those rooted the previous year, will require pots a size larger. Throughout the growing season the temperature should be from 60 degs. to 65 degs., and to keep the atmosphere slightly moist the syringe should be occasionally used between the pots. Shade from strong sunlight and admit air judiciously at all times. Overhead spraying is not recommended to any great extent, and it ought only to be practised on bright days and early enough for the foliage to become dry before sunset.

INSECT PESTS.—The principal insect pests are thrips and a mite which causes the foliage to assume a rusty appearance. Both can be destroyed by vaporising with XI All or any similar fumigant about every three weeks. Small plants could be dipped in a solution of any reliable insecticide. No gardener or amateur who has the glass accommodation and is fairly successful with the Lorraine section need fear taking up the cultivation of these charming Begonias. T. W. B.

NOTES AND REPLIES.

Soil for India-rubber-plant.—I have two India-rubber-plants which want potting very badly. They are in much too small pots, and their roots are exposed. Would you be so kind as to tell me what sort of soil they require and if manure or leaf-mould should be used? Should the soil be rammed down hard or should they be loosely potted?—L. BROOKE.

[A suitable soil for the India-rubber plant may be made up of two parts loam to one part of peat, and sufficient silver sand to keep it porous. The potting compost must be pressed down moderately firm.]

Soil for Arum Lilies.—Would you kindly tell me what kind of soil Arum Lilies require, and if they should be potted tightly or loosely?—L. BROOKE.

[The Arum Lily needs a rich soil, say two-thirds good loam and one-third well-decayed cow-manure free from insects, with a sprinkling of sand. If no manure such as above indicated is available, leaf-mould may be substituted for it, and, failing that, peat. The soil should be pressed down moderately firm. Should peat be used, stimulants of some kind must be given more frequently than when there is a mixture of manure in the potting compost.]

Thunbergias.—The Thunbergias have, perhaps, become less popular than was at one time the case. The annual variety, T. alata—familiarily known as Black-eyed Susan—is a charming climbing plant with slender stems and numerous buff-coloured flowers, each having a black centre. T. a. alba is identical in habit, but with white blooms, and is less effective than the former. Both may be raised in heat from seeds sown now, and will be useful throughout summer and autumn in the greenhouse. A distinct race is the hard-wooded Thunbergias, which require stove heat and are useful roof plants. They include T. laurifolia, with pale-blue flowers with a white throat; T. Harrisii, a vigorous grower with bold racemes of purplish-blue blossoms with yellow throat; and T. fragrans, with small, dark-green leaves and pure-white tubular flowers. The specific name of fragrans is rather a mistake, for the blooms are destitute of fragrance. This variety flowers during the winter, the others in summer and autumn. T. natalensis succeeds under greenhouse cultivation. The hard-wooded Thunbergias require a good yellow loam, to which may be added a proportion of peat, a little well-decayed manure, and a

sufficiency of sand. Both the annual and perennial varieties being liable to attacks of red-spider, frequent syringing is necessary.—W. McG., *Balmac*.

Hæmanthus Katherinæ.—A few of the Hæmanthus require stove heat, but the variety under notice does well in the greenhouse. It is by no means difficult to cultivate, and succeeds well in a good loam with a fair proportion of leaf-mould and coarse sand. When established in suitably-sized pots, like many other bulbous plants, Hæmanthus are best left undisturbed for a series of years. After flowering, which is usually in July or August, the plants must have gradually diminishing supplies of water until the foliage ripens off. Then they may be kept quite dry until growth is again visible; at all times, so far as possible, being fully exposed to the sun.—KIRK.

FROM THE FIRING LINE.

My son, Philip Edward Moon, left England for the front on May 1st, 1915, and between that date and a few weeks ago, when he came home on his first leave, had collected the following plants, all found, if not actually in the firing line, close to it. He went straight into the firing line, and his battalion acted as first support in the second attack at Festubert, and it was then that he found *Linaria minor* and *Sisymbrium Irio* (London Rocket) growing in the trenches, and close by *Galeopsis ladanum* and *Camelina sativa*. Later, when billeted close to Festubert, he found in a garden of a ruined cottage *Astrantia major*, his only loot! It was there that he saw a curious sight. A shell had burst in a dyke full of *Ranunculus aquatilis*, and shot a quantity of the plant on to the sides of the hole several feet above the level of the water, and there it was, growing quite happily as a small, compact, tufted plant, having lost its long feelers! He also found there *Galium palustre*.

In July his battalion was moved much further south, and in a village just behind the firing line he was much struck by *Malva sylvestris alba* growing amongst Crimson Rambler Roses. I remember he wrote home saying how beautiful the two were together, and suggesting we should try the effect in gardens here. At that time they, when out of the trenches, were billeted in the open fields, and often had shrapnel and bullets flying over them, but in spite of this and all the discomforts he found *Lychnis Githago*, *Lathyrus Aphaca*, *Vicia Cracca*, *Verbena officinalis*, *Orobanche minor*, *Centaurea Calcitrapa*, and also a very rare *Plantain*. Later they moved still further south, and were for a time near an old chateau, the gardens of which before the bombardment must have been very beautiful. One thing left growing in profusion amongst the ruins and debris was a pink *Petunia*, the flowers small but very pretty. In the trenches there the *Mint* (*Mentha arvensis*), scenting all round, and *Ajuga Chamæpitys* (Yellow Bugle), with its bright yellow flowers, were abundant. Growing on the parapet in the front trench he found *Cerastium arvense*. When they moved three miles back for a short time he found *Trifolium incarnatum*, *Althæa officinalis*, and *Adonis autumnalis*. It was in the early autumn, while they were relieving French troops, that he came across a "dug-out" covered with *Nasturtium*, and wondered what home-sick Frenchman had planted the seeds! He found the *Opium Poppy* seemingly growing wild, but thought probably it was an escape from some garden. E. A. Moon.

VEGETABLES.

TOMATOES FOR AMATEURS.

I HAVE grown Tomatoes both under glass and in the open air for more than thirty years, and during that time have found it necessary to grow them in fresh soil under glass to obtain the best results year after year, and to mix fresh soil with the old where the plants have been grown in the same place outside for a number of years. Rarely do plants fail to yield a good average crop when grown under glass. Outside—in the midlands and southern counties—my experience is that very satisfactory crops result three years out of five, and occasionally very heavy crops are obtained. Some varieties are much more satisfactory for outdoor culture than others, and there has been a vast improvement in the strains for indoor culture during the past few years. Seeds or young plants should be at once procured. Any light place under glass, with abundance of fresh air during the summer is suitable if the plants are grown in good loam made moderately firm. If only a few are to be grown in the open air, place them in small pots from the seed-pans or pots, and again repot them before planting them out the first week in June. If a big batch of plants is being dealt with, then raise them in boxes, transferring when strong enough and well hardened off to a bed in a cold-frame, and finally to their fruiting quarters. They must not suffer any check, as time is so valuable. When transferring the young plants to the boxes put them 3 inches apart in 3 inches of good loam and leaf soil mixed, on a layer of rotted manure. From the boxes shift the plants to beds in cold-frames, and treat them in the same way, but provide a bed of soil 4 inches deep on a layer of manure 2 inches deep, and put the plants 7 inches apart. While in the early stages of growth keep the plants on a stage or a shelf near the glass and afford them a little heat. If grown in warm pits, cover every night till the middle of May, but ventilate always when the weather is fine during the day, removing the lights in the day-time, too, to harden the plants during the last half of May. Ordinary soil in open borders should be enriched with rotted manure in the meantime and made firm. Put out the plants 18 inches apart. Tomatoes may be grown in quite open beds and trained, single-stemmed, to upright stakes. G. G. B.

THE HARDINESS OF CELERY.

At p. 9, January 1st, the question is asked as to the protection of Celery. It is well known that too early earthing up is frequently the cause of premature decay. My note does not concern Celery grown for exhibition, but that for home use. I do not favour the huge sticks one sees exhibited and the rich culture given. Such huge heads do not keep. As "A." rightly remarks, Celery given rich food is more subject to decay. I never, after planting out, gave late Celery other than salt and soot, both of these being of great value; also keeping the plants free from slugs, which often sadly disfigure the heads. "A." gives an excellent method of protecting, but even then there must be sound plants and quite free of decay, or the covers will be of little value. Celery grown by the method detailed below is of no use to those who want huge heads several feet in length. I always fight shy of the giant varieties for keeping; indeed, in many instances size is obtained at the loss of quality. We do not see large quantities of these huge growths exhibited after the autumn shows.

Many years ago I had to provide Celery every day in the year (if possible), and at the start I admit I had considerable losses, and though great care was exercised in the moulding up I had to adopt other measures. Often the soil is at fault, as, if of a close, heavy nature or clayey, it is most difficult to arrest decay, and this means much labour to make it suitable. The plants are often much weakened by too early sowing, by sowing in strong heat, by overcrowding in the seed-boxes, and delay in planting out.

For late supplies—and by this I mean for use from December to May—I would advise sowing on an open south border in rich, light soil. The seeds must be sown thinly, as there is no pricking off. The seedlings, when a few inches high, are lifted with a ball and transferred direct to their permanent quarters. Though the seedlings treated thus are very small, it is surprising how quickly they go away. In Celery thus treated there is no decay of the centre and an absence of pithy stalks, which are not so large I admit. I think it a gain if one can obtain a sweet, nutty, solid growth. The grower must largely depend upon certain varieties. There are some good forms to select from, and some of these, though not by any means of recent introduction, have proved to be the best keepers. These are the Incomparable Dwarf White and the Sandringham Dwarf White, both noted for their good quality and flavour. If red Celeries are liked I would advise A1, a dwarf, compact grower of excellent flavour and a splendid keeper, as it may be had good till quite late in the spring if grown as advised above. Kept late it loses its red markings. Of new varieties White Gem is an ideal Celery for keeping, dwarf, solid, and very hardy. I have kept these Celeries well into May by protecting with a few dry leaves or dried Bracken. As the days lengthen it is necessary to lift the plants, say in February or early March, with ample balls, and place in a cool, shady border. Do not omit moisture or there will be shrivelling of the leaf-stalks. Earthing-up, as "A." notes, is at times done too early, and also badly. With the dwarf Celeries mentioned above much less earthing-up was done than is often the case, my aim being to get a hardy plant. Celery grown for soups or flavouring and not earthed up in any way is quite hardy. I placed small quantities of soil in fine weather when the growth was nearly full-grown and at intervals of ten days or a fortnight. In the severe weather of 1895 my plants were but little injured, though a goodly portion of green leaf-stalk was exposed after the earthing up. A large number of plants grown for cooking in a wide but very shallow trench—six rows of plants in a trench—were not much the worse, the only protection being a covering of dry Bracken. W. F. K.

CAULIFLOWERS.

THE time for the second sowing of Cauliflowers being close at hand it may be well to give the reminder that so far as small gardens are concerned the small varieties should be selected, being, as a rule, superior in quality and more remunerative—that is, many more heads can be obtained from a given area and there is no waste. Some of the large Cauliflowers are of excellent quality, but others are decidedly strong. The small variety is known under many different names, but it is difficult to make any distinction except it may be there is one type a trifle closer and with leaves showing the protective character in a more pronounced form. Plants from the first sowing should be in small pots in a cold frame

by the time the second sowing is made, and yet another sowing can be made about the beginning of May. It is sometimes suggested that it is not advisable to make this late sowing of the small sorts owing to the fact that the plants are unable to stand a hot, dry time. This failing can be checked by planting in a fairly shady spot, preferably a west border, and after watering the plants well in, mulch with short manure or lawn Grass to keep in the moisture. All the sowings should be made as thinly as possible, as a thick plant sometimes means an attack of black-leg and the collapse of a large percentage. Powdered lime and wood ashes in the proportion of two to one scattered among the young plants will keep the enemy in check.

Cauliflowers, perhaps more than any member of the Cabbage family, are subject on some soils to clubbing, and it is very annoying to have a promising batch go off prematurely. If any danger from this is anticipated it is advisable before planting to dip root and stem into a stiff puddle of lime and soot, and if rapid growth from the planting can be maintained one is generally able to secure the crop. E. B. S.

Hardwick.

Useful early Lettuces.—With seed sowing somewhat delayed by the weather of late it will be necessary to make up lost time by sowing those kinds that give a quick return. For this purpose there will be considerable gain if one can in any way forward the crops at the start. The smaller, compact growers, as Tom Thumb and Commodore Nutt, are more suitable for earliest work. Both these produce nice, compact heads in a few weeks, and in addition they are of good quality. The two varieties named are, in my opinion, the earliest we have, and when given a little shelter they are most useful. Some are unable to give much frame shelter, but much may be done by sowing a pan or box of seed and covering with glass till the seedlings are growing freely. Placing a box of seed in a cold frame or under a hand-glass will do much to forward the crop. I have often sown a little seed at the foot of a south wall in March, and covered with mats at night or in cold weather, and gained considerable time. If one can, when planting out, give cloches or hand-glasses to a few of the best seedlings there is a gain of some weeks.—F. K.

Cabbage Christmas Drumhead.—For many years I have grown this small, useful Cabbage for the winter supply, and so far it has never failed. This season it has been excellent. The Christmas Drumhead Cabbage is very hardy, has a dwarf stem, a particularly close, compact growth, the heads medium-sized and of Drumhead shape. The quality is excellent and more like that of a good early spring Cabbage than anything else. In exposed gardens this is an ideal winter vegetable. I have found this Cabbage do well after Potatoes lifted early in August. Seed should be sown as early in July as possible; indeed, in the North I have sown this variety at midsummer. Owing to its close, compact growth it can be grown in a small space and, if possible, should be given an open quarter. I advise early planting (August), not allowing the seedlings to become drawn in the seed-bed. It is a good plan to plant in drills, so that, should the weather be dry, water can be given.—M.

Celery.—The plants intended for the main crop will be pricked out, from 3 inches to 6 inches apart, into skeleton frames as soon as ready. The soil should not be too rich. Shade for a few days during bright sunshine, and protect against frost and cold winds.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM APRIL 13TH.—*Magnolia stellata*, *M. conspicua*, single and double *Camellias*, *Azara microphylla*, *Prunus triloba*, the *Rosebud Cherry* (*Prunus pendula*), *Laurustinus* (various), *Ericas* (in variety), *Berberis* (in variety), the *Pearl-bush* (*Exochorda grandiflora*), *Daphnes* (in variety), *Andromeda polifolia* and others, *Spiraea arguta*, *Rubus spectabilis*, *Periwinkles*, *Cydonias* (in a variety of colours), *Skimmias*, *Phillyrea Vilmoriniana*, the *Chinese Quince*, *Rhododendron ciliatum*, *R. venustum*, *R. Jacksoni*, *R. racemosum*, *Elæagnus edulis*, *Forsythias*, *Osmanthus Delavayi*, the *Goat Willow* (*Salix caprea*), *Prunus Myrobalana*, *Sweet Gale* (*Myrica Gale*), *Blood-root* (*Sanguinaria canadensis*), *Primula rosea*, *P. cashmeriana*, *P. viscosa*, *P. Julia*, *Lithospermum rosmarinifolium*, *L. Heavenly Blue*, *Snowflake Gravetye Giant*, *Anemones* (in great variety), white and blue *Forget-me-nots*, *Honesty*, single and double *Arabis*, *Veronica filiformis*, *Anchusa myosotidiflora*, *Saxifrages* (various), *Caltha polypetala*, *C. palustris*, *Sweet Violets* (in great variety), *Snowdrops*, *Dog's-tooth Violets* (in variety), *Omphalodes verna* (blue and white), *Stylophorum diphyllum*, *Viola gracilis*, *Wallflowers*, *Narcissi* (numerous varieties), *Chionodoxas* (several kinds), *Hutchinsia alpina*, *Gentiana verna*, *G. acaulis excisa*, *Water Hawthorn* (*Aponogeton grandiflorum*), *Collomia grandiflora*, *Barrenwort* (*Epimedium*) (in variety), *Scillas* (in variety), *Crown Imperial* (*Fritillaria imperialis*) (in various colours), *Snake's-head* (*F. Meleagris*) (in many shades), *Jack-in-the-Green*, *Hyacinthus azureus*.

WORK OF THE WEEK.—Full advantage has been taken of the fine sunny days which have done so much to render the ground workable. The pruning of dwarf Roses has been finished, and the forking up and cleaning of the beds and borders are being pushed along at every opportunity. Further plantings of Tufted Pansies have been made. Should the weather remain favourable, some of the beds will be raked down to a fine surface, and choice dwarf annuals sown. Some of the dwarf blue annuals are extremely beautiful used in this way. Here and there open spaces are left in the Rose beds, or it may be across one corner. On these bare spaces the annuals are sown and allowed to intermingle with the Roses. A large quantity of Sweet Violets is grown outside, and as some of these have occupied the same position for three years a border raised above the ground level has been prepared, and the following varieties have been planted:—*La France*, *Admiral Avellan*, *California*, *The Czar*, *S. J. Josse*, and *Ascania* (the last a fine flower, almost equal in size to some of the Tufted Pansies and very fragrant). In a rather cooler and more shaded position, *Princess of Wales*, *Cyclops*, *Mrs. Schwartz*, and *Kaiser Wilhelm II.*, in separate groups, have been planted. In this latter position we hope to get late flowers. A few new Vines of the Teinturier group have been planted in the reserve garden as they were rather small. Over the bare places among the new plantations of Hepaticas flat stones have been laid to conserve moisture. A position has been prepared in a cool and shady lane for a group of Shortias. Rotted leaves, peat, sharp sand, and a little good loam formed the compost, and the position lying rather moist these slow-growing plants should do well. E. M. Sussex.

SOUTHERN COUNTIES.

Parsnips.—Much of the seed has perished outright, the succession of hard frosts experienced in March proving too much for it. This is the first occasion during the course of a long experience that seed of Parsnips has been killed by frost. The soil is in such good condition that it will not be necessary to sow elsewhere, and the plot will be resown at once.

French Beans.—Towards the end of the month the first sowing will be made on a warm border outdoors in short drills drawn 2 feet apart. If necessary, these can be quickly and conveniently protected. An early maturing or forcing variety is always selected for the first sowing. To succeed the foregoing another sowing will take place in the open in a fortnight's time. Although the dwarf kinds will continue to be grown, a climbing variety will be largely relied on for the summer and autumn supply. It would pay anyone having the convenience to do so to raise plants under glass either in pots or boxes and plant them out early in May.

Scarlet Runners.—By many these are preferred to French Beans, and when required as early as it is possible to supply them a sowing in slight heat should take place now, setting out the plants in shallow trenches containing a good depth of decayed manure about the second week in next month. Until the plants require staking, some pliable stakes bent over the row in the form of an arch will serve to carry protecting material when the state of the weather demands its employment.

Vegetable Marrows.—For planting in sheltered positions and on disused hotbeds where they will have the protection of fresh

lights for a time, the plants should now be raised. Seeds are best sown singly in 60-sized pots filled with ordinary potting soil, this saving all further trouble in the way of re-potting, as is the case when a number are raised in pans or large pots. Varieties are numerous, but those providing small or medium-sized fruits are most appreciated for the dining-room. Where quantity rather than quality is required, the varieties Long White and Long Green will yield excellent returns.

Potatoes.—Second early and maincrop varieties are being planted. Labour being scarce and planting very much in arrears, the sets are being dibbled in. The dibber has a blunt end and is shod with iron, there being a tread at one side to enable its being thrust into the soil expeditiously. Although this method of planting is not viewed with favour, there is, under the circumstances, no help for it, and one man can certainly plant a large breadth in a day. The holes are filled in afterwards by first breaking the soil down fine round them with a hoe. On heavier ground, which will shortly have to be planted a Canterbury hoe will be used for filling in.

Tomatoes.—The plants intended for planting outdoors have been moved into a frame, where they will be gradually inured to the outer air and hardened off.

Spring Cabbage.—The recent cold spell has retarded the turning in of such varieties as *Ellam's*, *Matchless*, *April*, and *Flower of Spring*. They have, therefore, been given a stimulant of 1 oz. of nitrate of soda to the square yard, which was at once hoed in. Harbinger is far and away the earliest variety, and although small, is of intrinsic value where a very early demand has to be met. A large breadth which will come in and succeed the former will have the soil between the rows dressed with sulphate of ammonia and then well hoed.

Zinnias.—For cutting in autumn as well as for the flower borders these are indispensable. The seed will now be sown in slight heat in boxes. As soon as the plants appear, they will be moved into a frame and grown on to the pricking-out stage as hardily as possible. Being quick-growing annuals, there is not the slightest need to accelerate growth, as they cannot safely be finally planted until the third week in May. A useful addition to the large-flowered varieties for cutting is *Z. Haagena*.

Wallflowers.—For spring bedding and cutting these cannot well be over-estimated, their fragrant flowers always meeting with just appreciation. A race of very early-flowering varieties is now to be had, among which *Yellow Phoenix* is a gem. Of those which come into flower the latter end of March and early in April, *Fire King*, *Cloth of Gold*, *Ellen Wilcott*, *Faerie Queen*, *Blood Red*, and *Purple Queen* are half-a-dozen sterling sorts growing to a height of 18 inches. Of the dwarf varieties, *Ruby Gem*, *Brown*, *Yellow*, and *Pink* are all worthy of cultivation, they being exceedingly useful for filling small beds. The double varieties, though later in flowering, are valuable for the flower garden and cutting. The seed is sown now in drills drawn 9 inches apart on ground which is capable of being reduced to a fine tilth. Pricking-out is done as soon as the plants are of sufficient size, in rows 1 foot asunder, 9 inches between plant and plant, and on soil of a holding nature to ensure their being lifted with good balls of soil in autumn.

Indian Azaleas.—As these pass out of bloom they are divested of the seed-vessels and stood together until the whole of the forwardmost have bloomed, when those that require it are repotted and others knocked out for drainage to be examined, rectified if out of order, and then top-dressed. They are then placed in heat and kept liberally syringed to induce them to break and make new growth. Such growths as are produced as a result of the plants being forced into bloom are sacrificed, these being too scanty to furnish sufficient bloom for another season. A good stimulant for Azaleas while making their growth is Standen's manure applied on the surface of the soil.

Azalea mollis.—These also pay if accommodation can be found to give them sufficient warmth to induce free growth after they cease flowering. If this is not possible they should be kept cool, when, if planted out in suitable soil they again become available for forcing in the course of a couple of seasons. They are also useful for planting in shrubberies where the soil is suitable for their needs.

Calanthes.—Of these *C. vestita* and its varieties, together with the hybrids *C. Veitchi* and *C. Bella*, are now starting into growth, and will be potted in a mixture consisting of fibrous loam, peat, with a little flaky leaf-mould, dried cow-dung, and a liberal quantity of coarse silver-sand. Clean pots, containing drainage to one-third of their depth, will be used. For the large pseudo-bulbs of *C. Veitchi* and *C. Bella* 8-inch pots will be used, three in a pot. For those of smaller dimensions, 6-inch and 7-inch pots will suffice. When potted they will be placed in a house where a temperature of 60 degs. to 65 degs. at night and 70 degs to 75 degs. by day is maintained.

Dahlias.—The tubers must now be taken from where they were stored in autumn last, and overhauled. As propagating of fresh

stock is for this season out of the question, the old tubers will be used for planting when the time comes round. A little attention in the way of reducing those which made a great number of tubers to due proportions will have to be given them, also in supplying new labels. They will then be placed in a cold-pit, covered with soil of a light description, and kept as cool as possible, removing the lights during the day, and covering with mats at night in addition to the lights if likely to be frosty. A. W.

MIDLAND COUNTIES.

Strawberries in pots.—Abundance of water and liquid-manure is afforded all plants which are fast swelling their fruit, and the syringe is used freely in bright weather till the berries begin to change colour, when both manure and syringing must be withheld. For syringing, the water should be very clean. As the fruits change colour air more freely and keep the house a little drier to assist the flavour, but do not lower the temperature too rapidly. A small batch of plants is now introduced about every ten days to keep up a supply.

Melons.—The fruits on the earliest plants are swelling fast, and need supporting. Square pieces of netting furnished with a length of string at each corner are the best for this. The plants are afforded a brisk top and bottom heat, abundant moisture, with liberal supplies of tepid water at the roots, supplemented with liquid manure. The foliage is copiously syringed twice daily, damping all dry surfaces and pathways frequently. A sowing is now made every three weeks, a few seeds only being sown at a time. Melons succeed very well through the summer in frames on hotbeds where a bottom-heat of about 75 degs. can be maintained. The present is a suitable time to sow seeds for raising a batch of plants for this purpose. Hero of Lockinge is a variety of good constitution and very suitable for frames.

Cyclamens.—Those forward enough will be potted into 5-inch pots. The pots must be clean and well drained, a suitable compost consisting of three parts good fibrous loam, one part leaf-soil, with a liberal addition of wood ashes and silver sand. I do not use manure in the soil, as I consider nourishment is best applied in liquid form when the plants have well filled their pots with roots. Place the plants in a warm, close frame near the glass on a bed of ashes, shading and syringing with soft water morning and afternoon until they are established. In about a week after potting gradually diminish the heat and give more air, carefully avoiding cold draughts. Extreme conditions of temperature are very injurious, and too much shade must not be given or the plants will suffer. Cyclamens, too, must never be allowed to suffer from want of water, as this will soon render them a prey to red-spider, thrips, and greenfly. Should these pests make their appearance dip the plants in a mixture of soft-soap and Tobacco-water.

Biennials and perennials of various kinds will now be sown on a well prepared border and pricked out as soon as large enough to handle.

Wallflowers.—Now is the best time to sow seeds of these. The seeds are often sown too late—in June and July—but the Wallflower requires a long season to develop into a sturdy, bushy plant that will stand the winter. Sometimes the plants are injured by sharp frosts following much wet in winter, this often resulting from sowing the seeds too late. Sow the seeds thinly in drills 6 inches apart, and as soon as the plants are large enough prick them out in an open situation in rows 1 foot apart and 9 inches between the plants. Pinch off the tap-roots as this induces them to form fibrous roots near the surface. If time and space can be afforded they will well repay transplanting a second time early in September, as extra sturdy plants will be produced with fibrous roots that can be lifted with the soil adhering to them for planting in their permanent quarters in November.

Half-hardy annuals.—Antirrhinums, sown in heat and pricked off into boxes have been well hardened off, and at the first favourable opportunity will be planted out in positions in which they are to flower. *East Lothian Stocks* and *Pentstemons* will also now be planted out in beds and borders. *Asters*, *Stocks*, *Nemesias*, *Phlox Drummondii*, *Salpiglossis*, and many other annuals sown in boxes have been pricked off into cold-frames.

Forsythias.—As these handsome flowering shrubs pass out of bloom they require, in whatever form they are grown, some annual pruning. The shoots made now and those that result from this pruning will furnish the flowering wood for another year. The flowering shoots of this year should be shortened back to three or four buds, and other pruning required may be done at the same time. *Forsythia suspensa* and *F. viridissima* thrive here planted in the open in sheltered positions. In very cold districts they require the shelter of a wall. As wall plants, the shoots should be nailed in loosely. If the soil around the bushes is found to be exhausted some of it should be replaced with turfy loam and rotten manure.

French Beans.—A sowing of these will be made the last week in April on a warm south

border, where protection can be afforded if necessary. The best way for early sowing of this important crop is to draw drills 4 inches deep and 18 inches apart, half filling the drills with old potting soil, afterwards planting the Beans and covering with the same soil. This method will ensure speedy germination and free growth, and will amply repay the cultivator for the extra labour of planting at this early date. Masterpiece, Sunrise, and Canadian Wonder are good varieties for sowing now.

Runner Beans.—It is yet too early to sow these in the open, but a crop may be had much more quickly by sowing in a cool-frame in pots or boxes, and then planting out in the open. Of course, large quantities are not needed, and a row or two of plants grown thus will suffice. If sown in heat the plants suffer if not thoroughly hardened off previous to planting out; but by sowing a little earlier in a cool-frame, and keeping the frame close until the seeds germinate, better plants are secured. If a sowing be made in the open about the second week in May this will form a succession.

Beetroot.—The main sowing may now be made wherever the weather is favourable on ground deeply worked and not manured, that occupied with Celery last year being very suitable. The larger-growing kinds will be better left another ten days or a fortnight, or the roots will in all probability be too large and coarse.

Celery trenches are being prepared for the earliest sowings. It is far better to put out the plants in a small state, provided they have been properly hardened, than to allow them to become starved. Solid Ivory is a capital variety for early use, as it matures quickly and takes up little room. The trenches should be taken out to a good depth and nearly filled with good manure. I consider it a mistake to plant too far away from the surface, especially on wet, heavy ground. It is only necessary to have the trenches deep enough to receive plenty of water. The ridges may be planted with Lettuces, where they will do well and will not be detrimental to the Celery crop.

Vegetable Marrow seeds should be sown singly in 4-inch pots and placed in a close frame for planting out at the end of May. Where early supplies are desired a few seeds may be sown in a frame, where the plants can be allowed to grow until they have reached the height of the pit, when, if all danger of frost is past, the sashes may be removed, and the plants allowed to run. In this way Marrows may be cut greatly in advance of those grown in the ordinary way.

Cucumbers.—If seed be sown now the plants will be ready for planting in about a month, a time when frames on hotbeds that have been used for propagating bedding plants and growing early vegetables are no longer required. Such frames may be advantageously used for growing Cucumbers during the summer. The heat from the hotbeds, if properly made at the start, will be sufficient for the Cucumbers. Plants in bearing require to be frequently looked over for the purpose of tying in, and stopping sufficient young shoots at the second joint to cover the trellis without crowding, taking out the surplus old leaves and growth that has borne fruit. Add a top-dressing of soil when the previous one gets full of roots, which takes but a short time.

Tomatoes.—The earliest batch of plants has set a good crop of fruit, and is afforded weak liquid-manure at every other watering, and occasional slight doses of Le Fruitier. Plants for succession have been placed in their fruiting pots. Those intended for fruiting in the open are ready for shifting into 5½-inch pots, and are induced to make good, strong, sturdy plants. Small, late plants cannot be depended upon, and are practically worthless.

Potatoes.—Planting should be completed as soon as possible. F. W. GALLOP.

SCOTLAND.

Stove.—Fine-foliaged plants are now growing freely, and to maintain them in good health the free use of the syringe is needful. The water must be pure and free from sediment. Rain-water is undoubtedly the best for syringing. Shading will soon be necessary, but where many *Dracenas* and *Crotons* are grown it may be advisable to leave a portion of the house unshaded, these plants revelling in bright sunshine. Plants for draping stages are always useful, and pots or (preferably) pans of *Selaginellas* ought to be provided. Certain of the *Tradescantias* are useful for this purpose, as also is the Indian Grass (*Panicum variegatum*). Another less-known subject is *Ceropegia Woodii*, with slender stems and fleshy leaves, and which can be readily propagated from cuttings in bottom-heat. Night temperature from 65 degs. to 68 degs., according to outside conditions. Fire-heat need not now be excessive if early closing is resorted to, and with fuel not only scarce but rising in price, sun-heat ought to be utilised as far as possible.

Caladiums.—These should be potted without delay into the pots which they are to occupy throughout the season. There are some very fine named varieties now procurable; but for general purposes it is not necessary to go to

the expense of such sorts, an ordinary mixed lot being quite useful. The pretty silver-leaved variety *C. argyrites*, still holds its own among the dwarf kinds, and is useful for table work in small vases. All *Caladiums* require plenty of moisture throughout their period of growth. I have seen them very effectively grown planted out under the stages of a warm house, the foliage of such plants being useful for cutting. In

Vinerias a little air must be given along the ridge quite early in the morning when the sun is bright. This checks the condensation of moisture on the berries and prevents to some extent any disposition to rust. Keep ventilation well abreast of the rising thermometer; but delay using the side ventilators as long as possible at this comparatively early period. Cold draughts are easily admitted from the bottom, and are apt to induce mildew. Artificial manure can now be safely given, and it is just as well to give a change of stimulant from time to time. There is plenty of good Vine manures on the market, and the roots relish a change now and then. Sublateral growth must be kept down by regular attention at the necessary intervals, and the night temperature should be kept round about 63 degs. to 65 degs.

Late Peaches under glass.—As soon as the embryo fruits are visibly set, thinning and disbudding may be profitably commenced. Do not hurry to complete the work, but spread it over a fortnight or even three weeks. If many superfluous fruits are set remove those situated under the branches, and endeavour to fix the fruits on the upper sides, where they will receive all the sunshine possible and be highly coloured when ripe. In disbudding, the shoots, both from the upper and under sides of the branches, should be gradually removed. Sufficient shoots for furnishing may be secured from the sides, and, after all, only a few of these are necessary. Some judgment, of course, is necessary; and in young trees more wood is left than is needful in the case of established trees, but it is safe to say that one of the chief causes of failure with Peaches and Nectarines is the practice of leaving too much rough wood in young trees. Some attention paid to the constitutions and requirements of the different varieties goes a long way in deciding just how much wood it is desirable to retain.

Hardy fruit.—Owing to a spell of fine weather it has been needful to water the majority of the trees of stone fruit upon the walls. When this course is followed it is done in no half-hearted way, every tree receiving a thorough root-watering. After this those trees which were mulched have the coverings rearranged, this conserving the moisture. Peaches and Nectarines are being hand-fertilised daily. Up till now no frost of any severity has been experienced, and so the trees have not been covered for the present season. As previously indicated, I consider it to be the better practice to keep the trees uncovered whenever possible, but, naturally, the coverings are ready to hand, and can be put on at once.

Raspberry canes.—These are breaking freely, and in the course of the week the ground, after having had a good dusting of chemical manure, was well hoed up. The recent mild weather has resulted in growth being much further advanced than is generally the case at this date.

Hardy-flower borders.—Aided by the fine weather much further progress has been made among the hardy-plant borders in the way of staking, etc. It is always a tedious business to get over these borders for the first time. On several of the smaller borders, after having been cleaned, seeds of hardy annuals were sown broadcast, a distinct variety being used for each. Thus, one was sown with *Saponaria calabrica*, another with *Nemophila insignis*, a third with *Godetia Lady Albemarle* (dwarf), a fourth with *G. Duchess of Albany* (dwarf), and so on. These borders are always very interesting treated in this way, and the seedlings, being early and rigorously thinned, the display endures over a long time. When they begin to grow shabby they are cleared away, and this is generally done just before the late autumn display of the hardy plants reaches its best.

Gladioli.—These ought to be planted now. There are many ways of planting them, all equally good—in lines, in groups, or in beds. Grouping is, perhaps, the most popular way, half-a-dozen or so in a group. Personally, I think planting in heds is the most effective way. One large bed here last year was very fine, and the spikes of the Gladioli rose through a carpet of *Aloysia citrodora* and Sweet-scented Pelargonium in mixture. This season the ground will be carpeted with *Nemophila insignis* or a dwarf blue Lupin. Successional plantings will be made for some time, chiefly in groups, for the purpose of securing late spikes.

Mignonette.—Successional sowings must not be omitted. In some gardens Mignonette fails, but if the bed be raked to a fine tilth and after the seeds are sown firmly beaten with the back of a spade, success is fairly certain. Seed-eating birds are sometimes responsible for the failure of Mignonette, and to prevent them from doing damage damp the seeds and coat them thoroughly with red lead.

Late Potatoes.—During the week preparations have been made in view of the forthcoming planting of late Potatoes. A considerable area is devoted to this crop, and, although the ground has usually been cultivated by the spade, during this season it has been ploughed. The soil, now in excellent order, has been well harrowed and all weeds and stones removed. Shortly the Potatoes will be planted by dibbling the seed tubers in lines on the flat instead of in drills. By this means the quarter will be more easily kept clean until it is time to fork up between the lines, after which moulding up will be done by the plough.

Peas and Broad Beans were again sown. Of the former, the varieties sown at this time were Duke of Albany and Alderman, two Peas which, if sown upon the same date, form a very useful succession. Harlington Broad Windsor Bean is preferred for present sowing.

Digging vacant quarters.—As soon as ground is cleared of exhausted winter vegetables no time is now permitted to elapse until it is manured and turned up. The soil at this time of the year is not thrown up roughly, but is broken rather finely as the work goes on. This saves time in forking at a later date, a run over with wooden rakes being sufficient when the quarter is again required.

W. McGUIROG.

Balmoe Gardens, Kirkcudbright.

NATIONAL ROSE SOCIETY.

APRIL 14TH, 1916.

THE spring exhibition of this Society was held at the Royal Horticultural Hall on the above-named date. It compared favourably with that of last year from the competitive point of view, the quality of the blooms showing a distinct advance. Varieties of outstanding merit throughout the show were Sunburst, Mrs. George Norwood, and Mrs. Foley Hobbs, thus demonstrating a special fitness for early work. In addition, the silver-medal blooms—Mrs. Edward Mawley and William Shean—attracted everybody. The magnificent dozen of *Maréchal Niel* from Mr. Goodwin, Maidstone, were in the nature of a revelation, hardly less so a vase of Sunburst from Mrs. Courtney Page. For colour, Mme. Collette Martinet (rich orange apricot) was alone. The "Gold-medal" Rose of the occasion was Mrs. Bryce Allen, H.T., a shapely, delightfully-fragrant variety of rosy-red colour. Following are the more important exhibits.

NURSERYMEN.—SECTION I.

Two entered for the group of Roses in pots, the leading award going to

Messrs. Hobbies, Ltd., Dereham. Pillar, Polyantha, and weeping *Wichuraiana* varieties occupied the central parts. Around and in the ground work were such as Sunburst, Dean Hole, Ophelia, and Melody, Baby Elegance occupying the margin with Ferns. Messrs. Paul and Son, Old Nurseries, Cheshunt, were second with a less well-garnished group, yet showing very fine blooms. Sunburst, Edward Mawley, the fine white Mrs. H. Stevens, Mrs. A. R. Waddell (apricot), Lady Hillingdon, and Mme. Edmee Metz (pink) were some of the best. For a group of pot and cut Roses in a space of 100 square feet,

Mr. G. Prince, Longworth, took the leading prize, arranging pillars of such as Hiawatha, Excelsa, White Dorothy, and the new pink Rambler, Chatillon, as a background in conjunction with stands and vase groups of Lady Hillingdon, Old Gold, Melody, Austrian Copper, Mme. E. Herriot, and many others. Mr. Elisha Hicks, who was second, had excellent standards of his new pink-flowered Mrs. George Norwood, which, it is claimed, is the most fragrant Rose ever raised. Dean Hole, Mme. Second Weber, and Mrs. Charles Reed were others of note.

Messrs. B. R. Cant and Sons, Colchester, staged in the cut and pot-group class Silver Moon, a magnificent single white, believed to be a seedling from *Sinica Anemone*, surpassing all else, Hon. Mrs.'

R. C. Grosvenor (gold and blush), George Dickson (intensely rich and dark), and Lyon Rose being other good sorts.

Messrs. Paul and Son, Cheshunt, were first for six pillar Roses in pots, showing Coronation (red), White Dorothy, Excelsa, Hiawatha, and others.

Messrs. Paul and Son led for six weeping standards, distinct, having, among others, American Pillar, Lady Gay, Sodenia, and the rosy-flowered Mme. Casimir-Mouille. Mr. George Prince was second.

Mr. Elisha J. Hicks, Twyford, was first for six pots of new Roses, not less than two varieties, showing standards of his new pink, Mrs. George Norwood, Mrs. Andrew Carnegie (white), Mrs. Charles Reed (a lovely pink and blush-white), and Edith Part, among others. In this class the standards not only afforded diversity but demonstrated the fitness of the varieties named for this particular mode of cultivation. For fifty Polyantha Roses in pots, not larger than 6 inches in diameter, Mr. Hicks was first.

CUT BLOOMS IN BOXES (NURSERYMEN).

Messrs. B. R. Cant and Sons, Colchester, secured the first prize for thirty-six blooms, not less than twenty-four varieties. One of the finest Roses in the show, Mrs. Edward Mawley (silver medal), was in this set. Edward Mawley (red), Dean Hole, Yvonne Vacherot, and Antoine Rivoire were other good things. Messrs. F. Cant and Co., Colchester, were second, showing excellent blooms of Mrs. Edward Mawley, Mrs. Foley Hobbs, Mildred Grant, Cleopatra, and others.

Mr. Elisha Hicks was first for eighteen blooms, not less than twelve varieties, with a capital lot, Mrs. George Shawyer, Mrs. Foley Hobbs, Dr. J. C. Hall (rose), Mme. Jean Dupuy, and Maman Cochet being very fine. Messrs. G. and W. Burch, Peterborough, had excellent examples of Mrs. Foley Hobbs and William Shean, among others, and took second prize.

Mr. A. T. Goodwin, Roseholm, Maidstone, took first prize for the third time in succession for twelve blooms of *Maréchal Niel*. The blooms were remarkable for colour, size, and substance, and we doubt if finer have ever been staged.

Messrs. Burch were first for twelve blooms of any other variety with Frau Karl Druschki.

Messrs. F. Cant and Co. were first for six distinct, not more than five stems of each, their best being Lady Ursula (pink), Capt. Hayward (scarlet), and Frau Karl Druschki. Mr. Elisha Hicks was second, staging Mme. C. Lutania (golden apricot), British Queen (white), and Mme. Second Weber.

AMATEURS.

Mr. E. J. Holland, Sutton, Surrey, and Mr. G. A. Hammond, Burgess Hill, were awarded equal first for twelve cut blooms not fewer than six varieties. We were unable to agree with the judges' decision in this case. The latter exhibitor's Roses were, we thought, much superior, albeit lacking in coloured varieties. Mr. Holland's collection contained William Shean (silver medal), a large, yet less beautiful and refined bloom than Mr. Hammond's bloom of Mrs. Foley Hobbs. Both blooms of Dean Hole in Mr. Holland's set were, we thought, weak; certainly small and of poor colour. In the ladies' vase class,

Mrs. Courtney Page, Enfield, showed Sunburst magnificently. Of this variety the show contained nothing finer: clean, refined, beautiful, and as near perfection as could be desired.

TABLE CLASSES.

Mrs. Oakley Fisher was awarded first for a setting of Lady Hillingdon, Acer foliage and other things in brown wicker baskets; second, Mrs. F. A. Tisdall, whose Sunburst, with Asparagus, was particularly good. We strongly favoured the arrangement of Mrs. Courtney Page, who was placed third with a superb lot of Ophelia, a lovely pink and cream in perfect condition, the first-prize table in the opinion of many. It would be interesting to know on what lines the tables were judged. In the nurserymen's section Mrs. A. R. Bide, Farnham, was alone, employing the unique Mme. Collette Martinet (rich orange apricot), and taking first prize.

The list of certificated plants and medals at the Royal Horticultural Society's meeting on April 18th, as also the awards of the Narcissus Committee, will be found in our advertisement columns. A report of the latter will appear next week.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Freesias the second year (H. F. W.).—To grow Freesia bulbs so that they may be depended on to flower the second year they need a good place in the greenhouse after they go out of bloom, proper attention to watering, with a little liquid manure occasionally, and as they show signs of going to rest exposure to full sun in order to ripen them. This will be about midsummer or a little later. When the leaves have all dried off stand them on a sunny shelf and give no water. In August turn out of the pots, shake clear of soil, size the bulbs, and repot. We much prefer, however, to purchase fresh bulbs every year, as the difference in blooming between home-grown bulbs and those imported is very considerable.

Zonal Pelargoniums for winter (M. T.).—To have Zonal Pelargoniums in flower during the winter months cuttings should be taken at once. Insert singly in small 60 pots in equal proportions of sandy loam and leaf-soil, and stand in a warm greenhouse. When the cuttings are well rooted and commence to show a little growth, pot on into 5-inch pots, and stand in a cool frame for their summer quarters. Keep all long shoots pinched back to form a plant of good habit, and pinch the flower-buds out as they appear. At the end of July another shift may be afforded, a 6-inch or 7-inch pot being a useful size. Place back into the frame, and continue pinching for a month or six weeks. For the final potting loam and leaf-soil in equal proportions, with the addition of a little well-rotted stable-manure, are essential, and a small portion of sharp sand. At the beginning of September discontinue pinching, and allow a little stimulant twice a week. We recommend cow-manure. As soon as the plants begin to show flower, stand in a greenhouse for their winter quarters. Care should be taken during the winter months with the watering.

FRUIT.

Disbudding Vines (Inquirer).—This consists in removing the young shoots which are not required, and the sooner this is done after the bunches of Grapes can be seen the better. All healthy, vigorous Vines will throw out more shoots than there is room to lay in. As a rule, one shoot to each spur is quite enough to leave. Go over the Vines as soon as they break and take off all weakly buds; but, in doubtful cases, where one cannot identify the shoot which is destined to carry the best bunch, two of the most likely ones are left, and a final selection made later on when the bunches are more developed.

Repotting an Orange (A. G.).—This is the best time of year to repot your Orange-tree, but do not place in cold draughts after repotting. If you can give the plant stove treatment for six weeks or two months it will do well. Syringe daily, keep foliage free of insects, and do not overwater at the root. If you can give the roots a little bottom-heat after repotting for a few weeks it promotes a good start. If unable to, frequently damp overhead, but not so heavily as to saturate the soil. Use good turfy loam, some pieces of broken charcoal, and dried cow or spent Mushroom manure. Pot firmly, with plenty of drainage.

VEGETABLES.

Tomatoes in unheated greenhouse (Grower).—Tomatoes may be grown either in pots or boxes, but in your case we should prefer a trough made with one board on the bottom, unless the border could form the bottom, and an 11-inch board to form the front, the back of the bed resting against the

wall. The trough thus formed may be 15 inches or so wide, and should be filled with a mixture of two parts loam, one part stable-manure, not too damp or rich, and some old mortar or plaster, or crushed charcoal, or a little charred material. Set the plants out 18 inches apart. Do not use stimulants till the first trusses are set and the fruit swelling; then any kind of liquid-manure will be useful.

MISCELLANEOUS.

Shading for a conservatory (J. C.).—Do not paint the glass over with permanent shading material, it is a very bad plan. In a general sense nothing is better for the purpose than thin scrim canvas outside blinds, made to roll up or down. Any intelligent local carpenter will make the roller and fix the blinds. If these can be arranged so that they will roll up under a protecting board, so much the better.

Grass mowings (A. B. Wilson).—If the summer is dry it is a good plan to remove the Grass box of the mowing-machine—*i.e.*, if you mow the Grass every week—and leave the mowings on the lawn. They prevent the Grass being burnt. If you do not care for this, then you may collect the mown Grass and use it as a mulch for the various crops in the kitchen garden or spread it over the flower beds. This mulch will help to retain the moisture and save watering.

SHORT REPLIES.

R. P.—Kindly send some specimens of the caterpillar you refer to, and then we can better help you.—*Holmestrove.*—The most probable cause is that the shoots, being very green and sappy, succumbed to the very severe weather we had during March.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*C. W. R.*—1, *Chionodoxa Luciliae*; 2, *C. sardensis*; 3, *Habrothamnus elegans*; 4, *Anemone fulgens*.—*R. S.*—1, *Iresine Herbsti*; 2, *Begonia ascotensis*; 3, *Ornithogalum nutans*; 4, *Muscari botryoides*.—*J. Ross.*—1, *Clematis indivisa*.—*Rev.*—Risky to name without barren rosette, but your specimen seems to be *Sempervivum ciliatum*, a greenhouse species.—*Miss A. Donovan.*—1, *Berberis buxifolia*, syn. *B. dulcis*.

Name of fruit.—*Mrs. H. H. Keddel.*—Apple Bess Pool.

CATALOGUES RECEIVED.

CANADIAN UNITED MANUFACTURERS' AGENCY, 12, Charterhouse Buildings, Goswell-road, E.C.—*"Cuma" Specialities.*

THE NATIONAL CHRYSANTHEMUM SOCIETY.—*List of Prizes, 1916.*

Book received.—*"The Carnation Year Book, 1916."* Burnley: Hortus Printing Co., Ltd.

Tropaeolum Dr. Mules.—Can any of your readers inform me through GARDENING ILLUSTRATED where I can procure plants of Dr. Mules' climbing scarlet Tropaeolum? It is a most distinct and beautiful Tropaeolum. Until the last two years I have been able to buy plants, but since then I cannot find anyone able to supply me. I have tried many nurserymen, but the plants I have received have proved similar, but not the correct kind. Many gardeners in this district would be very pleased to get the right kind. Dr. Mules, who brought this Tropaeolum out, was an eye-specialist in Bowden, near Manchester.—*HOLLIES.*

OBITUARY.

MONS. F. JAMIN.

I REGRET to announce the death of a much respected French nurseryman, Mons. F. Jamin, of Bourg-la-Reine. He was, among other things, Vice-President of the National Society of Horticulture of France, and a grower of fruits and plants generally. As a young man he had been to England—I think, in Messrs. Rivers' Nursery—and he was always very glad to meet English people. I got some of my best fruit-trees from him, and my Clematises on their own roots. Pyramids of Perle d'Azur, from layers, every year remind me of him with their thousands of blooms. I sincerely hope that he will have some worthy successor. He always had a good stock of Clematises on their own roots, layered in little pots, so that they could be easily sent out all through the planting season. Like others, he had followed the grafting delusion for some time, and regretted to me that he had ever given up his layering ground, which is the right way of propagating many shrubs and climbers. He had also a very beautiful jardin fruitier.

W. R.

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NOTES OF THE WEEK.

Dittany of Crete (*Origanum Dictamnus*).—Looking over Tournefort's "Travels in the Levant," I see the figure of a plant like this in the book, and very well figured. I regret I fail in growing this curious plant. I think its best place would be a dry wall or some specially warm soil.—W.

The great Pilewort (*Ranunculus ficaria-formis* F. Schultz) (*Ficaria grandiflora* Robert).—This, referred to lately, is rightly named. As regards its being distinct from the little Celandine there can be no doubt of its being so as a garden plant. The main thing for us is that it is a first-rate plant for spring garden use.

Narcissus cyclamineus at Edinburgh.—In the first week of April a delightful little group of the charming *Narcissus cyclamineus* was in bloom in the rock garden of the Royal Botanic Gardens, Edinburgh. This Daffodil is not plentiful in the north, and one may go through many gardens before meeting with it. In Edinburgh it seems to do particularly well.

Anemone stellata.—There is at present (April 21) an excellent display of this Windflower. The colours vary from rosy-white to a purplish-crimson, the blooms of the latter being larger than those of the former. All these—over a thousand in number—were imported from Italy, and, so far, are turning out well, although a very severe winter might possibly try them.—W. McG., *Kirkcudbright*.

Primula Winterei in the open in Edinburgh.—Quite a pleasant picture was made in the rock garden of the Royal Botanic Gardens, Edinburgh, by a group of *Primula Winterei*, which was coming into bloom the first week of April. Some flowers were already expanded, and the group, nestling at the base of the large rocks and sheltered from the wet and winds by some which overhung, looked remarkably well. *P. Winterei* is quite hardy in these gardens.

Gigantic Arums.—A recent note, over the signature of "An Old Friend," is interesting in so far as it shows the enormous height of flower-stem and size of spathe. Otherwise, as in the case of many other things, size is really a drawback, medium-sized flowers being preferable for ordinary work. If a florist were asked which he would prefer, large or medium-

sized spathes of Arum Lilies, he would at once answer in favour of the latter, for the reason that it is difficult to work other flowers into the interstices left by exceptionally large spathes. In private places, too, medium-sized blooms, having thinner stems, can be more easily used in vases, especially long and slender glasses.—KIRK.

The white Snow Glory.—This graceful flower is now in bloom, and well worth growing. It seems stronger than *Chionodoxa Luciliae*. We have to thank Mr. Maw for it, and I am looking forward to some charming associations of this with the blue form, both hardy bulbs that in some free soils might be naturalised.—W.

Pontic Kingcup (*Caltha polypetala*) as a cut flower.—This is the handsomest hardy plant that has been introduced for a dozen years. It is very good for the house, and lasts well there, looking very pretty in a little bed of Wood Forget-me-nots. It is good in all situations, such as in ponds, fountain basins, and even a moist border.

Tufted Pansy Marguerite.—Although it is now nearly twenty years since this variety was introduced it is still favoured by many. Its habit is neat and compact, while its freely-produced flowers are of a pale primrose-yellow, rayless, and with a deep yellow eye. Individual blooms possess much substance, and have exceptionally long foot-stalks, so that they have a certain value for cutting. The variety is very useful for massing, and, if the spent flowers are regularly picked, it continues to bloom freely till late in the season.—KIRK.

Primula Juliae.—This has stood the winter, and is giving a plentiful supply of bright purple flowers just above its close-growing mat of foliage. It is a very dwarf plant, being barely an inch or two in height. It is a gem for the border, the bog garden, the stream-side, or the moraine. In the last-named it has flowered earlier with me than anywhere else. It is a Caucasian species, discovered in 1901, and first recorded in bloom in this country in the Oxford Botanic Gardens in 1910. It increases freely, but there are two forms, one flowering much more freely than the other.—S. ARNOTT, *Dumfries*.

The Spring Star Flower (*Brodiaea uniflora*).—I grow this as a wide edging in front of Azaleas, where the soil is cool but not good, yet well exposed to sunshine. The bulbs have occupied this position for some years. As I write (April 15th) the

plants are almost hidden by myriads of pale blue star-shaped flowers, a violet stripe running down the centre of each petal. The effect is beautiful, especially in the middle of the day, when the fragrant flowers are fully expanded. The flowers, borne on stiff stalks each a foot in length, last well when cut. Individual flowers appear all the winter through, but it is at the present time such a glorious profusion of bloom is produced.—E. M.

Ranunculus cortusae-folius.—This handsome plant, too tender for the open air in most of our British gardens, is excellent for a cool-house, especially where it can be planted out. It was finely in flower in the early days of April in one of the houses of the Royal Botanic Gardens, Edinburgh. It is planted out, and had there exceeded considerably its book stature of 2 feet. The very large flowers, of a glistening yellow, were very fine. Although introduced so long ago as 1825, *R. cortusae-folius* is but little seen. It well deserves a place in the alpine houses which are becoming so popular. Although not an alpine in the proper sense of the word, it might be associated with the smaller hardy flowers with advantage.—S. ARNOTT.

An early Cherry (*Prunus subhirtella*).—The flowers of this Cherry are at their best in early April, in advance of those of the large-flowered *P. serrulata* and the varieties of the European Cherries. A native of Japan, it was introduced to the British Isles in 1895. At its best it is only a small tree. In Japan its height is said to be from 20 feet to 30 feet, and here it will probably reach maturity at from 15 feet to 20 feet high. The head is wide, spreading, and made up of numerous slender branchlets, from the axillary buds of which clusters of pale rose-coloured flowers are borne from early April onwards for two or three weeks. Its early flowering appears to be against the production of fruit in this country, for so far none has been recorded. That, however, is of little moment, for cuttings of half-ripe shoots root quite readily if inserted in sandy soil in a close frame during the early part of July. Plant if possible so that the tree will have a background of dark foliage, for the flowers are seen to greater advantage under such circumstances than against an unbroken sky-line. It is also desirable to protect against north and east winds, for cold winds seriously injure the delicate blossoms. A closely allied *Prunus* is the Rosebud Cherry of

Japan (*P. pendula*), the principal difference being in the pendent branches of the latter. It is, however, a less desirable tree for general planting, as it is rather easily injured by late frosts.—D.

Primula vincæflora.—This charming Primula, which Professor Bayley Balfour, in his paper at the Primula Conference in 1913, stated had been grown in the Edinburgh Botanic Gardens for five years without flowering, was in bloom in the beginning of April. The leaves are surmounted by a lengthy stem, bearing a large flower of Violet-like shape, and of a most beautiful blue-purple. In form the flowers are quite unlike those of the greater number of the Primula species. It remains to be seen how far *P. vincæflora*, with its distinct flowers, will lend itself to cultivation in our gardens, either in the open or under glass. Probably the latter will be the more suitable.—S. ARNOTT.

Rhododendron Pink Pearl.—The parentage of this fine hybrid is said by "D." (page 193) not to be generally known. Some years ago I communicated to the *Field* newspaper information which I received in Edinburgh to the following effect: When the stock of Peter Lawson and Son, of Edinburgh, was sold by auction, Messrs. Methven bought a large number of seedling hybrid Rhododendrons. Some years later, when Messrs. John Waterer's traveller was inspecting Messrs. Methven's stock, one of these hybrids was flowering, which he purchased, and this, I was told, was the original Pink Pearl. Messrs. John Waterer wrote to the *Field* to say that I had been misinformed, and that Pink Pearl was a hybrid raised by themselves, but they declined to state its parentage. It is neither my interest nor my desire to express an opinion as to which of these two conflicting accounts is correct, each coming from a source of undoubted integrity. I think it is obvious that *R. Griffithianum* is one of the parents of Pink Pearl, and it is well known that Mr. Peter Lawson, a noted enthusiast in this genus, used that species largely in the production of hybrids; but Messrs. John Waterer may have done so also. Their motive in keeping secret the parentage of Pink Pearl is not clear.—HERBERT MAXWELL, *Monreith*.

The Pasque Flower (*Anemone Pulsatilla*).—Large numbers of this beautiful Windflower are now in bloom, some of the plants, which have been established in their present position for several years, carrying from fifty to eighty flowers. Like many other valuable spring flowers, it has in many instances been cast aside, which is unfortunate, as it robs gardens of one of the choicest of hardy plants. The large, drooping buds appear from among a fringe of silky grey hairs, and these are seen to much advantage in the early morning when covered with dew. Although the general tone of colour in the flowers is mauve there are violet, red, and white kinds equally attractive. This plant is fond of limestone soil, but this is not absolutely necessary for its successful culture, as the soil here is devoid of lime. The plants referred to are used as an edging along the side of old flagstones set up edgewise in place of tiles, and to which they seem to cling. The soil is of a sandy clay nature, known among gardeners as soapy. In this the plants are quite at home, and annually provide a feast of their beautiful flowers on stout stems a foot in length. The flowers are splendid for cutting, and last well indoors. During the past winter a group has been planted in a little shade, and this when established should prolong the season of bloom.—E. M.

VEGETABLES.

THE MANURING OF COTTAGE GARDENS AND ALLOTMENTS.

OF the chief food ingredients required by plants only three, viz., nitrogen, phosphates, and potash, have to be applied directly in the form of manure. Farmyard manure contains all three, but artificial fertilisers usually contain only one or two of the necessary ingredients.

A fourth substance, lime, is required, not so much as a plant food as on account of its action on the soil.

FARMYARD MANURE.—The manure at the disposal of the cottager and allotment holder is often poor in quality as compared with farmyard manure made in well-constructed cattle-feeding yards. It is apt to contain too much straw, or other litter, and too little of the animal excreta. In view of the bulk of material applied, therefore, the crop returns obtained from its application are often disappointing. When the manure has to lie for some time in a heap before application it should be covered with about 6 inches of soil in order to preserve the fertilising material. In the case of heavy soils the manure is best dug in during autumn and winter; in the case of light soils this should be done in spring, some time before cropping. The undecayed portions of the manure should preferably be used for the green crops (Cabbage family), the more completely decayed portions for the root, fruit, and flower crops. An average market-garden dressing of manure would be about 2½ cwt. to 3 cwt. per rod (30¼ square yards). A large barrow-load of moderately decayed manure will usually weigh about 1 cwt. Where the full dressing of ordinary manure cannot be obtained artificial manures, as indicated below, may be applied with advantage.

POTATOES.—Where the crop is grown on the flat, sulphate of ammonia should be applied on the surface just before the first earthing up, at the rate of ½ oz. per square yard (1 lb. per rod, or 1½ cwt. per acre). Where Potatoes are planted in drills the sulphate of ammonia may be applied in the drills at the time of planting. Superphosphate of lime should be applied at the rate of 1½ oz. per square yard (3 lb. per rod, or 4¼ cwt. per acre), and may be forked in lightly before planting on the flat, or applied in the drill at the time of planting; or superphosphate and steamed bone-flour may be mixed in equal proportions and applied when planting at the same rate as in the case of superphosphate alone.

CABBAGE FAMILY.—All the members of this group respond to applications of nitrogenous manures. Sulphate of ammonia should be applied at the rate of ½ oz. to ¾ oz. per square yard (1 lb. to 1½ lb. per rod, or 1½ cwt. to 2 cwt. per acre) before the first earthing up, or as soon as growth starts. Where Cabbage crops are slow in "hearting," and Turnip crops refuse to "bulb," phosphates are usually deficient. Superphosphate should be applied, alone or in combination with steamed bone-flour, at the rate of 1 oz. per square yard (2 lb. per rod, or 3 cwt. per acre) at the time of planting, or before the first earthing up.

In inland districts, where allotment crops on light and medium soils are liable to suffer from drought, salt is very helpful and will usually increase the crop. It should be applied at the rate of 1 oz. per square yard.

PEA AND BEAN FAMILY.—Crops belonging to the Pea and Bean family can usually provide themselves with sufficient nitrogen. A mixture of superphosphate

and steamed bone-flour, in equal proportions, should be applied to the ground, before or after sowing the seed, at the rate of 1 oz. to 4 yards in length of drill. The mixture should never be sown in the bottom of the drill so as to come into direct contact with the seed.

ONIONS, LEEKS, AND CELERY.—Sulphate of ammonia should be applied at the rate of ½ oz. per square yard (1 lb. per rod, or 1½ cwt. per acre), with superphosphate and steamed bone-flour, mixed in equal proportions, at the rate of 1 oz. per square yard. On light soils, liable to dry out, salt may be given with advantage (1 oz. per square yard). These crops should all be manured in the early stages of growth.

CARROTS, PARSNIPS, AND BEET.—Sulphate of ammonia should be applied at the rate of ½ oz. per square yard after singling. Superphosphate and steamed bone-flour, mixed, at the rate of 1 oz. per square yard, should be applied before sowing the seed. On dry soils 1 oz. of salt per square yard may be applied before drilling.

LETTUCE, SPINACH, AND RADISHES.—These are greatly helped by applications of sulphate of ammonia, which should be applied at the rate of ½ oz. per square yard in the early stages of growth. Where Radishes do not "bulb" readily superphosphate, at the rate of 1 oz. per square yard, should be applied to the soil before sowing. Where the soil is known to be over-stocked with organic matter (containing nitrogen), producing a very rank growth of leaf, the sulphate of ammonia should be withheld. This reservation applies to all the crops dealt with in this article.

LIQUID MANURE FOR FRUIT AND FLOWER CROPS.—One peck of poultry manure or one peck of sheep droppings placed in a 40-gallon cask and filled up with water will, after standing twenty-four hours, make an excellent liquid manure if applied while fruit is swelling, and in the case of flowers while the blooms are opening; 2 gallons per square yard should be applied weekly. Where the above materials cannot be obtained, ¾ lb. sulphate of ammonia and 1 lb. superphosphate in 30 gallons of water will make a safe liquid manure, which may be applied at the rate of 2 gallons per square yard.

GENERAL CONSIDERATIONS.—The recommendations made above are drawn up to meet the conditions now existing with regard to the supply of chemical manures. Potash salts are hardly obtainable, but wood ashes, which contain potash, should be collected and applied at the rate of 1 oz. per square yard to soil in which Potatoes, Peas, Beans, Carrots, Parsnips, and Onions are to be grown. The richest ash is produced by hedge clippings, prunings of fruit bushes, Nettles, and coarse-growing weeds burnt before they are fully ripened. The ash of timber may contain little potash. Ash must be collected as soon as possible after burning, as rain quickly washes out the potash. Recent experiments tend to show that members of the Cabbage family can avail themselves of the stores of potash already in the soil to a greater extent than most other crops, and this circumstance should be borne in mind while potash is scarce. On heavy soils, and soils rich in organic matter, basic slag may replace superphosphate, particularly in districts with a good rainfall. The quantity used should be from one and a half times to twice as much as is recommended in the case of superphosphate.

The present prices of the manures referred to in this article are about as fol-

lows, when bought in quantities of 1 ton or more :—

		Per ton
		£ s. d.
Sulphate of ammonia	20% of nitrogen	17 0 0
Superphosphate	35% of soluble phosphates	5 0 0
Steamed bone-flour	1% nitrogen and 60% insoluble phosphate	7 0 0
Basic slag	20-30% of total phosphates	1 14 0
Agricultural salt		2 10 0
		1 12 0

Allotment holders should order their manures co-operatively so as to save on the carriage and secure the advantage of the lower prices at which dealers are prepared to quote for considerable quantities.

The prices charged for small quantities of 1 cwt. or less vary very much with the district and the cost of carriage from the nearest manure works.—*Journal of the Board of Agriculture and Fisheries.*

Mushrooms.—Beds which have been bearing throughout the winter have been given water at a temperature of 85 degs. This has had the desired effect. Applying water for this purpose requires to be done

PLANTS AND FLOWERS.

INDOOR PLANTS.

NOTES AND REPLIES.

Acacia dealbata failing.—There is an Acacia dealbata in the conservatory of these gardens that is almost a failure. It is planted out in loam, peat, and sand, about 2 feet in depth, aspect south-west. It is about six years old, but made rapid growth the first year after planting. I stopped it in the spring of last year when about 10 feet high, since then it has made very little wood or side growths, and the leaves fall off. There is a small ventilator on the roof, which opens direct on the head of the plant, and, thinking that was the cause of failure, I left off using it. The temperature is kept about 55 degs.—HENRY PENFOLD, *Down's Court, Sandwich.*

[Acacia dealbata is such a vigorous grower that we cannot understand your specimen behaving as it has done. Is the border drained so that the surplus water can run away? If not, the roots may be in a poor state. Should conditions be

and sand would have been better. When potting, you would, of course, have an opportunity of observing the condition of the roots. If they are unhealthy it may have been caused by an excess of moisture, or the reverse, for large plants may often appear moist on the surface and yet be very dry in the interior of the ball of earth. In a general way, however, too much moisture is at the root of the trouble. It is also quite possible that the plant has been kept too warm and shaded at some time, and this would cause the leaves to die off.]

ROSES.

ROSES ON ARCHES AT PECKHAM RYE PARK.

Roses are seen to the best advantage when growing over arches and arbours. Fortunately, there are a wide selection, and many forms and colours, so that we can



An arch of Roses in Peckham Rye Park.

with judgment, as it is the soil casing alone of the beds which needs moistening. If the manure beneath it becomes saturated the mycelium perishes and a further supply of Mushrooms may be looked for in vain. As the house invariably becomes too hot from now till autumn comes round for Mushrooms to be grown successfully, a cooler place has to be found in which to grow them during that period. Sheds or disused stables answer well for this purpose, and later on beds can be made up in the open if necessary. In these several instances the beds should be made upon the ground surface in the form of a ridge, 3 feet in width and 2 feet in height. To eke out the supply of manure or droppings four barrow-loads of loam may be added to each cart-load, and be well mixed with the manure at the time it is formed into a heap to undergo the usual course of preparation prior to the making up of the beds.—A. W.

favourable in this respect we should advise you to lightly fork over the border and apply a light dressing of some stimulant, such as one of the many plant foods now on the market. Instead of this, weak manure-water may be given. The soil and temperature are very suitable, and we should not be afraid to open the ventilator immediately above it.]

Camellia failing.—Would you please tell me what is wrong with this Camellia? The leaves are turning brown. It was like this before I potted it last year. The mixture I used was loam, leaf-soil, sand, and manure. I have it in a vinery 3 feet from the glass, and it is flowering very well.—J. F. M.

[Undoubtedly the cause of the ill-health of your Camellia is some error in its culture. What that is we are unable to say definitely, and can only point out possible causes. We strongly suspect that the roots are in an unhealthy state, and the fact that you used manure in the potting compost would not tend to improve matters. A mixture of loam, leaf-mould,

easily satisfy our tastes and still keep to the varieties that are suited to the purpose. An arch or bower of Roses should never be formal or its main beauty is lost. Few things are more pleasing than an arbour or archway covered with the huge trusses of yellow and nankeen of Alister Stella Gray, the deep crimson of Carmine Pillar, or the creamy-white of Félicité Perpetué, more especially when the growths are allowed greater freedom than is usually met with. If we wish very hardy varieties for an exposed position, we should make use of the Ayrshires and others of the same habit, as Dundee Rambler, here seen clambering over an archway in Peckham Rye Park, Rêve d'Or, Zephirin Drouhin, Aimée Vibert, and Longworth Rambler. We can have flowers of small or large size, single or double; in large trusses; those producing a heavy mass of bloom early in the season, more or less continuous bloomers, or those almost evergreen.

FRUIT.

CHERRY BLOSSOM.

WE usually look Kent way for pictures of Cherry orchards, but judging by the following, from *The Times* of April 19th, other counties have charms in Cherry orchards:—

Every orchard in South Buckinghamshire, and the counties fringing on that district, is now a billowy mass of blossom. The trees are mostly of an enormous size, which accounts for the high, tapering ladders which are to be seen in this part of the world in the summer. In spite of late frosts and the cruellest of winds and blizzards, the Cherry trees are blooming earlier this year than last. For the past few weeks a deep pink shade has been diffused over every orchard—a sign that with warm rain and sunshine they would soon emerge into showers of white. But the cold winds persisted, and the rain came, but without warmth, and the trees burst into bloom amidst hail and sweeping northerly winds. So to-day the Cherry orchards stand out white against a background of purplish-red—for the other trees are not so forward—a wonderful Spring vision in a still wintry setting.

It is a sad sight to see some of the trees which were in leaf last year when the Cherry bloomed now lying prone, their great roots upheaved. In one Buckinghamshire orchard, where the Cherry trees are now white, there lies a whole row of giant Elms. Last year, when the orchard was in bloom, these same trees were thick with tender leafage. This Cherry blossoming country is full of the haunts of poets; it is the country where Milton lived; where Waller was born, in the windy hamlet of Coleshill, above Amersham. Hard by is the quiet retreat of the Quakers—of William Penn and his circle. Near Jordans, where rest William Penn and beautiful Gulielma, his wife, there is an orchard where the blackish trunks stand supporting showers of snowy blossom, and the green Grass beneath is chequered with moving shadows, as the blossoming boughs sway in the breeze. This orchard lies at the top of the steep, high hill which mounts from Jordans. Further on, past this orchard in the direction of Chalfont St. Giles, if one keeps on the high land above the Miskbourne stream, one comes to more Cherry trees, for that narrow lane leads through the heart of the Buckinghamshire Cherry Orchards.

NOTES AND REPLIES.

Grape thinning.—This now requires almost constant attention. One most important point in Grape thinning is to commence early. It is surprising how quickly the berries increase in size when the flowers are fertilised, so that if one does not begin to thin the most advanced bunches directly they require doing, by the time one has reached the last bunches the berries have developed so much that it is practically impossible to remove those one ought without damaging in some way those remaining. Begin thinning at the bottom of the bunch and work upwards. Take out all inside berries, cross berries, and small berries first. The berries left should be the big ones that point straight out. The berries should be left about $\frac{3}{4}$ inch apart. Be careful not to rub the berries with your head or anything else, because this injures the bloom and makes

the Grapes shiny when ripe. Do not put the scissors through the bunch to thin the other side, but move round the bunch. Cut the stalks in close, and keep the scissors clean.—G.

Caterpillar among Gooseberries.—Generally, the worst attacks are experienced during a dry season. There are many remedies—many of which are dangerous—but nothing is better than the old plan of dusting the bushes freely with soot, or with soot and lime in equal proportions, as soon as the first signs of the pest become visible. These, it will be noticed, are usually at the bottom of the tree, and if the infected part be at once dusted, the caterpillars will fall to the ground, where a good sprinkling of soot will speedily finish them. The summer rains will wash the fruit clean before ripening time comes round.—KIRK.

GARDEN FOOD.

SALADS FOR 1916.

THE season is coming when we may expect to have good salads in our gardens for those who do not force, and salad is such a precious element of garden food that we may well take some precautions.

It seems to me the great thing is to have salads as far as we can clear of manure of any kind, or with only a very small quantity of rotted stuff below the surface. It should be easy in every country place to grow salads in a cleanly way, and free from contact with any kind of manure. Clean, fresh ground, plenty of water, and such leaf soil as we can get where nourishment is wanted, is the best way of growing them. The introduction in many places of the French system of market gardening, that is to say, with beds on enormous mounds of manure, is very successful in the region round Paris, but I doubt if it is as well done in our country. If size is not to be desired in salads of any kind we ought to be able to get them in the freshest and best way without the addition of rich manure. All those who grow and control their own salads have the great privilege of being saved from the accidents of the market gardener and the market.

The way recommended in books of washing and drying salads is a mistake. Salads are better served as they grow, that is to say, as dry as may be. In that way we get the true flavour and the natural salts of the plants. Adding dressings, particularly what are called salad dressings, as is done in some English houses and in most hotels, is also a mistake. It is an odious delusion, but easily got rid of, and even we think an epicure of salads would be better without the best oil and vinegar. As to our great favourites, the Cos and the Cabbage Lettuces, it is possible that there are other things as well, and a man who has been going round the country lately in robust health made salads of all vegetables, getting rid of the cook and doing very well. He grated his Turnips and his Brussels Sprouts, and so on. Whatever we may think of his way there is no doubt that some delicate salads can be made of mixed fruits—Oranges, Bananas, and other things, helped out with good Apples like the Newtown Pippin. W.

NOTES AND REPLIES.

Qualities of dessert Apples.—The article from "F. B.," in your issue of March 11th, reminds one that we all have our preferences as to fruits and our special ideas as to the relative values of the many varieties. I offer mine. Ribston is dry, deficient of flavour, and of no value beyond October on this warm, gravelly soil. The following are all good for late use:—Allington, when well coloured, is good during December and January for those who relish briskness; Northern Spy is of

superlative texture, and useful right through March; while Bedfordshire Foundling will supply the lover of tartness during March and April with a good Apple. Something of richer flavour is found in Mannington Pearmain and Pine Golden Pippin during the first three months of the year. I should not like to be without some of the varieties marked kitchen in the nurserymen's lists. Highly-coloured fruits of Cox's Pomona during November and December, Beauty of Kent from February to April, and Northern Greening during March and April are refreshing in an unequalled degree; Carter's Pearmain is very pleasant eating during April and May, it is crisp, juicy, and rich; Sturmer Pippin finishes the season, being good right into June, but is tougher and not so sweet as Carter's Pearmain.—WILL TAYLER, *Hampton, Middlesex.*

Kirke's Plum.—Among dessert Plums this has, I consider, few equals. It has not the exuberant growth of some other Plums, and therefore needs much less pruning—an operation which ought to be very sparingly performed on all kinds of Plums. Its spurs never attain to an obtrusive length on walls, and it ripens up its wood well if the autumn is at all favourable. Kirke's may be relied on year after year to furnish a crop. Its fruits, too, are large and handsomely shaped, their purplish-blue skins, with delicate bloom, showing well in the dessert. The yellow flesh, as in all yellow-fleshed Plums, is of high flavour. In our northern climate this variety must have a wall, doing equally well here either with a southerly or an easterly exposure.—W. McG., *Balmac.*

The Pecan Nut.—The Pecan is one of the finest of Nature's products. One lb. of Pecans contains more nourishment than any other known food; 1 lb. of Pecans contains as much protein as $\frac{1}{2}$ lb. of meat, as much fat as $\frac{3}{4}$ lb. of butter, and as much starch or carbohydrates as $\frac{1}{4}$ lb. of bread, so 1 lb. of Pecans is the full equivalent of $1\frac{1}{2}$ lb. of other highly concentrated and nourishing food. In comparing total values, 1 lb. of Pecans is worth, in nutritive value, 2 lb. of pork chops, 3 lb. of salmon, 2 $\frac{1}{2}$ lb. of turkey, or 5 lb. of veal. An acre of land planted to Pecans will produce from four to ten times as much nourishment as one used for pasture. In the next century Nuts will largely, if not entirely, take the place of meats on the bill of fare, and the Pecan will assume its rightful place at the head of the list of nourishing and digestible foodstuffs.

Wholemeal gem bread.—1 lb. flour, $\frac{3}{4}$ pint water. Put into mixing-bowl cold water (boiled or distilled if preferred), and half the flour. Mix well together with whisk or hand. Mix in remainder of flour a little at a time until stiff enough to mould into gems. Drop into well-greased gem pans, which have been previously heated, and bake in a quick oven from forty minutes to fifty minutes. A "gem" is a small oval roll, about 2 $\frac{1}{2}$ inches long and 1 inch in thickness. If so made that a good deal of air is incorporated with the dough the gems, when baked, will be light, pleasant to eat, and very digestible.

Apple Claygate Pearmain.—I see this Apple much praised by readers. Once I tasted it delicious at Berkeley, but I think it is an Apple of very ordinary flavour. Some nurserymen have no doubt the true Apple, which is a very fine Russet.—S.

Birch wine.—Can any reader give me a recipe how to make Birch wine? It is the sap drawn from the Birch-tree. I think I saw a recipe some years ago in your paper, and I am not sure whether one should add sugar and yeast or only sugar when the sap is in the bottles.—F. A.

TREES AND SHRUBS.

THE PINASTER AND THE STORMS.

I HAVE a notion that the Pinaster is a neglected tree, and very much more valuable than some of the fashionable Conifers of the day. There appear to be varieties of it, some better than others. At any rate, there are some extraordinary trees of it in Sussex which have withstood the storms for many years. I wrote to the owner to ask him how they stood the recent gale, and this is his answer. They are very handsome trees, and I am pleased to hear that they survived:—

In reply to yours of April 11th, I am

fore May, if the bloom is susceptible to damage by frost, is of any use with me, and the earlier May blooms are caught as often as not. Several of the quite late bloomers were caught last year, but that we must hope is exceptional. W.

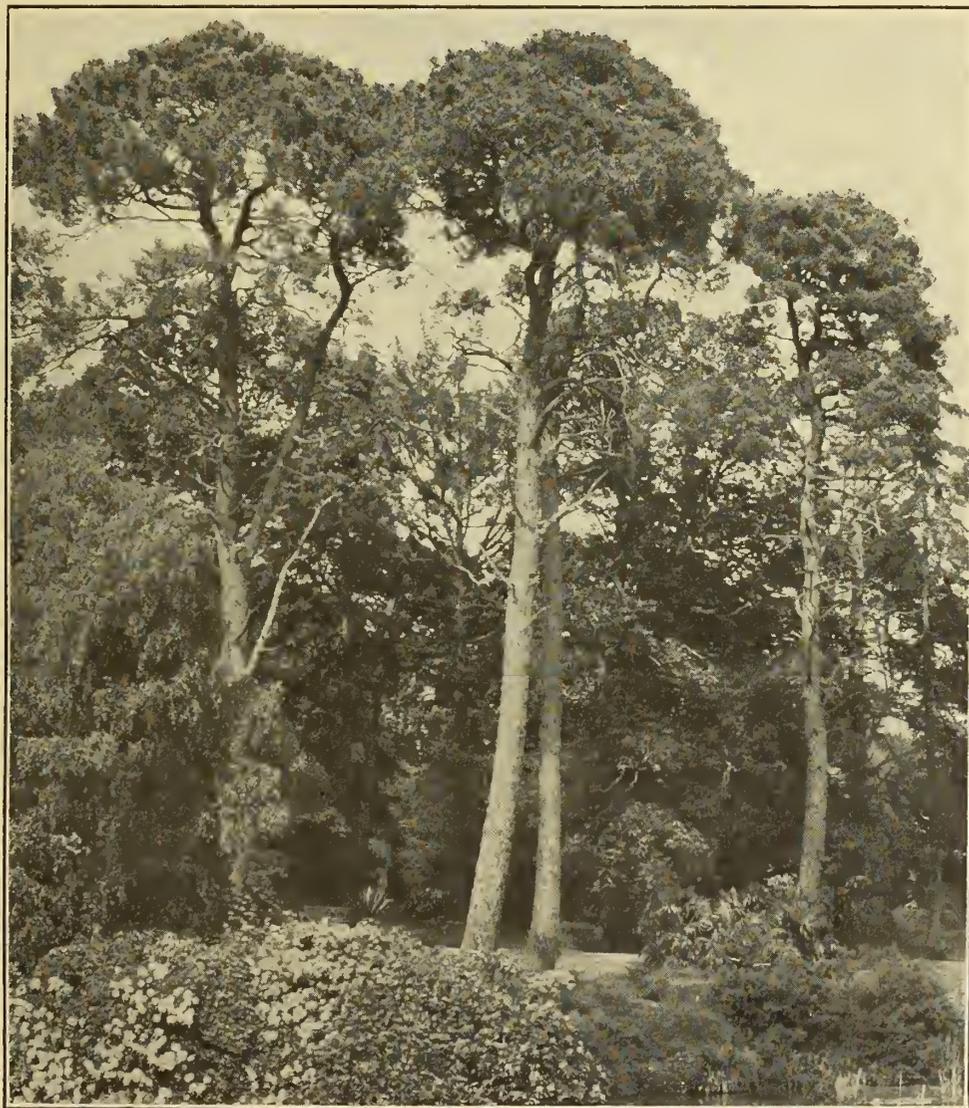
NOTES AND REPLIES.

Shrubs for bank.—I have a small shrubbery, the bank on pathway running up into shade of tall trees. Would the Tamarisk be suitable to brighten up the place?—T.

[Very few shrubs are likely to succeed on a bank under tall trees. Certainly the Tamarisk would not be a success under such conditions, as full sunshine is necessary in order to develop the charming pink

named is the Ivy. For such a purpose the smaller-leaved forms, if of free growth, are preferable to those with large leaves, which would, from the weight of their foliage, be very liable to be stripped off by heavy gales.]

Cutting Ivy.—The common Ivy is the best of all evergreen wall climbers, for it is at its best during the dark, dreary days of mid-winter, and gives a snug, warm look to any building that is covered with it. Like all other creepers of a strong growing nature, it needs frequent attention to keep it in order, or it will fill up water-spouts and over-grow windows if not kept in check by timely pruning. It must have at least one good cutting-in



Group of Pinaster, Sussex.

very glad to say that my big Pinasters escaped anything but quite trifling damage from the south-westerly gale of the one night and the northerly blizzard of the next. In fact, I escaped very fortunately altogether, but the gardens are so well sheltered on the northern side that we never suffer from that direction. I hope you have been equally fortunate. I see the winter has left its mark upon some of my Eucalypti, or, rather, the autumn, as it was, I think, the November frost that did the damage. The early Rhododendrons have not had a ghost of a chance this season, but it is very seldom they have, and I consider that nothing that blooms be-

colour of its blossoms. Furthermore, it would not thrive in such a position. Of the few subjects that may hold their own under the conditions named, the most likely are the Butcher's Broom, Berberis Aquifolium, and Berberis Darwini, and of low-growing shrubby plants, the Ivy, Vinca minor, and Hypericum calycinum.]

The Hydrangea.—Will the Hydrangea stand gales of great violence where shelter is impossible on sea coast?—K. B.

[The Hydrangea would not be likely to succeed under such conditions.]

Hardy self-clinging creeper.—What is the hardest evergreen creeper, self-clinging, for walls exposed to terrific sea gales? The soil is poor.—K. B.

[The only self-clinging evergreen climber likely to succeed under the conditions

every year, and I find that April is the best time for doing it, for then the season of active growth is close at hand, and the young foliage quickly develops and takes off the somewhat bare look given it by clipping. A small, sharp reaping-hook or pair of pruning shears is the best tool for cutting it in with, and it should be cleared entirely off the wall below the gutters for at least 1 foot, or it quickly fills them up and causes an obstruction.

The Double-flowered Blackthorn (*Prunus spinosa* fl.-pl.).—Well-flowered examples of this shrub at once arrest attention, for the white blossoms are conspicuous, and last in good condition for a longer period than those of many other kinds of *Prunus*. The stiff, spiny branches peculiar to the type

are reproduced in the variety, and there is little to distinguish between the two plants when out of flower. The blossoms, which appear in April, usually with great freedom, are each about one-third of an inch across. As is the case with the type, this variety is well adapted for planting in poor ground, and this, together with its showy nature, should be sufficient recommendation for its extended culture. Unfortunately, it is not easily obtained, probably on account of its having to be increased by grafting. It is sometimes offered grafted on stocks of the type a few feet high, and at other times it is met with as a low bush with branches touching the ground. If it could be obtained in quantity it would form an excellent companion to the double form of the common Gorse for clothing dry banks, while it is equally worthy of a place among choice shrubby plants.

The Snowdrop-tree (*Halesia tetraptera*).—One of the most beautiful of flowering trees in its season is *Halesia tetraptera*. Introduced as long ago as 1756, it is still by no means so extensively grown as its beauty warrants. It is perfectly hardy, and, given a rich, open soil, and abundant moisture, makes a charming display in April. I have a tree, every year crowded with flowers, which is 15 feet high and more in breadth. The popular name of Snowdrop-tree is a particularly appropriate one, for the pure white pendent flowers, which thickly stud the old wood, have a close resemblance, both in shape and pose, to those of our native Snowdrop. They are borne in clusters of three or four on short stalks. The specific name refers to the four-winged fruits. The tree is deciduous, the leaves just pushing after the flowers have expanded. The species is a native of South Carolina, etc., and likes more especially the banks of streams and other moist situations.—F.

OUTDOOR PLANTS.

SOWING ANNUALS.

As the best time for sowing these is now with us, it may not be amiss to call attention to one or two facts that are frequently overlooked in their culture, and which, to a great extent, bring them into disrepute. The first cause to which I allude is that of sowing them on poverty-stricken soil, thereby causing not only a very meagre, but also a very short-lived, display of bloom. Sowing thickly is one of the worst things that can be done. It is a very common practice to sow annuals in patches in mixed borders, and generally one can find from ten to twenty plants in a space where three or four would make a far more effective display. If it is desirable to sow in patches it is certainly desirable to sow more than enough seeds to form a good clump; but as soon as the plants are large enough to be considered safe from the many mishaps that befall the seedling plants they should be thinned out to the desired number, which can reasonably be supposed to attain something like a full development. I am aware that a good many annuals do better sown where they are to flower. These ought to be treated as above described. A good many may be sown in boxes, pots, or pans, and planted out when other bedding plants are put out. I may mention *Phlox Drummondii* as one of the most popular annuals grown, and one that has been immensely improved of late years. The very best strain of seed is far more expensive than the old small-flowered one, but a small packet of it, if sown in a seed-pan or box, and the seedlings pricked out singly as soon as large enough, and finally planted out at least

1 foot apart, will fill a large bed as they branch out, just the same as *Verbenas*; and if regulated over the surface with a few pegs or hair-pins before they come into bloom will make a really magnificent display. Plenty of other illustrations might be cited, for in the main the transplanting of seedlings singly is amply repaid by better after results. Then, as regards soil, how often do we see annuals sown in borders full of the hungry roots of coarse-growing herbaceous plants that suck out every particle of nutriment, and where it is difficult for the seedlings to live at all, much more thrive, so as to attain anything like fair proportions. Only give annuals fair play by planting them in good soil, deeply cultivated, and they will hold their own against anything in the whole list of garden flowers. Briefly, get the best seed, sow thinly, and plant out where they can flourish, and your beds of annuals will yield you infinite pleasure. T. P. W.

THE MAYFLOWER

(*EPIGÆA REPENS*).

"SURREY," p. 189, wishes to know under what conditions this hardy plant thrives. I have never attempted to grow it because I know that I could not possibly give it the conditions which are indispensable to its welfare unless I adopted means which I think are out of place in the case of hardy plants. For me a hardy plant has no value if it has to be protected not only against the vicissitudes of an English winter but has to be nursed during the growing season. When the late Mr. Wilson began growing hardy plants at Wisley this *Epigæa* was one of the things that he much desired to establish. He failed for some time, but one day he showed me with pride a plant which was unmistakably at home. It was in short Grass just within the shelter of Oak-trees, the over-hanging boughs of which gave a certain amount of shade. "You see," said Mr. Wilson, "it is rooting as it goes," and unless one can get it to form roots in this way it will certainly not become thoroughly established and will not take on perennial vigour. Later on I saw it in a most luxuriant condition in the Oak wood in company with Lilies and other things which cannot be treated as border plants, and I cannot imagine that it would be more vigorous in its native land. The soil, naturally light, was enriched by the accumulation of decayed foliage which had been going on for very many years. This must be the natural rooting medium of this *Epigæa*, and, in conjunction with the shade, shelter, and atmospheric conditions engendered by the superior vegetation, gave it exactly what was necessary to promote a vigorous life. Only where this hardy plant finds similar conditions can one realise its beauty. It is a charming hardy plant when in its native vigour, but in the form of semi-stunted specimens, such as are generally to be seen, it is not worth growing.

"Surrey" and others who may be interested in this hardy plant will, I think, realise what it needs, which briefly stated are partial shade and very free soil composed mainly of decayed leaves and perfect shelter from cold winds. Those who have woodland should have no difficulty in growing this interesting little hardy plant to perfection. If shade and shelter are there the rooting medium can be made, in which case I would suggest well-decayed leaf-soil and some peat in lumps. It is, of course, open to those who have no woodland to try their hand, in which case a north position should be chosen and dryness of atmosphere must be neutralised as much as possible by frequent moisten-

ings both at the roots and overhead. In this way a moderate degree of success may be achieved, but not comparable with that obtained under conditions which closely imitate those which it enjoys in the woods of New England. J. CORNHILL.

NOTES AND REPLIES.

Montbretias wintered in cold-frames have made sturdy growth. They have been hardened off, and may now be planted out. The ground where it is intended to form groups should have plenty of old hotbed manure or leaf-soil trenched in. For grouping, the plants may be placed 6 inches apart, at which distance they form masses of colour. If a border is devoted to their special culture, plant in rows 1 foot apart and 6 inches apart in the rows, this allowing room to use a hoe amongst them.

Double White Rocket.—For many years I went to a great deal of trouble to obtain the real old-fashioned sweet-scented double White Rocket, and tried specimens from many nurseries. However, I have at last obtained the correct kind, and shall do all I can to preserve it by taking side shoots every year and striking them, otherwise I believe the plants die off.—HOLLIES.

Hunnemania fumarifolia.—Although perennial, this is so tender, except in very warm gardens, that it is best treated as an annual. It is much too seldom grown, and is really a handsome and showy border flower.—S. A.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

PRIMULA DENTICULATA.

AMONG the bolder and more showy hardy Primulas none is more easily managed than the subject of the present note. Rich in variety and well grown in informal groups, it commands attention by the effectiveness of its display at flowering-time. Good as a border plant, it may be introduced into the cooler parts of the rock garden with every hope of success, the measure of success depending on a more or less generous treatment. The accompanying illustration shows a small group of it in the rock garden, to which reference has already been made, and in such a place it is seen to advantage.

What surprises one, seeing its free seedling and the ease with which hundreds or thousands may be raised, is the comparatively little use made of it for naturalising in cool or moist woodland and like places; in short, where our native Primrose—most precious of spring flowers—in established examples bearing nearly foot-long leaves and tufts in proportion, revels. In these and places akin this Himalayan kind would need but little soil preparation to make it a success. Not that I would suggest any slovenly method of treatment or haphazard way, the plant meriting something more than this. In the woodland the plant would not only show well, but be benefited by the shelter afforded—a substitute, in some measure, for its own native covering of snow. For such work seedlings would be best raised in boxes and put out when three or four leaves had been formed. In Nature the species often inhabits boggy or wet ground, and in cultivating it the fact should be borne in mind. A deciduous kind, resolving practically into a crown at ground-level in winter, the vagaries of our climate tempt it occasionally to start early into growth, with the result that the flowers are injured by frost, though rarely to any great extent.

SEEDLING-RAISING of this fine perennial kind is especially interesting, because of the good colour forms that are likely to occur. Lilac in the typical kind, the usual range is from the palest of this shade to rich, sometimes reddish, purple and white. The varieties differ also in size of flower, all being produced in roundish heads at the top of a foot-long scape. The pure white form, *P. denticulata alba*, is especially valuable for the alpine-house. It also

comes fairly true from seeds, though tinted lilac forms also appear. Possessed of a greater vigour, and more imposing withal, is the Kashmir form, *P. d. cashmiriana*, a variety also characterised by longer leaves and more richly-coloured flowers. The whole plant, too—stems, leaves, and calyces—is covered with a dense meal. The coming of this excellent variety about the year 1879 gave a distinct impetus to hardy plant gardening at the time. Seeds of it and the equally unique *P. rosea* were distributed in the same year—both acquisitions to the cultivated species of that time and not surpassed to-day.

Primula seed is best sown soon after ripening, little soil covering being necessary. Delay in this is frequently accompanied by loss of vitality; also uncertain vegetation. A point for the seedling-raiser to bear in mind is the bog-loving nature of this set. Moisture, indeed, is as important at this as during the growing stage. The raising of these plants from root-cuttings in the case of plants so easily and abundantly raised from seeds is likely to suffer neglect or fall into disuse altogether. It has a value of its own, however, in the case of varieties of special merit, the plants then coming true. It is, however, less expeditious than seedling-

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM APRIL 20TH.—*Osoberry* (*Nuttallia cerasiformis*), *Forsythias*, *Rhododendrons* (in variety), *Purple Plum* (*Prunus pissardi*), *Rosebud Cherry* (*Prunus pendula*), *P. Amygdalus*, (the *Wild Cherry*), *Ribes sanguineum*, *Osmanthus Delavayi*, *Andromedas* (various), *Viburnum Carlesi*, *Cydonias* (in various colours), *Chinese Quince*, *Elæagnus edulis*, *Berberis* (in variety), *Prunus triloba*, *double Gorse*, *Laurustinus* (various), *Azara microphylla*, *Rubus spectabilis*, *Bush Honeysuckle*, *Sweet Gale* (*Myrica Gale*), *single and double Camellias*, *Ericas* in great variety, *Spice Bush* (*Lindera Benzoin*), *Spiræa arguta*, the *Pearl Bush* (*Exochorda grandiflora*), *Magnolia stellata*, *M. conspicua*, *M. Soulangeana*, *Pernettya serbica*, *Narcissi*, *Snowflakes*, *Grape Hyacinths* (in variety), *Windflowers* (in variety), the *Pasque-flower* (*Anemone Pulsatilla*), *Hepaticas* (in variety), *Primulas* (in variety), *Polyanthuses* (in variety), *Saxifrages*, *Barrenwort* (*Epimedium*) (in various colours), *Arenaria balearica*, *single and double Arabis*, *Scillas*, *Hutchinsia alpina*, *Bloodroot* (*Sanguinaria canadensis*), the *Algerian Iris*, *Honesty*, *Stylophorum diphyllum*, *Water Hawthorn*, *Fritillaries* (in variety), *Snow Glories* (in variety), *Red and yellow Fumitory*, *Forget-me-nots*, *Hyacinthus azureus*, *Tufted Pansies*, the *Greater Celandine*, *Caltha polypetala*, *C. palustris*, *Violet Cress*, *Crown Imperials* (various), *Lithospermum Heavenly Blue*, *Veronica filiformis*, *Gentiana verna*, *Arctostaphylos californica*, *Collomia grandiflora*, *Anchusa myosotidiflora*, *Synthyris reniformis*, *Omphalodes verna* (white and blue), *single and double Primroses*, *Pernettya serbica*, the *Bitter Vetch* (*Orobus vernus*), *Wallflowers*, *Tulips*.

WORK OF THE WEEK.—The final sowing of

(Ruth Fischer) makes a charming carpet to beds of red or yellow Roses. *Viola gracilis* has been used for this purpose. This lovely plant flowers itself to death here, and care is needed otherwise the whole stock would disappear in summer. Mowing has been left later than usual this year for various reasons, and the Grass having grown too long in places the scythe has had to be used in advance.

Sussex.

E. M.

SOUTHERN COUNTIES.

Outside Vine borders.—The winter covering may now be removed in order that the sun may warm the border and induce activity among the roots near the surface. After the covering has been taken off and the surface cleaned, the latter should be dressed with a concentrated Vine-manure, lightly forking in the same afterwards. A mulch 2 inches deep of horse-droppings, spread evenly over the surface of the border, will then render the operation complete. Failing material of the nature mentioned with which to mulch the surface, short litter may be employed instead.

Early Peaches.—With the completion of the stoning, which is best ascertained by taking a fruit from each tree and cutting it open, the crop must be reduced to safe proportions forthwith. The old-established rule of allowing one Peach to each square foot of trellis clothed by each tree is a safe one, and is always adhered to. Nectarines are left somewhat closer, or one fruit to every 9 inches square. Such of the fruits as are inclined to hang downwards should be elevated on pieces of lath, so that they shall get the full benefit of sunlight and become well coloured at the finish. As the skins of Nectarines are apt to burn if exposed to intense sunlight about the time they begin to soften, that portion of the roof under which the trees are situated should then be lightly shaded with whitewash. They will then ripen perfectly and without blemish. Higher temperatures may now be safely indulged in, that for the day ruling from 70 degs. to 75 degs., and from 60 degs. to 65 degs. at night. Advantage of sunny weather may always be taken to close in time to secure a temperature of 85 degs. to 90 degs. The watering of the border must now be carefully attended to. This is all-important, as, if the soil is allowed to become at all dry and a heavy watering follows, the sudden accession or flush of sap is apt to cause splitting of the fruits—particularly Nectarines—to take place. Although a final dressing of artificial manure is given when stoning is finished, liquid stimulants are admissible up to the time the fruits exhibit signs of ripening. Until that stage is reached the foliage must be liberally syringed daily, and as soon as warm weather sets in the syringe may be superseded by the garden engine. Due attention has to be paid also to the tying down of the young wood when necessary, and in the pinching of lateral growths and all those which extend beyond the limits of the trellis.

Second house.—A final thinning of the young wood should now take place, leaving, as far as circumstances permit, no more than is necessary for future requirements, as well as to secure an even spread of foliage without any crowding. A further thinning of the fruits may also be done, leaving the final thinning until the stoning period—upon which they are now entering—is safely passed. Matters of routine, such as keeping the young growths tied to the trellis, airing liberally on fine, warm days, keeping the foliage clean and free from insects by that best of all insecticides copious supplies of water applied forcibly, must have due attention. If fly should, unfortunately, effect a footing, afternoon syringing would then be omitted, and the house vaporised at night. A vigorous syringing the following morning would clear off any of the insects which might not be killed outright. A thorough watering of the border now will carry the trees through until the stones have become perfected.

Celery.—Seed of the variety *Leicester Red* will now be sown to yield a good lot of plants to come in for late supply next spring. A good quantity of *Solid White*, *Superb Pink*, and *Sulham Prize* will be pricked out into frames in which Violets have been grown during the winter. The loamy soil which was placed therein for Violets does admirably for Celery, as good balls of soil attached to the roots are certain to result from the use of such material. The only preparation required is to level and make the surface firm and to put a little fine soil on top into which to prick off the plants. After having been watered, shaded, and the frame kept closed for a few days, the plants soon start growing, and can then be freely aired to ensure sturdy growth.

Early Potatoes.—A sharp look out has to be kept to prevent the tops being injured by frost, as they are now on the point of pushing through the soil. The best preventive is to pass up and down the rows, and with a hoe to draw up sufficient soil to all that are visible to cover them. This, at any rate, places them out of harm's way for a time.

Maincrop Carrots.—The sowing of these has at last been accomplished, the soil, fortunately, being caught in good working condition after several delays. The soil being of no great depth, an intermediate variety has been selected.



A group of *Primula denticulata*.

raising. The work should be done during the winter.

E. H. JENKINS.

NOTES AND REPLIES.

Moving rock plants.—I am moving to another house in June. Can you advise me as to moving my small collection of rock plants? These, though not numerous, consist of a great many varieties. I have possession now of a new garden close by, and could move them now, or I could leave them where they are until the end of September and move them then. Would it answer to move them now to a prepared bed and leave the making of the rock garden till later, and finally plant it in the autumn? This would be the easier plan for me.—G. C. PHILLIPS.

[The simpler and better plan would be to move them now, particularly as the opportunity for so doing is open to you. In moving the collection it would also be well to divide the plants, so far as that is possible, transplanting the units with room for developing. By so doing and by affording the plants a full season's growth ahead, there should be available not only a considerably increased stock of plants, but reinvigorated examples of a youthful nature, capable of a better service than could possibly result from the planting of older specimens transplanted intact. All the same, you would do well to push forward the building of the rock garden, so that the planting may be done during September if possible.]

flower seeds under glass has been made, and many of those sown in March have been pricked out into boxes. Perennials raised in the same way are given all the air possible in order to harden them before planting out. The vacant spaces among shrubs are now being prepared for hardy annuals. The ground is heavy, and, therefore, entails considerable labour to break it down sufficiently to allow a covering of fine soil for the small seeds, which we hope to sow during the coming week. A row of *Pernettyas* planted during the winter which had become drawn and straggly has been cut hard back. A group of white Lilacs on their own roots has been planted out in the Heath garden, and a further group of *Butcher's Broom* has been made near those recently put out. Some plants of *Prunus pissardi* (Wood's variety), having come to hand, have been put out in the Heath garden among young *Box* bushes. Young plants of *Daphne Mezereum* have been used to thicken an existing group. This is not very happy in our soil, preferring that of a chalky nature. The *False Heath* (*Fabiana imbricata*) has not been very satisfactory owing to the poor condition of the soil where it has been growing, and so a new plantation has been made in richer ground.

Sweet Peas raised in pots, after a thorough hardening, have all been planted out on well prepared ground, some in groups and others in long lines. After planting, a dusting of soot was given and the plants staked with small Birch sprays, which give a little protection from the cutting winds as well as support. After the Peas have become established 10 feet stakes will be used. A large group of *Fellenberg Rose* has been carpeted with the *Giant Summer Forget-me-not*, and the planting of other Rose beds with various coloured *Tufted Pansies* and other plants is being continued as weather permits. The dwarf *Forget-me-not*

Chicory.—This is best sown under similar conditions to the foregoing, and to ensure good, stout roots the plants should be thinned to 9 inches apart. This allows ample space for each to develop properly.

Beet.—Seed of the long-rooted Beet will be sown the first favourable opportunity. In its present condition the soil is too hard and dry for a good tilth to be secured, but after a light shower or two it will then break down to a fine state and form a good seed bed. The drills will run north and south, and stand 1 foot apart. Three or four seeds will be dropped at every 9 inches into the drills, and the plants thinned down to one when in fit condition for this to be done.

Scarlet Runners.—The site where the rows will be grown will now be prepared. For this purpose narrow trenches are opened and good rotten manure placed in the bottom about 4 inches deep. This is trodden firm and over it sufficient of the best of the soil thrown out is spread to bring it up to ground level. The surplus soil is placed on either side of the trench, which converts the latter into a kind of broad furrow, and renders it capable of retaining water, when necessary to apply it, without any waste ensuing. Grown on this principle the roots are to a great extent rendered proof against the vicissitudes of a hot, dry summer, and the plants continue yielding long after those grown in the ordinary way have ceased to be of any further use. The seed is sown in a double row as soon as the soil has settled down. A. W.

MIDLAND COUNTIES.

The earliest Peaches are swelling fast after stoning, and are afforded a rather higher temperature—65 degs. by night, 80 degs. to 85 degs. by day with sunheat. The trees are syringed morning and afternoon, and the atmosphere of the house kept moist. Untie any shoots that press the fruits against the wires or shade them from the light. Syringing must be discontinued as soon as the fruits begin to ripen. See that the trees do not lack water at the roots, and give liquid manure to those that are heavily cropped. Succession Peaches are stoning, and the temperature is not allowed to exceed 60 degs. by night, free ventilation being given during the day when the weather is favourable. The shoots are tied down as they grow, being careful to avoid overcrowding. Any extra strong shoots are stopped to balance the flow of sap. The trees are kept free from aphid by occasional fumigation with nicotine compound.

Vines require to be looked over once or twice weekly, stopping all lateral growths that are extending beyond one leaf, and those in later houses to one or two joints above where the bunches are showing.

Peaches and Nectarines are ready to be again disbudded, and all shoots necessary to be retained for the building up or extension of the trees will now have to be selected. It is well to leave two of the best placed at the base of each branch until one of them gets a good lead and can be tied in. Let these spring from the upper sides of the branches nearest to the centre of the tree. Trees trained on this principle are more uniform in growth, cover the walls better, and are much easier to regulate should a branch die. The remaining shoots on the branches should be further reduced to 3 inches apart for the present, preserving at the same time all the best placed and strongest fruits. Take means to prevent aphides from increasing among the young leaves. Quassia extract is the safest remedy, and should be applied as often as necessary. Some varieties of Peaches are liable to be attacked by mildew, and whenever this appears the affected trees should be syringed with a weak solution of Gishurst compound, using about 2 oz. to 1 gallon of water, allowing it to remain on the leaves. All insecticides should be applied to the trees in the evening and in fine weather, for the foliage of the Peach being very tender at this date is easily injured. At the time of writing the protecting nets are still left on the trees, cold north-east winds such as we are experiencing conducing to mildew and the attacks of aphides.

Cherries do not require much disbudding. Merely remove those shoots which spring from the back of the branches and thin those growing in clusters to prevent overcrowding, training in sufficient for the extension of the branches or for renewing worn-out shoots and furnishing blank spaces. All other shoots should be pinched at the third leaf. Cherry-trees are very subject to attacks of black-fly, and on its first appearance means must be taken to destroy it by syringing with an approved insecticide.

Herbaceous borders.—Many early-flowering subjects, as Delphiniums, Lupines, Paeonies, Galegas, Heleniums, Oriental Poppies, the larger Campanulas, etc., will now need support. It is not necessary or desirable to stake everything, only those especially liable to injury. For plants in groups I find a few sprays of Pea-sticks placed around and among them quite sufficient, and by the time they reach the flowering stage the plants practically hide up all the sticks. Eremuri in a sheltered position are now pushing up their flower-spikes. It is advisable not to tie these flowers up to sticks, as the stems being very brittle

are liable to be snapped off just above the stakes by rough winds. A good mulching of manure has been afforded them, and in dry weather they will be greatly benefited by copious supplies of water.

Polyanthuses raised from seed sown in boxes are ready for pricking out into nursery beds on a cool border. There are now many fine strains which come fairly true from seed. The present is a suitable time to sow seeds in a cool spot out-of-doors.

Hyacinths and Tulips cleared from the beds in time to make room for summer-flowering plants are often regarded as worthless, but all they need to make them serve again is careful lifting and replanting. Put them somewhere in the open, and water occasionally, so that the leaves may ripen off naturally. I find that bulbs so treated ripen up well and flower the next year.

Perpetual-flowering Carnations.—A batch of plants that has been flowering indoors all the winter will be planted out on a well-prepared border. Here they will continue to flower all the summer and make good growths for propagating in September.

Early-flowering Chrysanthemums will be planted out at the first favourable opportunity.

Roses.—It is necessary to keep a sharp look out for maggot and aphid as the plants need close attention to keep them free of these pests, which if neglected quickly cripple the most promising buds and shoots. Aphid is quickly checked by syringing with Quassia extract sometime during the afternoon; but in dealing with the maggot the surest plan is to give the curled leaves a gentle squeeze with the finger and thumb, after which syringe with the above-mentioned insecticide.

Thinning crops.—One of the greatest mistakes that can be made in the cultivation of vegetables is overcrowding. Especially does this apply to Peas and Beans. These are often sown and permitted to grow too thickly, the consequence being the plants crowd each other and the yield is poor and of short duration. Thinning should be done as soon as the seedlings are large enough to pull out, and all small crops, as Onions, Parsnips, Turnips, Beet, Lettuce, etc., should be thinned out twice. Keep the ground stirred between the lines with the Dutch hoe, and dust over the ground frequently but lightly with fresh soot, which is not only one of the best stimulants to apply at this season, but protects the above-named crops from the ravages of birds and other pests.

Lettuce, both Cos and Cabbage, is now sown frequently, planting out from each sowing, so that no break in the supply is likely to occur. Lettuce should be watered freely in hot, dry weather, thus ensuring a quick, crisp growth.

F. W. GALLOP.

SCOTLAND.

The greenhouse.—*Cineraria stellata* has been very effective, but the plants now show signs of exhaustion. Flowers still in comparatively good condition were cut, and a few of the best of the plants were for a time retained. To fill up the space thus vacated use has been made of a good batch of *Schizanthus Wisetonensis* now in excellent bloom. The plants having been grown quite cool are robust, and will be useful for some time to come. Another useful subject, in the shape of the winter-flowering *Antirrhinum Nelrose*, has also been employed, the spikes of this useful variety lending variety. A large batch of *Zonal Pelargoniums*, too, was made use of. These are chiefly in 6-inch and 7-inch pots, and if assisted with liquid manure they will bloom freely until autumn is well advanced. A final lot of double-flowering *Begonias* was boxed up for late use, and plants of the same family now some way advanced were reported. These are grown to some extent, and are in many shades of colour, but whites are strictly limited in number, as it is considered that they are singularly ineffective either in groups or when used singly. A good quantity of *Campanula isophylla* and *C. l. alba* also received a shift from 3-inch pots into 5-inch pots, in which handsome pieces which bloom profusely can be grown. *Primulas* yet remain in good condition, and during the week a number of seedlings of *P. obconica* was pricked off for autumn blooming. Watering now takes up a considerable amount of time, and as far as possible this is attended to in the early morning. With more sunheat firing is now less essential, although a little heat is still run through the pipes at night.

Stove.—Syringing is now regularly done twice daily—early in the morning and round about 4 p.m. In order to reduce firing, early shutting up is practised, and if the thermometer rises rather sharply no harm follows when the house has been thoroughly damped down. *Gloxinias* come on apace, and the batch for September work was potted during the week, as were *Gesneras* and some pieces of *Saintpaulia ionantha*. In the case of several large plants in pots top-dressing was given. This method serves well enough for a season, but as drainage cannot be attended to it is merely regarded as a makeshift. Recently-pruned climbers now making free growth are being tied in as becomes necessary. *Acalyphas* now strike readily if young growths are

selected, and in a small state these showy plants possess some value. For large baskets such Ferns as *Nephrolepis exaltata* and *Phlebodium aureum* are useful, and soon fill up if vigorous young plants are employed. Damp down freely the pathways and stages, for if a dry atmosphere is permitted *Crotons* and similar smooth-leaved plants will be liable to attacks of red-spider and thrips. This is a very good season at which to sow seeds of Palms. In the majority of cases germination is rapid, and young Palms are useful in many ways.

Begonia Gloire de Lorraine.—The last lot of cuttings has gone into the propagating case. Encouraged by the success which followed the cultivation of a spare batch during the past winter under ordinary greenhouse conditions, the plants resulting from these cuttings will be given cool treatment throughout their season after they have rooted. The plants referred to lasted in good order for an exceptionally long time, and long after those in a higher temperature were over.

Nerines.—These, being now sufficiently ripened, will be placed on a shelf fully exposed to the sun, and by and by they will be stood out-of-doors at the foot of a south wall until the autumn. Similar cultural details are applicable in the case of *Hamantails*.

Vallota purpurea.—Some good potfuls of the Scarborough Lily were in the course of the week top-dressed and removed from the cool-house in which they had passed the winter to pits, where they will remain until the flower-spikes begin to be visible, which under such conditions is generally about the beginning of September.

Figs in pots.—During the week Figs in pots have been top-dressed. These trees have been kept quite cool, and promise good crops. It is curious that while Figs out-of-doors succeed in poor sandy soil and a circumscribed root-run, it is hardly possible to provide too rich feeding for Figs under glass, whether these are in pots or planted out. Syringing is done twice daily. Stopping is practised at the fifth leaf beyond the fruit.

Vines ought to be looked over regularly and the shoots carefully tied down. A tight hand should be kept on sublateral growths. If these are not kept pinched the main leaves are robbed of nourishment, and not only so, but the roots are unduly excited, and when sublaterals which have been neglected are suddenly cut back a check ensues which may lead to shanking. The use of the knife is deprecated. Sublaterals ought to be removed at a stage when they can be pinched out between the thumb and forefinger. Present temperatures: For Hamburgs and similar varieties, 63 degs. to 65 degs.; Muscats, 5 degs. more.

Pricking off has claimed a considerable proportion of the available time in the course of the week. Much use is made of beds in cold-frames for this purpose, this being preferable to using boxes, however handy the latter may be at planting-out time. In beds watering is much more easily done and does not require to be attended to at such close intervals, while, if care is taken when the plants are lifted, good balls can be always secured. For some little time the sashes are closed rather early in the afternoon and matted up, but when danger from frost is over the frames will be freely ventilated by night as well as by day. In the course of the week large quantities of such things as *Antirrhinums*, *Marigolds*, *Tagetes*, *Asters*, and *Lobelia* have been dealt with.

Biennials.—The sowing of biennials, including *Canterbury Bells*, *Sweet Williams*, and so forth, has been attended to. In addition, several varieties of *Aubrietias* were sown. These will be pricked out into cold-frames for transferring to their flowering quarters in late September.

Melons in pits.—Seeds have been sown to provide plants for growing in pits. Meantime, the manure intended for the filling of the pits is being turfed and re-turned on alternate days in order to sweeten it. The right kind of manure for this purpose grows more difficult to procure, and more use has to be made of leaves. As, however, there are hot-water pipes in the pits referred to, it is not a difficult matter to keep up the temperature should the heat from the hotbed decline. A good, heavy loam is used, and a fair proportion of old mortar rubble is mixed with it. At the same time seeds of Cucumbers to be grown under similar conditions were sown.

Peaches and Nectarines on walls are yet being hand-fertilised, as, if a free set is wanted, artificial fertilisation must be undertaken. There are indications of a good crop, and presently some little disbudding will be done. There has been no serious frost so far, and the outlook is encouraging. Meantime, when the thermometer is very low, covering is done. Plums, too, are being similarly treated. Those on a south wall, Jefferson, Washington, Kirke's, and several Gages, are in fine bloom.

Kitchen garden.—Broken weather from the middle of the week onward prevented much progress being made. More Turnips were sown, a couple of lines of Early Nantes Carrot and a few lines of Broccoli. The Turnips and Carrots were sown on ridges of Celery trenches, from which they will be cleared off in plenty of time.

W. McGuffog.

Balmie Gardens, Kirkcubright.

BOOKS.

"IN A COLLEGE GARDEN."*

THIS is a very well-meant and well-written book, but there is not much in it about gardening. Everyone must wish that all women who care for gardening may learn it, and the more women who find healthy occupation the better for them and for us all. At the same time, the idea which the author endeavours to propagate that until recently women were not interested in gardening is clearly a mistake. In Mrs. Loudon's day ladies were just as much interested in gardening as at any other time, and they had fewer distractions than they have now in the way of golf, hockey, shooting, and other pastimes, not excluding the cigarette. A party of young lady students came to see my garden one day and were observed taking a little relaxation on the Grass smoking cigarettes, one of the most active heart poisons.

A lady cannot know too much about gardening if she is to manage her own garden or even a small market garden. Gardening in a broad sense, such as we want in our country places, of which there are many in every county, is not sufficiently considered in this book, and the following points deserve thought.

The way to make a good gardener is the way that makes a good sailor, and that is, apprenticeship first. The conditions, the soils, and the fruits and crops grown in our country vary so much that no one can be properly taught gardening in any one place. The idea that gardening can be taught in a year or two at a self-styled college is a delusion.

THE WORK TOO HARD FOR WOMEN.—For quite half a year in our country the weather is far too severe for women to work in the open air. The soils in the Thames Valley and about Edinburgh and Dublin are often friable, but what about the heavy Wealden soils, or the cold clay north of London, 50 feet deep, and some about Horsham, where land is pure clay often. Only the strongest men can face such soils. Heavy work also as forming walks, trenching ground in all weathers, nailing trees on frosty mornings, planting fruit-trees, and other work is not for women, who ought to be occupied in the first place with work under cover. Men are often employed in shops and on work of many kinds which can be done as well by women, and would be much more agreeable work for them, as it can be done in all weathers.

This learning gardening in colleges is an arduous thing that very few women could face. We are told in the book that young women are given one week in which to decide what they will do.

"I now, therefore, invite the reader to follow me in the proceedings that take place when new students have been through a probationary week at the College and are called upon to decide whether they like the life and intend to remain two years in order to perfect themselves for the profession. It is customary for them to report themselves to their Principal, Miss More, and, being passed by her as competent for their future studies, they are admitted to my office, when I, as Founder of the College, am asked to give them some words of wholesome advice.

"The employer, meanwhile, is slowly learning a lesson, and begins to realise that to have a lady as a gardener is a luxury and must not be considered an economical way of reducing the payment of a living wage. A woman gardener, like all head gardeners, should be paid in proportion to the amount of brain-fag, deception, and other disagreeables that, by honesty and intelligent supervision, she rescues her employer from being the victim of. Then, too, her practical, well-trained skill, her scientific education, deserve remuneration."

Thus the employer is to understand that he is to be asked to pay more for a col-

lege-trained girl gardener than he often pays for an experienced, trained gardener. It is clear also from the book that it is not intended that these young ladies should do manual work after a time, but are to supervise men who have had a dozen years' training in gardens, and tell them how the work should be done!

As to the direction of gardeners by students from colleges of the kind described here, just imagine a well-trained man, who has been apprenticed for several years in a good general garden, and afterwards, it may be, has learned fruit culture at Wilton, shrubs at Caerhays, trees at Kew, and has been in a good nursery, in which places he has had an opportunity for the study of design, being lectured by a young lady who has had none of those advantages. Even the most pretentious colleges so called have no trace of design, whereas in a first-rate garden the needs of the place in park, lawns, fruit garden, or orchard compel some thought of design.

The idea that gardening has not been well taught before the coming of the "horticultural college" is a mistaken one. The best schools for gardeners are the country seats of the United Kingdom, in all parts of which there are beautiful and well-cultivated gardens with various means of learning all that can be taught in our islands. It would be well if women would take more share in the garden, as they do on the farm in various countries. In our own land, too, women used to work in gardens in labour suited to them. Now in many districts they will not look at such work. They certainly have their duties to the race and the home to think of first. Besides, there is the fact that, next to work on a sailing ship, gardening out-of-doors on our land is one of the hardest labours for men and wholly unsuited for women.

LAW AND CUSTOM.

A YEW HEDGE.

THE boundary hedge between my garden and a farmer's field is an old Yew hedge. Supposing an animal of the farmer's dies by eating the Yew either by reaching over the fence or from twigs falling into his field, who is responsible? I have given him permission (the farmer) to lop off all the branches on the side of his field, and this he refuses to do.—RECTOR.

[We gather from what you say that the hedge belongs to you as rector of the parish. The subject is one that has been before the High Court on several occasions. In the case of *Crowhurst v. The Amersham Burial Board*, heard in 1878, the defendants had planted on their own land, but so close to the boundary as to project into the adjoining meadow in the occupation of the plaintiff, a Yew-tree, and the plaintiff's horse, whilst feeding in the meadow, ate of the portion of the tree which projected and died in consequence. It was held that they were liable to compensate the plaintiff for the loss of his horse, but in the case of *Ponting v. Noakes*, heard in 1874, it was held that where in such a case the Yew-tree grew wholly within the defendant's boundary he was held not to be liable. Apparently neither of these two cases is exactly on all fours with your case. From what you say we gather that the hedge is a very old one. It does appear, however, from the case of *Smith v. Giddy*, heard in 1904, that a landowner is liable for allowing his trees to overhang his boundary to the damage of his neighbour's crops, and there seems no good reason why this should not equally apply to allowing the boughs of a Yew-tree to overhang to the damage of your neighbour's live-stock. There is a case which was also tried in 1878 (*Firth v.*

Bowling Iron Co.) in which the defendant company's land adjoined the plaintiff's, and was fenced off by a wire rope which it was the business of the defendant company to repair. Through exposure the rope decayed and pieces of it fell on to the Grass on the plaintiff's land, whose cow in grazing swallowed one of the pieces and died in consequence. The defendant company was held liable to the plaintiff for the loss of the cow. Of course, we have not before us the full particulars of your case, but there are two things to be borne in mind which may possibly have some bearing upon its ultimate decision. One is, that if the neighbour's cow got the poisonous Yew by putting its head over the boundary line you could not be held liable, because such reaching over would amount in law to trespass. The other point is that it may be that outside your hedge is a ditch, or what was once a ditch, and that probably belongs to you, because the ditch always belongs to the owner of the hedge inside it, and it may be possible for you to show that it was the duty of the farmer to keep his cow on his own side of the ditch, and that if he had done so she would not have had access to the Yew, which doubtless he knew was growing there; and consequently you would arrive at the same position—namely, that the cow was trespassing. If you like to send us fuller and better particulars we shall be glad to assist you further, if possible.]

Tenant removing plants.—(1) When a tenant plants fruit-trees, Rose bushes, etc., in the garden attached to his house has he any right to remove them when leaving the premises? (2) If he has no right to do so when actually leaving, has he not a right to dispose of what he has planted to his neighbours or otherwise during his tenancy? If he has a right to do this during his tenancy, at what time does the right cease? Is it during the time he is under notice or is it at the expiration of the notice?—HENRY COWIE, *Antrim*.

[When once a tenant has planted fruit-trees, Rose-trees, etc., in his garden he has no right to take them up again at any time, nor is he entitled to dispose of them to his neighbours, nor can he claim any compensation in respect of leaving them behind. The reason for this is that the trees, in law, are part of the freehold, and thus, as soon as they have taken root, they belong to the landlord, who can, if necessary, take action to restrain the tenant from taking them up or otherwise interfering with them.]

Water on excavated land (*Holliday*).—We do not quite understand what it is that is demanded of you. You say they "blame you" for it; but do they suggest that you are to go to any expense in the matter? If so, we can only say that, so far as the facts are revealed in your letter, the demand appears to us to be entirely unreasonable, and we should advise you to see a solicitor if any proceedings are threatened, with a view to defending them. The facts, as we read them, are these: Your house and garden are on a hillside. Above your property is the higher hill-ground from which a good deal of water percolates down into your garden, making the soil there rather too wet. To remedy that you have had some tiles put down in your garden, leading to a "soak-away" at the bottom of it. Below you on the lower part of the hillside is a cricket-field. To make this level they have excavated a portion of the hillside, as it were, close under your garden, and cutting into the part where this "soak-away" process goes on. That is putting your position at its worst. There is no certainty that this "soak-away" is spoiling that corner of their levelled ground. But they are in some way calling you to account from some alleged in-

* "In a College Garden," by Viscountess Wolsley Citizen and Gardener of London. London: John Murray.

fringement of their rights. We cannot see any ground on which they can make a claim against you. We do, however, see a possibility of your garden giving way owing to their excavations, and in that case it is quite certain you would have a right to sue them for damages, as they are removing the support from your land to which you have an undoubted right.—LEX.

ROYAL HORTICULTURAL SOCIETY'S DAFFODIL SHOW.

THE Royal Horticultural Society's Daffodil Show was held on April 18th and April 19th, when a good exhibition was got together. The more important classes contained not a few varieties of merit, and excellent novelties were staged. In the amateur classes many of the flowers were poor, the spectacular side of the exhibition by no means improved by the dingy green baize used at the back of the stands or the never-ending array of mustard-coloured exhibition cards with which the tables were strewn. Surely something better than this would be possible. The one great object lesson of the meeting demonstrated that single blooms, or threes even, contribute but little to an exhibition and afford no clue as to the garden value of the Daffodil. The non-competitive groups did this much better, and the great bank of 800 or so of King Alfred, with others in proportion, from Carter and Co., was something to remember. Following are some particulars of the show:—

OPEN CLASSES.

For a collection of Daffodils, forty-eight varieties, representing the different divisions, Mr. A. M. Wilson, Shovell, Bridgwater, who showed such excellent sorts as Robespierre, Croesus, Iquerna, The Fawn (a fine Leeds), and others, was first. Some under number were exceptionally brilliant and good. Mr. C. Bourne, who was second, had superb White Emperor, Buttercup, Great Warley, King Alfred, Golden Knight, and the richly-coloured Queen of Hearts in a nice lot.

For twelve varieties of Trumpet Daffodils Messrs. Barr and Sons, Covent Garden, W.C., were placed first, having *Famora*, Mrs. G. H. Barr (white Ajax sorts), *Stockwell*, *Justicia*, *Cato*, *Latona*, and *Golden Sovereign* among the yellow selfs. Mr. A. M. Wilson was placed second; we thought, however, his heavier lot of flowers. Not a few were under number—*as, e.g.,* 366 and 413 (bicolor Ajax, a very fine flower). *Diogenes* and *Grenadier* were of special merit.

For twelve varieties *Incomparabilis* forms, Mr. A. M. Wilson, Bridgwater, was easily first, having such as *Croesus*, *Robespierre*, and *Durbar*, all with strikingly brilliant cups. This exhibitor was also first for twelve *Barri* varieties, the whole of his collection being still under number.

In the class for nine varieties *Leedsii*, Rev. J. Jacob was placed first. *White Mere* and *White King* were two of his best varieties, *Sirdar*, *Whitewell*, *Thora*, and *Lowdham Beauty* being others. Mr. A. M. Wilson, Bridgwater, was placed second with, as we thought, a heavier set of flowers. *Venus*, *The Fawn*, *Livonia*, and *Lanceolot* were among the best of those named. The collection, too, was well staged. The latter exhibitor easily led in the class for nine varieties from the *triandrus*, *cvclamineus*, and *Jonquilla* hybrids respectively. The set revealed the strength of the last-named. In the *poeticus* class for nine varieties, Mr. F. Herbert Chapman, Rye, was alone, *Quatrain*, *Marseillaise*, *Biarritz*, and *Bunthorne* being his better sorts.

AMATEURS.

Miss V. Warren, Canterbury, took first prize for twelve varieties fairly representing the different divisions, showing *Pearl of Kent*, *Homespun*, *White Queen*, *Lowdham Beauty*, *Monarch*, *Bennett Poe*, and *Bernardino* among others. Mr. W. B. Cranfield, Enfield Chase, was second, leading, however, in the following class for three varieties, a yellow or lemon trumpet set, and showing *Queen of the West*, *King Alfred*, and *Grand Sire*. Mrs. E. V. Butler, Tewkesbury, was second, showing *Monarch* and *Lord Roberts* well. These two were in like place in the class for three varieties of bicolor trumpets, Mr. Cranfield showing *Weardale Perfection*, *Greave*, and *Florence Pearson*, Mrs. Butler having *Herod* and *Weardale Perfection*. Miss Butler took first place for three varieties bicolor *incomparabilis*, showing *Bedonin*, *Will Scarlet*, and *Whitewell* in good form. Mr. G. Stocks, Doncaster, took first prize for three varieties, three stems of each, *Leedsii*, *Lizzie* and *Zena* being the better things.

OPEN CLASSES (SEEDLING AND NEW DAFFODILS).

Twelve varieties not in commerce, first prize the *Engleheart Cup* and £1, brought a grand lot from Mr. P. D. Williams, Lanarth, St. Kevern, the set embracing *Barri*, giant *Leedsii*, *poeticus*, self and bicolor *Ajax* and *triandrus* hybrids under number being one of the strongest we have seen. Some of the *Barri* and *incomparabilis* forms were of exceptional quality and brilliance. For nine *triandrus* hybrids, Messrs. Barr and Sons,

Covent Garden, took first prize, showing *Alemen*, *Carmela*, *Keziah* (a very fine white), *Lucinda*, and *Silvia*.

For twelve varieties raised by the exhibitor, Mr. A. M. Wilson took the lead with an admirable lot, 402 and 871 among numbered sorts and *Elfin* among named varieties appealing strongly. Messrs. Barr were second, *Model* (a golden *Jonquilla* hybrid after *Buttercup*) and *Golden Empire* (a yellow *Ajax*) being two of the best. For six varieties raised by the exhibitor, Mr. F. Herbert Chapman was first, Mrs. Horace Wright (a glorious *Engleheartii*) captivating all. *Thoroughbred* and *Archangel* were also good things.

For a collection of thirty-six varieties, three stems of each, representing trumpets, *incomparabilis*, *Barri*, *Leedsii*, *triandrus* hybrids, *poeticus*, and doubles, Mr. W. B. Cranfield, Enfield, was first, having *Croesus*, *Venetia*, *White Emperor*, *Sybil Foster* (white *Ajax*), and *Silver Cloud* (*triandrus* hybrid) all very good. Mrs. Ridley, who was second, had very fine *Croesus* and *Lady Margaret Boscawen* in her set. Four collections were staged in this class.

NON-COMPETITIVE EXHIBITS.

Messrs. Carter and Co.'s great bank of Daffodils, with its hundreds of the rich-golden *King Alfred*, *Lady Margaret Boscawen*, *Mme. Gamp*, *Lucifer*, *Dazzler*, and others, was one of the features of the meeting. Messrs. Dobbie and Co., adapting their *Sweet Pea* style of exhibiting to the Daffodil, showed many of the most popular sorts in imposing stands. It was a welcome change to the eternal ones or two rigidly fixed in an exhibition jar. *Seagull*, *Firebrand*, *Duke of Bedford*, *Sir Watkin*, *Flambeau*, *King Alfred* were all so shown and looked admirable. Messrs. Barr and Sons had a rare novelty in *Pink Beauty* with coloured trumpet. *Golden Monarch*, *Golden Apricot*, *Golden Comet* (a *Buttercup* or *Jonquilla* form), *Nannie Nunn* (brilliant crown), and *Coralind* (a *Leedsii* with apricot-coloured crown) were some of the good ones. Messrs. R. Sydenham, Limited, Birmingham, had a lovely lot of *King Alfred* and a big display of *Lady Margaret Boscawen* among many. Messrs. R. H. Bath, Limited, showed a big batch of *Flame* (an *incomparabilis* of merit), *Croesus*, *Crystal Queen* (giant *Leedsii*), the new *White Pennant*, and Mrs. R. Sydenham. Messrs. J. R. Pearson, Lowdham, showed *Empire* (a giant bicolor *Leedsii*) well, *White King*, and *Potentate* (yellow *Ajax*) among others. *Buttercup*, *White Emperor*, *Pixie*, and *King Harold* were some of the best in Mr. C. Bourne's collection.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Plants for exposed rock garden (K. B.).—*Achillea tomentosa*, *Achillea umbellata*, *Ajuga reptans purpurea*, *Alyssum saxatile*, *Arabis alba*, *Arenaria montana*, *Cerastium tomentosum*, *Cotoneaster humifusa*, *Cotoneaster thymifolia*, *Cytisus Ardoini*, *Draba aizoides*, *Genista sagittalis*, *Genista tinctoria*, *Linaria cymbalaria*, *Lotus corniculatus*, *Muehlenbeckia vernalis*, *Oxalis corniculata*, *Pyrrhtrum Tchihatchewi*, *Rosmarinus prostratus*, *Saxifraga umbrosa*, *Sedum lydium*, *Sedum spurium*, *Silene alpestris*, *Thymus Serpyllum* (in variety), *Veronica prostrata*, and *Veronica repens*.

Unhealthy Gardenias (Gardenia).—The main cause of the deformed flower buds and unhealthy appearance of the plants in question is, no doubt, largely, if not entirely, due to a very bad attack of mealy-bug. The specimen twig and bud sent were literally swarming with it; we never remember seeing a worse case. If the plants are all like the sample sent, the best way would be to destroy them at once by burning them, thoroughly cleansing the house by scrubbing woodwork, whitewashing walls, painting, etc.; and then replacing the plants by a clean and healthy stock. To keep *Gardenias* clean great care is required. They should be freely and forcibly syringed every day with clean water, and occasionally with a mixture of paraffin-oil and water; a wineglassful stirred into 3 gallons of water is a safe mixture. This should be kept continually agitated whilst it is being used, and, if the sun comes out after it is applied, the glass should be shaded, or the foliage is apt to become scalded.

FRUIT.

Peaches dropping (Disappointed).—The failure arises from one of three causes. Either the wood is not properly ripened in the autumn, or the soil in the border is allowed to get too dry during the autumn and winter. But from the tone of your inquiry we are disposed to think that the soil in the border is too deep and too rich. In such a case the wood would not ripen satisfactorily. Many people err in making *Peach* borders under glass too deep, and the soil too rich, which is a great mistake. Good loam is all that *Peaches* require to grow in under glass. What stimulants they want can be given in the form of liquid-manure or surface dressing.

VEGETABLES.

Beet and recently manured ground (A. R.).—Ground recently manured is not suitable for root crops such as *Beet*, *Parsnips*, or *Carrots*,

as the fresh manure causes the roots to fork badly, and renders them almost valueless. We would certainly advise sowing in the plot that was not manured.

Cutting seed Potatoes (White Rose).—The cutting of seed Potatoes before planting must depend upon the size of the tubers. As a rule, there is no better seed, whether of round or kidney shape, than sets weighing six or eight to the pound, provided they have been well kept and not permitted to grow out in the winter through bad storing. If the sets be more than 4 oz. each, then they may be cut through the middle, and larger tubers may be cut three or four times. The great object in cutting should be to make the most of the tuber by leaving at least one strong eye or shoot to each set.

MISCELLANEOUS.

Moles (K. B.).—If you can find the main runs, procure some of Calvert's No. 5 carbolic acid. It is very powerful, and should be handled with great care. Place some in a small bottle in each run. The smell is very penetrating, and will probably drive them clean away.

Shading greenhouse (Shade).—The use of various washes for shading is good for houses requiring permanent shading, but there are many objections to the use of whitening, etc., in the case of plants requiring all the light that can possibly be obtained. The best system of shading is to use roller blinds. The blind is fixed to a lath outside the house, as near to the top of the roof as possible. The other side of the blind is fixed to a roller with tinned tacks. The roller should project a little at one end, and on the projecting end be fixed a grooved wheel which will enable the roller to be pulled up or let down in an instant.

SHORT REPLIES.

K.—It is very difficult to say, as you give us no idea as to the garden you refer to. If very shaded and surrounded by buildings the only plants likely to do any good are hardy Ferns.—*Porch.*—For such a position as you refer to you will find the *Lapageria* very suitable.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*Dr. R. Thorpe.*—*Berberis Darwini*, so far as we can make out from the meagre specimen you send us.—*J. Lynn.*—Malformed flowers of *Cobaea scandens*.

CATALOGUES RECEIVED.

J. STANFORTH AND CO., LTD., 12, Charterhouse Buildings, Goswell-road, London, E.C.—“*Stanforth Tools*.”

Trial of Stocks at Wisley.—A trial of biennial and winter-flowering Stocks will take place at the Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey, during next winter and spring. One packet of each variety to be tried should reach the Director, from whom the necessary entry forms may be obtained, not later than Monday, May 9th.

OBITUARY.

LIEUTENANT ERIC G. SUTTON.

It is with deep regret that we hear of the death, at the age of twenty-one, of Lieutenant Eric G. Sutton, who was killed on April 8th. He was the second son of Mr. Leonard Sutton, of Reading, and, as our readers will remember, was given the Military Cross for his bravery in connection with a mine explosion in September of last year. He was educated at Rugby, and after visiting France and America he, on the outbreak of the war, returned home and was gazetted to the Royal Sussex Regiment in September, 1914, gaining his lieutenancy in the following June.

M. PIERRE GERMAIN.

WE regret to say that a young French horticulturist has lately died from tetanus following a wound received while at work in a Welsh garden. Tetanus is a terrible disease, to which gardeners and others who work in the soil are perhaps the most liable, and which, we believe, has been very prevalent among our men in Flanders. We believe there is a serum which, if applied in time, cures the disease, but in this case it was not applied. The microbe of tetanus certainly infests certain areas of cultivated land, and therefore all who work in such areas should, in the case of the slightest cuts, thoroughly wash and protect the wound in the first instance.

GARDENING ILLUSTRATED.

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Founded by W. Robinson, Author of "The English Flower Garden."

MAY 13, 1916.

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TREES AND STORMS.

LATELY I heard a heavy gale blowing, and thought of some of my friends who have big Cedars and other coniferous trees standing alone all dressed to the ground in crinoline fashion. The common teaching of the books is quite wrong about the necessity for planting this precious Conifer by itself. It is the surest way to have trees knocked over in a gale. In the west of England I have been grieved to see the numbers of Cedars of Lebanon laid low. It is rarely one sees a Cedar showing its stem, and very rarely Cedars grouped. The true way is to plant the trees well together and let them shelter and protect each other. It is best for their health and for their good effect.

Anyone who looks at Pines in the well-planted or the natural wood will often find them growing very close together, and, even so, growing very large, as one may see in the Silver Fir woods of Auvergne, tall Pines of good measurement growing within a yard of each other. And this is true not only of Pines, as I remember at Angers visiting the botanic garden there with Professor Sargent and seeing very noble Planes growing within a few feet of each other.

It is a common mistake to suppose that such trees want immense space to grow well in. In one of the most important books on Conifers in our language we are told to leave as much space of ground round each tree to grow in as is the height of the tree. As many trees of the Pine tribe are 80 feet to 100 feet or more high that is an absurd idea. Trees in forests or otherwise need no such amount of space; in fact, it is against them, as it enables the Grass to rob their roots. One of the good results of planting the trees close together is that they keep away Grass and weeds. Three or four kinds of Pines well grouped may give a better effect than a hundred kinds put about in a weak, dotty way.

I have this from a friend in the Thames Valley:—

Elms, Cedars, and Firs were the trees which went down in the recent storms in this district. There are many Planes in the neighbourhood, but I have not seen or heard of one that suffered. A great number of Chestnuts fell in Bushey Park, and most of the Elms in King Edward VII. Avenue, Windsor. Cedars grow singly about here, and when not sheltered by a house fell. Many Oaks had big branches wrenched off but none were uprooted.

The Marquess of Huntly sent an inter-

esting note to *The Times*, which appeared on p. 193, on the trees which have best withstood the great gales at Orton. Nothing is said of soils or conditions, or whether the trees were grouped or set out in the single way usual in pinetums. One precious fact comes out clearly, the resisting power of the "Big" Tree (*Sequoia*) in our northern land. I remember Professor Jepson, who knows the Californian trees and tree land by heart, told me that tree was harder than the Redwood, and the notes from Orton further prove its fitness for our islands. Unfortunately, this great tree is often planted alone, like a lighthouse, and gets no advantage of a shelter and the other gains that grouped or massed trees enjoy. I had so often seen the Big Tree by itself in the middle of a field or lawn with all the winds of heaven dancing about it to its injury that I got an idea that it was a tender and worthless tree, and until my friend Professor Jepson told me its character in California I ceased to plant it, and have lost a quarter of a century by so doing. In fact, it promises to be a very important tree in our country, and should be planted in a sheltered place in woods to begin with.

The recent gales were certainly exceptional in their destruction, but we may again point out that severe storms of this kind are certain to recur periodically, and some precautions against their ravages should be taken in time. Without doubt there are winds that nothing can resist, not even the closest planted wood, but such winds are of rare occurrence in our southern country; all the greater reason, therefore, for taking precautions against them. This is best done in the form of what are called in other countries shelter belts. The best way to use them is to put them against the coldest and most unpleasant winds. We mean, of course, in places where there is room for planting, such as farms, orchards, parks, and gardens.

A great deal of the planting done in country places is in the form of very poor, skimpy fringes round the place which are of no use for shelter or anything else. Much the best way is to find out the dangerous points and plant well against the prevailing or dangerous winds. In our country we have some of the best evergreens for this purpose in the Hollies, the Yews, and the excellent evergreen Oak, which all round our coast-land in England and Ireland is the best wind-break that can be found. Where the wood is thick, as it should be, then the Austrian and Corsican Pines come in very well. The

dot-planting and little rings about a park are no good either for effect or for any comfort that woodland gives. It is useless putting the noble trees of the Pine tribe about like electric standards, it only invites disaster, as we see in the case of the Cedar, and it also destroys all effect of form, because if the tree only forms a round lump on the ground, no matter how high it may be, one gets no idea of its dignity or grace. Where the Cedars grow on the mountains of North Africa or Asia they are kept together, and one can see the beauty and dignity of their stems, and so it ought to be in our planting. We hear that in one town in Herts over 5,000 fine trees were blown down. It is well, therefore, to consider the trees that are apt to give way the first and to avoid planting them. It is sheer folly to plant the Field Elm, or any other Elm, anywhere almost.

W.

NOTES OF THE WEEK.

Omphalodes cornifolia.—Withered a bit on the way, but clearly a welcome member of this interesting genus of hardy plants. The new kinds are charming things. From Sir Frank Crisp.

Haller's Windflower (*Anemone Halleri*).—This, from Sir Frank Crisp, reminds one of the Pasque Flower, and is clearly a good thing. The point is to grow it well and increase it freely. It lives with me on a dry bank, but has not bloomed freely. *A. Pulsatilla* is free as a garden edging and gives a lovely effect.—W.

Crocus: A long-blooming season.—Seldom do I remember Crocuses continuing in bloom so long as this season. In my garden the first flowers were open on January 9th. These were in a sunny spot at the side of a gravel path. Now, in the last few days of March, some yellows are glorious in a north aspect, while on a bank facing north, in the Grass, they are at their best. I grow them in big groups of one colour, and in this way they are far more effective. Both yellow and light colours are more striking than blues.—W., Surrey.

Anemone apennina in a sunk garden.—There is a delightful sunk garden in the gardens of Mr. James Brown at Knockbrix, Borge, Kirkcudbright, and in the month of April a large group of a good variety of *Anemone apennina* was remarkably fine, the blue flowers charming against the grey walls of the sunk garden with their adornment of trailing and climbing plants. The Apennine Windflower is one of the best of the spring

Anemones, its starry flowers being quite distinct from those of the *memorosa* class, of which *A. n. Robinsoniana* is yet the finest of the blue varieties.—S. A.

Collomia grandiflora.—This pretty little annual, seeds of which were sent to me from British Columbia, sows itself on my dry banks, and is welcome in April. It is distinct from the others which are commonly grown, though not so large in flower as the name might lead one to expect.—W.

A guide to Kew Gardens.—Under the authority of the Board of Agriculture, and upon the recommendation of the Directors of the Royal Gardens, Kew, ladies and gentlemen interested in horticulture will be conducted over Kew Gardens on Mondays, Wednesdays, and Thursdays in each week by Mr. John Weathers, who will deal with the most seasonable and interesting features. Parties will meet at the principal entrance on Kew Green at 3 p.m. on the days mentioned, and a fee of 2s. 6d. will be charged to each person to prevent overcrowding and inconvenience. Further particulars may be obtained from Mr. J. Weathers, Park View, Isleworth.

Rhododendron racemosum.—This dwarf Rhododendron, from Western China, is a grand subject for the rock garden. It comes into bloom towards the end of March or beginning of April. Its flowers in the half-opened state are of a deep rose-pink shade, but when fully expanded, and the inside of the corolla is shown, they assume a pale pink shade. As its name indicates, the flowers are in the form of racemes or corymbs. It is a very free bloomer and attains a height of from 1½ feet to 2 feet.—ALBION.

[A pure white form of this Rhododendron was shown at the meeting of the Royal Horticultural Society on May 2.]

Narcissi in Kirkcudbrightshire.—Narcissi of all kinds seem to be flowering well in the south-west of Scotland this year, and, although late, they have been very good. A glorious display has been made in Mr. James Brown's garden at Knockbrex, which is situated close to the Solway in the south-west of Kirkcudbright. In other parts of the same district these flowers also do exceedingly well. Along with the older *Ajax* and *incomparabilis* varieties there were big groups of such as *Mme. de Graaf*, *King Alfred*, and many more of the newer kinds. A particularly beautiful effect was produced by great numbers at the margin of one of the lakes, where the blooms were reflected in the lake with the most enchanting results.—S. A.

Kerria japonica.—Although this plant is best known by its double-flowered form, the type is a very beautiful shrub. Really a native of China, it appears to have been early introduced into Japan and to have become naturalised there, hence the specific name. In 1804 the double-flowered form was introduced to the British Isles, where, in the absence of the type, it was called *Corechorus japonicus*, a name it retained for thirty years until on the introduction of the single-flowered shrub it was found to have nothing to do with *Corechorus*, and was named in honour of the collector, William Kerr, who introduced the double variety. The type forms a rather dense, but shapely, bush, 3 feet or 4 feet high, with arching branches, which during April and May bear freely rich-yellow flowers, each about 1½ inch across. The double-flowered variety, on the other hand, is of stiff, erect habit, sometimes 8 feet or 10 feet high, with stout branches, bearing flowers each up to 2 inches across, the blooms on dif-

ferent plants varying a good deal in size. In the North of England the double-flowered plant is often grown against walls.—D.

Gentiana excisa.—This fine Gentian is now in flower on a retaining wall between sandstone blocks. Not being quite sure of its name, I sent it to Mons. Corveon, who says it is the true name of a form of *G. acaulis*, of which there are, according to the botanists of the day, four types—*G. alpina*, *G. angustifolia*, *G. Clusii*, and *G. kochiana*. These should be easy to grow in cool soils, though we never see them flower so well as in Ireland or Scotland. A sandstone block over the plants seems to suit them.—W.

Osmanthus Delavayi.—This new Osmanthus is evergreen, flowers freely in early spring, and the blooms are fragrant. There is, however, a doubt as to its hardiness. It can, however, be grown in the south and south-west counties, and succeeds in the open about London. A native of Yunnan, China, it was introduced to France in 1890, but has only been grown in the British Isles for a few years. In China it sometimes grows 6 feet high. The white flowers appear in small clusters from terminal and side buds during April and early May. It succeeds in loamy soil, that which is light and well drained being most suitable, and it can be increased by cuttings of half-ripe shoots placed in a close frame in summer. In cold districts it deserves a wall.—W. K.

Aubrietias on walls.—Nowhere does the *Aubrietia* look better than on a wall, where its trailing habit and masses of flowers create a fine display in the spring. Even in places where the *Aubrietia* is a failure, or, at least, a disappointment, on the level or on rockwork, it often succeeds admirably on a wall. There are places where the *Aubrietias* are practically destroyed in wet winters if on the level. The *Aubrietia* never is more beautiful than when hanging down the face of a wall. At Pollok, Sir John Stirling Maxwell's garden, close to Glasgow, the *Aubrietias* are a brilliant feature on the wall of the terrace. At Knockbrex they are utilised on a terrace wall overlooking a small moat, and there they are exquisite, harmonising well with a fine blue *Myosotis* at the base. Dr. Mules and other good named varieties are on the wall and are very beautiful against the grey stone.—S. A.

Thunbergia Gibsoni.—The notes on indoor plants from W. McGuffog are always of interest to me, as he frequently deals with subjects that are now very rarely seen in gardens. In his article on *Thunbergias* (page 222) he makes no mention of *T. Gibsoni*, so I conclude it has not come under his notice. This is not to be wondered at, for, though a very desirable species, its light seems to be hid under a bushel. It is a native of Central Africa, whence seed was sent a few years ago, and a specimen resulting therefrom was shown at a spring meeting of the Royal Horticultural Society in 1913, when it received an Award of Merit. Its nearest affinity is with *Thunbergia alata*, from which it differs, however, in several well-marked features. Instead of being an annual, as in the case of *T. alata*, this newer kind is of perennial duration, and can be readily struck from cuttings as well as raised from seeds. Allowed to assume their natural character, the shoots lie flat on the ground and extend for a considerable distance. The flowers, borne upright on firm stems, protrude from a large, inflated, hairy calyx, in colour green, striped with purple. The blossoms themselves are larger than those of *T. alata*, and of an intense, brilliant, orange colour. Good examples of this *Thunbergia* were ex-

hibited at the Chelsea Show two years ago, but I have looked in vain since then for any announcement of it having been distributed to the public.—K. R. W.

The double-flowered Gorse forms a more compact bush and is tidier during the summer, when the seed-pods of the single-flowered plant render it rather unsightly. The double-flowered Gorse is excellent for clothing dry banks of poor, stony soil, where few things would succeed. A good object lesson regarding its use for such a purpose is to be seen at Kew, where in several places what were bare, unsightly banks a few years ago are now most attractive. The double-flowered Gorse is at its best during April and May, and for nearly two months it is a mass of gold. The provision of good soil or manure is a mistake, for it only promotes rank growth, which does not flower so freely as that of a stunted character. Increase is by cuttings, each 3 inches to 4 inches long, inserted in a cold frame during July or August. Roots ought to be formed by the following April, when the young plants should be potted and kept in pots until they can be placed in permanent places.—W. K.

Grevillea rosmarinifolia.—This *Grevillea*, concerning which "Byfleet" inquires (page 221), cannot be the same as he grew some years ago, as his plant only attained the height of 1 foot, whereas *G. rosmarinifolia* will grow 6 feet or 7 feet high and as much through. It is one of the hardiest members of the genus, and though it will only survive mild winters around London, it is at home in sheltered places along the south coast and in Devon and Cornwall. The leaves, which are closely set on the branches, are each from 1 inch to 2 inches long, and very suggestive of those of the Rosemary. The rosy-red flowers are borne in dense terminal racemes, the long, prominent style being bright red in colour. A second species, quite as hardy as *G. rosmarinifolia*, is *G. sulphurea*, which forms a bush of much the same height as the preceding. The leaves of this are needle-like, and the flowers of a pale yellow colour. They are freely borne during the months of May and June. The *Grevillea angustifolia* alluded to was, I understand, quite a different plant from either of these.—W. T.

Rhododendron rhombicum.—This is one of the earliest of the deciduous species to bloom, for it is usually at its best well before the end of April. A native of Japan, it is known as a spreading bush 3 feet or 4 feet high, with curious diamond-shaped leaves, which are usually very pretty when they first develop, the margin being of a bright reddish-brown and the centre green. The flowers appear in advance of the leaves and are usually produced one or two together from the joints of the shoots. Each one is upwards of 1½ inches across and of a delicate shade of rosy-purple. It is doubly welcome, as it is often in full flower by the middle of April. Its only drawback is that the flowers are often injured by late frosts, therefore it should be planted where it will receive some protection from cold north and east winds, and be shaded from early morning sun. In other respects it may be given similar conditions to other Rhododendrons or Azaleas, sweet, moist soil, moderately free from lime, and a good surface dressing of decayed leaves.—D.

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TREES AND SHRUBS.

ABUTILON VITIFOLIUM.

This beautiful flowering shrub, a native of Chili, is quite hardy in many parts of Ireland and the warmer districts of England. It can also be successfully grown and flowered in less favoured districts provided it is afforded shelter from cold winds and given a warm and well-drained soil. The plant here figured is 8 feet high and covered with foliage to the ground level. It is growing on a sheltered bank with a background of Yews. The flowers of this Abutilon are pale lavender in colour, and the leaves resemble in shape those of the Vine. Although often not a very long-lived plant,

are borne in each leaf-axil. As in the case of the spring flowering section of the genus, it requires little pruning. An occasional thinning out of the older branches relieves the younger ones and admits light and air to the centre of the bushes, which are very necessary for the proper ripening of the wood. The cultivation of this class of Spiraea offers no difficulties, for it thrives in any good garden soil. Seeds are produced freely, and they form an easy means of propagation, whilst quite as good results may be obtained from cuttings of the semi-ripe wood put into pots of sandy soil, in a close frame, during July and August.

The Fothergillas.—Only two species of Fothergilla are grown to any extent in our gardens, but both are interesting shrubs.

advance of the leaves. The conspicuous part of the flowers is the mass of white, thread-like stamens, the petals being absent. The second species is *F. major*, a superior shrub in every way. Of vigorous, erect habit, it forms a bush up to 6 feet or more high, spreading by means of shoots, which spring from the base. The terminal flower-heads are set in autumn, but they do not develop until late April or early May, just before the leaves, when good-sized, erect heads of white, fragrant flowers are borne. In this case, also, the stamens are the conspicuous part of the flower. The leaves in autumn turn to a bright shade of yellow before they fall. The leaves of the other species turn red in autumn. *F. montana* is very like *F. major*, and is occasionally seen in cultivation.—D.

Pyrus folgneri.—This is one of the most beautiful of the several species of *Pyrus* introduced from China within recent years, and is likely to become very popular. Growing to a height of about 30 feet, it forms long, slender branchlets which assume a pendent habit. The leaves are long and narrow, dark green above and silvery beneath, a very pretty effect being produced by the combination when the branches are stirred by the wind. The white flowers are borne in dense heads up to 4 inches across, and they are succeeded by oval-shaped red fruit. As a specimen tree on a lawn it is very suitable. Originally introduced by Mr. E. H. Wilson when collecting for Messrs. Veitch, its first appearance in this country dates from 1901. It was known for some time as *Micromeles folgneri*, a name sometimes given to a few species of *Pyrus* which possess minute botanical differences from other *Pyruses*, but the name of *Pyrus* has been retained by Mr. Bean in his book on "Trees and Shrubs Hardy in the British Isles."—D.



Abutilon vitifolium.

if planted in suitable positions it may be depended on to grow and blossom freely for a number of years, while it can be readily replaced by raising young plants from seed, which in some districts ripens freely. It can also be propagated from cuttings inserted in pots of sandy soil and placed in a close and slightly warm propagating frame. F. W. G.

Lilford Gardens, Northamptonshire.

NOTES AND REPLIES.

Spiraea Henryi.—This *Spiraea*, introduced some few years ago from China, belongs to the canescens group, and blooms during the latter part of June and early July. Of robust habit, it grows 4 feet to 5 feet high, with long, semi-pendent shoots, from which the corymbs of small white flowers

They belong to the same natural order as the Witch Hazels, and, like those shrubs, have very quaint flowers. The genus is native of eastern N. America, where several kinds grow in moist, light soil. Here they are found to succeed best in light loam to which peat or leaf-mould has been added. They like sun, but should not be planted where they are likely to suffer from dryness in the event of a period of drought. They can be propagated by layers or by cuttings. Seeds sometimes ripen, and they may be used as a means of increase, although it does not appear to be possible to procure them regularly. *F. Gardeni*, sometimes called *F. alnifolia*, is the better known shrub. It grows 2 feet or so high, bears oval, Alder-like leaves, and produces terminal heads of white flowers in May a little in

VEGETABLES.

POTATOES.

RECENT notes on Potatoes confirm me in a view which I have always held—that locality has much to do with the success or the reverse of certain varieties. Two varieties mentioned in the issue of April 8th may be taken as instances. These are Langworthy and King Edward VII. Langworthy is here an utter failure, and after repeated trials has been discarded. On the other hand, King Edward VII. yearly gives most excellent returns, the only fault—if fault it can be styled—being that the tubers are rather too large. These Potatoes, when Langworthy was grown, were planted on the same quarter and given precisely the same treatment in respect of manure and attention. Here, too, British Queen practically fails, while Up-to-Date is, as a cropper, equal to King Edward, though inferior in quality. The note upon "greening" seed tubers in a recent issue and the remarks over the initial "T" were also highly interesting. Greening immature seed was at one time largely followed in Scottish gardens, and it always gave good results. The practice has never really fallen into disuse among cottagers in this district, many of whom still select their seed-tubers as lifting goes on from day to day, and lay them upon the garden walk, fully exposed to the sun, until they are thoroughly greened. Disease, they say, is not so liable to attack crops grown from "greened" seed-tubers; and while they cannot explain their reasons for this, yet it is evident by inspecting their crops that this is so. Possibly the increased use of chemical manures may have something to do with the proneness of the Potato, nowadays, to disease, and as the

cottagers referred to use little or no artificial their freedom from disease may be in some measure attributable to this, and generally to under rather than over-manuring. In addition to the old variety, Dalmahoy, mentioned by "T.," several other good old sorts occur to me. For example, Regent, Champion, Skerry Blue, American Rose, followed by such kinds as Schoolmaster, Magnum Bonum, White Elephant, and others. About twenty years ago a variety known as Adirondack—of American origin—was popular in this district. As is the case in most things, the old sorts are ousted by novelties, and varieties of Potatoes nowadays appear to increase in numbers rather too rapidly than there is any occasion for. In Kirkcudbrightshire during 1915-16, crops were above the average, and the prices were very moderate. W. MCGUFFOG.

Balmæ, Kirkcudbright.

CUCUMBERS WITHOUT FIRE-HEAT.

In frames on hot-beds early in the summer, and in frames on cool-beds during mid-summer, good crops of Cucumbers are grown. Many amateurs possess small lean-to and span-roofed houses, and in these grand crops of Cucumbers may be grown during the summer without the aid of heat from hot-beds or pipes. A successful amateur cultivator in Lancashire used to cut turves—most of them from the roadsides—and form a bed with a firm front 18 inches deep and 2 feet wide at the base, tapering to 18 inches at the top. The turves forming the interior of the bed were chopped into very small pieces and some well-rotted manure and leaf-soil mixed with them. The Cucumber plants were raised in a box covered with glass and planted out when the first rough leaf was about the size of a penny. A space of 30 inches was allowed between each plant, the haulm being trained to wires about 18 inches from the roof-glass. Each young plant was shaded from bright sunshine with paper till well established; afterwards the glass was lightly shaded, the plants stopped regularly beyond each joint on side shoots after the main stem had been stopped when three-parts up the roof. Very little ventilation was given, sun-heat being husbanded. Light and frequent surface mulches, judicious watering and feeding with liquid manure, resulted in the production of enormous crops. G. G. B.

NOTES AND REPLIES.

Carrots.—The sowing of the main crop will be made as soon as the weather and the state of the ground permit. It is most important for this crop to choose a time when the ground is dry. The ground chosen should have been heavily manured the year before and prepared by deep digging without manure last autumn or winter. Sow the seeds in drills 1 foot to 15 inches apart and 1½ inches in depth, and after covering the seed and before raking the land give a good dressing of soot. Carrots growing in frames need careful attention, admitting plenty of air in fine weather and affording water as often as necessary.

Brussels Sprouts.—This is one of the most important autumn and winter crops, and the time has arrived when good breadths raised from seed sown under glass will be got out. The most suitable quarter in the kitchen garden for the main crop is that which is of good depth, has been heavily manured and deeply trenched, and has not carried a crop of the Brassica tribe for two years. If the land be not firm it must be made so by treading, as a loose soil invariably produces soft Sprouts. The plants should be allowed a distance of from 2 feet to 2½ feet apart each way, according to the nature of the soil or the size to which the varieties grow. On strong land the wider distance is advisable for all. Lift the plants carefully and do not expose the roots too long to the air.

Spinach Beet.—With a view to obviate frequent sowings of the summer variety to maintain the supply, Spinach Beet will be largely grown this season. A good sowing will now be made, and when the plants are large enough the thinnings will be transplanted into good ground. The quality and flavour of the

tops are, of course, not to be compared with those of true Spinach when cooked, but it has the good point of yielding a plentiful supply over a long period without bolting to seed, which summer Spinach does all too quickly when warm weather sets in.

Tomatoes in pots.—The plants having now made good progress—grown up till now three plants in an 8-inch pot—they have been placed in their fruiting-pots. The soil used is by no means rich, and in the meantime the pots were not much more than half filled. This practice checks any danger of damage arising from a too free use of water, and as growth continues, top-dressings can be given as required. For top-dressing a little good chemical manure is of distinct value to Tomatoes in pots.

GARDEN FOOD.

SALADS.

On the Continent anything in the way of cold, left-over vegetables is turned into salads, while in America many vegetables which we never eat raw are used for the same purpose. There is much to be said in favour of using up cold boiled vegetables in this manner. It is very economical, for it turns odds and ends, too small to be employed in any other way, into tasty and appetising dishes. Cold Potatoes can be sliced, mixed with Lettuce, Endive, or any other green salad that may be in season, a simple dressing poured over, and eaten with either cold or hot meat. Chopped Carrots and Potatoes, covered with a good salad dressing, and sprinkled rather thickly with chopped Parsley, are very good. French and Broad Beans also make another nice salad, but I have never seen this combination eaten in England. Green Peas and Potatoes or green Peas and shredded Lettuce are two more combinations that are great favourites in Belgium.

At one "hotel" (it was really a café) where I spent some months an extra quantity of vegetables was cooked for the mid-day meal, and the remains were always mixed together and served with the evening dinner, being eaten with either cold or hot meat, fish, or omelettes. In fact the vegetables at the evening meal were always turned into a salad. Apparently there was no rule for the mixing, any cold vegetable being dished up again. The dressing was made by mixing oil and vinegar, a very little salt, sugar, and mustard. This dressing took some time to make, as the vinegar and oil had to be added alternately, a little at a time, until all had been mixed. Then it was set aside in a cool place for two hours, the dressing being added to the vegetables at the last minute before serving. I prefer Lemon-juice to vinegar in this dressing as the flavour is more delicate.

A delicious fruit salad is made in France by slicing an equal quantity of Oranges and Apples. These slices must be perfect rounds, cut across the fruit. Both fruits are peeled before slicing. Arrange the slices in a deep glass dish, placing an Orange and Apple slice alternately, each slightly overlapping the other, around and around until the dish is almost full. Sprinkle a little caster sugar over each slice, and a fair amount over the whole. Set the salad aside in a cool place for two hours, and serve very cold. A nice American salad for serving hot is made of Oranges. Peel and slice several sweet Oranges, sprinkle with a little sugar and a liberal pinch of cayenne pepper. Add the juice of two Lemons and cover the whole with a plate. Stand in the oven until very hot and send to table with a mock "wild duck" roast made with brown Lentils flavoured with fried Onions and chopped Sage formed into a roll and baked. Another American salad is made from the heart of a small spring Cabbage. It is very good, but as a rule

English housewives are afraid to try it, disliking the idea of eating raw vegetables. Remove all the green outer leaves from a very fresh, firm-hearted Cabbage. Cut out the stalk, and slice the white heart very finely. Wash well and toss in a cloth or basket to get rid of the water. Lay the Cabbage shreds very lightly in a salad bowl. If the flavour is liked add a little chopped Shallot. Cover with a good mayonnaise dressing and garnish with chopped Beetroot. Cauliflower is also delicious eaten as a salad. The flower is broken into tiny pieces, mixed with shredded Lettuce, and an equal quantity of chopped Celery. Either mayonnaise or ordinary salad dressing may be used with this salad. Chopped Cauliflower can be employed instead of Nuts in making a salad in which Nuts form one of the ingredients. No one will be able to detect the difference after the dressing has been added. All raw vegetables, such as Cabbage and Cauliflower, should be perfectly fresh.

H. THOBURN-CLARKE.

Apple Claygate Pearmain.—Something I said in a note about this is a little misleading. I meant to say that, generally, another Apple is sold for it, but I presume there can be no real trouble in getting the true variety.—W.

Wholemeal bread (unfermented).—Put 2 pints cold water into mixing-bowl, stir in a little at a time sufficient wholemeal flour to make a moderately stiff dough. Mould up into six to twelve small loaves, well knead and bake in a quick oven for about forty-five minutes.

Apple Carter's Pearmain.—Mr. Will Taylor, Hampton, writes of this, and sends one specimen, which, though out of condition, is a very interesting Apple and good in flavour. I should like to taste it when it is in good condition. We have so many Apples that it is a mistake to grow any unless proved good. This seems a good Apple, a neglected old sort probably, and well worthy of attention.—W.

Broccoli.—I get the best sorts of Broccoli, well grown and well cooked, but the flavour is bitter, and acid, and unpleasant. This cannot be necessary. We know, in fact, from the large purple Broccoli and the sprouting sort, which are sold in the London market, that the Cauliflower race need not have any such flavour, and it should be possible to raise a race of plants entirely free from it. It is work worthy of our seedsmen and hybridists.—W.

Beans and Lentils.—Among the most precious sources of garden food are the pulses, as they are so well grown on the Continent and also here. Well cooked, they are a very important part of garden food, and a great help to the food reformer. Like everything else, they have gone up in price, so much so as to be almost prohibitive. Messrs. Barr and Sons, who had the good idea of introducing these as a source of food, write as follows as regards the change in price:—

"Until the war broke out we offered these eating seeds by measure. The cost of them, however, has so increased that we were unable any longer to sell at the same rate, and we thought it better, therefore, to sell in packets, each packet being sufficient for a fair-sized dish. When normal conditions again prevail we shall offer in a different manner. Seed of Peas and Beans for food cannot now be imported, the French Government and other European Governments having prohibited the export. We have, therefore, had to pay full seed prices."

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

GARDEN PLANS: MOTHER EARTH OR THE DRAWING-BOARD.

Mr. Robert Marnock found "plans were essential to his work," and, "however carefully thought out the plan, he found it necessary to modify and improve it on the ground whenever he could." Of course, he did. I do not believe any really great work in architecture, painting, music, literature, or gardening was

"backgrounds, near groups, views near or distant, gradations of earth, and nature of soil and vegetation of the place," and then make his plan on paper, not because the drawing of the plan will compete with the work on the ground, but will assist it in determining areas, calculating gradients, estimating quantities where excavations have to be made, and determining the most economical method of carrying out the work. Finally, it will give to subordinate workmen clear and definite instructions to which they can refer during the progress of the work. This latter point is of the utmost value, especially

able to a similar site, but it must only be the idea and not the plan that is adopted. Nothing is more fatal to good garden design than the endeavour to force into unsuitable situations a treatment because it has proved eminently successful elsewhere. Neither have I any sympathy with the young man in a builder's or architect's office who prepares garden plans and uses his trees, shrubs, and plants on the same principle he arranges for the disposal of drain-pipes and bricks; but here, again, it is the man, not the plan, that fails. The "park-like country round London and in the home counties spoilt by planting trees



Lower lake, Gravetye; summer. An old "hammer" pond.

ever completed according to the original intentions of its creator, so far as the smaller details were concerned, and no one realises more fully than I do that the best plan ever produced can be improved on application to the site. It is just as true that the best garden scheme ever imagined can be improved by giving it the utmost consideration by preparing plans. It is not the plan, but the man who prepares it, makes the garden, or anything else, what it is.

"W. R." says the main question is paper or earth, and he would be a fool indeed who tried to make paper take the place of work on the ground. A wise man would study the site, and fully consider

when the work covers large areas and it is necessary to carry out various portions of a connected scheme at the same time, but with different sets of workmen.

"W. R." says he has never used drawings in any of his work, but this does not prove that drawings are useless, but that he possesses a sense of composition, an instinct for what is good, and the requisite power of developing details on broad areas greater than the vast majority of people.

I have not a word to say in favour of the "conventional plans which are to be found in every office and every big book on gardening," except that such plans may sometimes suggest a line of treatment suit-

in rings and dots" might have been better if the work had been left in the hands of one experienced in the study of pleasing effects and who could have prepared drawings showing such effects in such a way that the men working on the ground would have had it taken out of their hands to so spoil the landscape.

The assertion at the end of "W. R.'s" note is as individualistic as is the true art of gardening, and, having previously stated that he has never used paper plans he boldly states in the light of his experiences of them that it is a "complete delusion that plans for picturesque gardens can be made or improved on paper." Has he lost sight of the fact

that if "complete knowledge of the subject and the eye of an artist" are necessary, the pen, pencil, or brush of an artist may be very useful in conveying to others who possess neither the knowledge nor the eye what that knowledge teaches and the eye sees, and thus ensure that the right teaching and true perception are carried into effect.

WESSEX.

[I grant to the writer at once that the paper way is a professional one, but it is certainly not the best way. If he looks at activities of all kinds, and especially those of artistic aims, he will see that the professional way is not always by any means the best way. Of this many examples might be given, but let us take architecture, that of the Victorian up to the present day. A much-trusted architect told me that it pained him to see the work done in architecture in some of the most beautiful parks of the country. For buildings we must have drawings, but great harm has been done to building by showy drawings that falsify the garden, and we see the result of such work in all directions.

I give three examples of actual work in the hope of converting "Wessex" to my view:—

(1) I go to London by road sometimes, and pass, on the way, a piece of slightly diversified land, not naturally ugly, but certainly made so by what is called landscape gardening. It is bordered by a miserable wire fence, and is dotted all over with trees stuck in rings, with here and there, standing alone, an Austrian Pine or a big tree. The surface is broken up in a futile way, and breadth and simplicity destroyed. From the planting there is no shade, shelter, or beauty, and it has been done as hundreds of places have been done—from a few dabs of a water-colour drawing by someone in the office without experience of trees or knowledge of landscape. If this were seen in a few instances only it would matter little, but hundreds of acres in some of our fairest counties are thus disfigured. The laid-out garden is nothing compared with the lawn, park, or woods around a country place. If I wanted to change this place, what good would it do to go and survey it to have it planted again. I should only want a good woodman to cut the trees away and plant again. It could be done, of course, in the paper way at double the expense and delay, with the chance of the plan being made and judged of by the young man in the office.

(2) To go to another place—the garden at Hillbrook Place, which was illustrated in a recent number of this paper. It came about from a study of the ground in the first place. No plan of any kind was made, no plan could show the subtlety of the planting and the happy use of many beautiful shrubs and plants which are not known to the young man in the office. There was no paper design, and no paper plan could have arrived at the same result.

(3) Here is an illustration of a lake I have made myself, which tells its own story. It was an old "hammer" pond on a farm, and cattle crossed it from one side to the other, and there was a band of yellow clay round the edge where the waves dashed up. What good would surveying and making a plan of this have done? It would merely add to the delay and cost. Merely to make a plan of the whole now would be an elaborate labour without any use, except adding to paper rubbish. The ground near the pond was of very little value, and I had to enclose it to keep out rabbits and hares, and that was done on the ground itself by getting true lines

with a few sticks cut out of the nearest copse and making a quick fence.

Laying out on the ground can only be well done by one who knows all his materials—trees, shrubs, and flowers—and has an artist's delight in the work. But should anyone attempt such design without these credentials?

I shall say no more in print about this matter; but if "Wessex" comes to see me I will try and show him that paper plans are a very poor substitute for the earth itself.

W. R.

LILY OF THE VALLEY.

ALTHOUGH this hardy plant is so popular, it often does not get the treatment it deserves. Because it is of a hardy, enduring nature it is by many expected to furnish good flowers on the let-alone principle, and this it will do should the soil be of a favourable nature. Soils vary so much that a hardy plant may in one place thrive for some years undisturbed, whereas in another, periodical transplanting may be imperative. The Phlox is an instance. Where the soil is light and very porous, blooming acts in an exhausting manner, and fresh ground is necessary every other year if blooms of really good quality are desired. It is the same with Lily of the Valley. I have known beds last many years with very little attention, and produce flowers of very fair quality, but I have noted that the plants get a certain amount of shade, and something in the soil must have suited them. Those who grow for producing high-class flowers for the London markets must practise high culture. The form of culture, or rather want of it, which prevails in amateurs' gardens generally will not do for the market-grower. The flowers obtained in that way would fetch what market men term a "mere nothing." Judgment has to be used as to the duration of the beds. In some soils the plants will last longer in the best form than in others, but one cannot err in transplanting every fourth year, and in the case of light, porous soils it may be necessary to do so every third year, and the knowledge of this can only come from experience.

In the matter of growing for profit, soil and climatic conditions must be considered, and this holds good of all things cultivated for the London markets. Periodical transplanting, deep culture, and liberal feeding produce those fine samples which form a feature in Covent Garden Market. The ground for Lily of the Valley should be thoroughly stirred to a depth of 15 inches early in September, laying it up rough, breaking it down in the end of October, and adding some rotten manure, if it can be had, if not, some kind of artificial must be used, but this is better applied later on, hoeing it in just as growth appears. If old beds exist, the best crowns may be set out 6 inches apart, and if this is done at the time stated the crowns will be well settled in by winter rains and you will, the following spring, see a marked difference in the quality of the flower-spikes. The liberal culture will tell in the first season, and the following year there will be a full crop of top grade flower-spikes. Lily of the Valley grows naturally in the influence of protective vegetation. It is at home in the copse and woodland in company with the Anemone, the Bluebell, and Primrose—a pretty and happy combination of native flowers. I know of one place where this plant has been naturalised under such circumstances, and with success. In the southern counties I advise planting where the sun goes off about noon. Its growth is much more healthy when there is some protection from hot sun.

BYFLEET.

NOTES AND REPLIES.

Everlastings.—Although I am no great admirer of the so-called everlasting flowers, yet at times they are useful in winter, even with the increased number of things which bloom during the dull months. In the borders the Helichrysums may be grown, and if sown now, plants will be ready for putting out in May after there is no further danger of frost. For greenhouse work Rhodanthes are not without value, and from seeds sown in March good pieces may be bloomed in 5-inch pots. The best varieties for this purpose are R. Manglesi, R. maculata, and R. m. alba. When it is desired to preserve the blooms of these, or of Helichrysums, they ought to be cut when fully expanded and hung head downwards in a cool, dry place. When thoroughly dried they are useful for mixing with dried Grasses.

—KIRK.

The Bloodroot (*Sanguinaria canadensis*).—This is now in flower, the snowy blossoms, with their enveloping leaves, being very welcome. It is rather variable, the best variety being sold as *S. canadensis* major, with larger flowers. There is another form, known as *S. canadensis* multipetala, with a greater number of narrow segments, but I do not consider it any improvement on the others. I have generally grown *S. canadensis* in full sun for the sake of its flowers remaining open for the greater part of the day, as they close in dull weather and in the shade. It is increased by division in early summer or by seeds sown as soon as ripe.—S. ARNOTT.

Mignonette Golden Queen.—This is one of the best sets of Mignonette. Seed should be sown at once on firm land out-of-doors. It may also be sown earlier in heat and transplanted; indeed, in our cold district we are compelled to do this, and gain excellent results. If sown outside, the plants must be well thinned. Do the thinning as early as possible, and well water afterwards to settle the soil. It can, of course, be used as an edging, but a prettier effect is obtained if large patches of it can be sown or planted in the mixed border or a whole bed given up to it.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield.*

Crocus biflorus Pestalozæ.—Few Crocuses give us more variety than *C. biflorus*. Among the most acceptable varieties is *C. b. Pestalozæ*, which has several points of beauty. One of these is its small size; another its colouring—white, touched with yellow at the base. Maw says it is the albino form of *C. b. nubigenus*. His coloured illustration on Plate LIX. of his "Monograph," Fig. 4, does not do justice to this charming little Crocus.—S. ARNOTT.

Two good Gladioli.—The planting-time for Gladioli has again come round, and while the majority of these popular flowers are handsome, some of them are especially so. Two very telling kinds in groups are *Ida Van* and *Electra*, the former carrying stately spikes of salmon-red, the individual flowers of fine form. *Electra* is one of the best of the self-coloured Gladioli, the spikes more than ordinarily robust and the flowers of a bright scarlet.—KIRK.

Queen Anne's double Jonquil.—This is by no means a common plant, but is generally admired, even by those who do not care for double flowers. It has the usual narrow Rush-like leaves of the Jonquils, and the flowers are of a clear, warm yellow, and very double. Why it is not more cultivated seems surprising. Miss Bertha Anderson grows it admirably in her garden at Barksimming, where are to be found many rare plants.—Ess.

Hardy plants for cutting.—Nothing takes the place of these for cutting, especially where material is wanted for tall glasses. It is a good plan to grow in various aspects. For years, when needing a quantity of flowers for cutting, I used to grow many perennials in three aspects—on a warm border, in the open, and on a north border. In this way many things continued in bloom for three months.—J. C.

The double Amoor River Adonis.—This comes into bloom generally in March, but in some places earlier. It is later than the single form and of a different type of growth. It grows about 6 inches high, and has double yellow flowers with a greenish centre. A nice clump in one of the borders of the Royal Botanic Gardens, Edinburgh, was very pleasing the other day.—S. ARNOTT.

Anemone demissa.—A good Windflower from Yunnan which has been recently introduced is *Anemone demissa*, which comes near the Himalayan *A. polyanthes*. With me *A. polyanthes* is a splendid doer on a half-shaded part of the rock garden, but it never ripens seeds. In *A. demissa* the exterior of the flowers is flushed with blue; the growth is dwarfer.—S. A.

Tulip Prince de Ligne.—Among the earlier yellow Tulips, *Prince de Ligne* is now (April 19th) in good bloom, and, especially on a sunny day, is very bright. Useful in beds or borders, this Tulip also forces very well, and, having a naturally long stem, it is very handy for cutting.—W. MCG., *Balmac.*

Aubrietia Wallacei.—This old variety of *A. deltoidea* is one of the first to bloom, and, although not so large-flowered as the newer ones, is valuable for giving a bit of colour (a warm purple) in the early days.—Ess.

INDOOR PLANTS.

GROWING *v.* BUYING FLOWERS.

My gardener says it is cheaper to buy flowers than grow them. We supply the church and have a good stock of Chrysanthemums and Lilies. When these are over there seems nothing else but to buy. There are two heated greenhouses, which cost some £5 for winter heating.—JOHN M. CURZON, *Torquay*.

[As you already have the greenhouses, and incur some amount of expense in the heating of the same, and taking into consideration the favourable conditions under which you labour in regard to climate, there should be no great difficulty in keeping up a supply of flowers for the purpose stated from the time Chrysanthemums are over until Narcissi and other flowers are available for cutting outdoors.

As regards expense, it would no doubt be cheapest if but a limited quantity is required every week end to purchase them, but if a continuous and liberal supply is needed it would then, we think, be cheaper to produce them. Besides this, you would have the gratification of seeing your greenhouses furnished with plants, some in bloom and others on which the flowers would be in various stages of development, while when the cutting stage is reached any surplus remaining over after fulfilling the above-named requirements would, no doubt, be acceptable for the decoration of your own apartments. Due provision would naturally have to be made for the meeting of such a demand from the end of December until the end of March by potting or boxing up in the autumn such plants and bulbs as are adapted to the purpose. Callas, for instance, yield a great quantity of spathes over a long period in gentle warmth. Spiræas, too, of such varieties as *S. astilboides* and *S. japonica*, are also very suitable. Retarded crowns would be best for flowering in the depth of winter, while ordinary crowns would form a good succession. Bulbs alone would furnish a varied and continuous supply, commencing with the early-flowering varieties of Polyanthus Narcissus, after which would follow Tulips of the earliest blooming sorts. Then medium and late-flowering varieties of the latter would carry on the supply of these flowers till the end of March, by which time *N. poeticus ornatus* would be in bloom with you outdoors. Of Daffodils alone there are many varieties which are amenable to gentle forcing, and can, moreover, be purchased at a cheap rate. Of these, Trumpet major, Golden Spur, Princes, Empress, Emperor, Horsfieldi, and Sir Watkin are the names of a few varieties. *N. poeticus ornatus* must not be omitted as the blooms are highly prized for the purpose under consideration. The early-flowering variety of Gladiolus named The Bride is also easy of cultivation; it does not require much warmth, while the spikes of bloom are admirably adapted for arranging in an artistic manner. The foregoing are a few suggestions only as to what might be easily grown under the circumstances, but the list, if it were necessary, could be much extended.]

NOTES AND REPLIES.

Seeding Amaryllises which did not during the present spring bloom are being carefully attended to in respect of moisture. The foliage is occasionally sponged, and growth is encouraged as far as possible. The raising of Amaryllises from seed is interesting, and if there is nothing particularly noteworthy among the flowers they are always useful for decoration.

Bouvardias may be propagated now. I prefer root-cuttings. To obtain the roots for propagation the old stools should be shaken out, the thickest of the roots selected and cut up into short lengths. These should be inserted in pans of light, sandy soil and placed in the propagating pit, where they will soon begin to develop new growths.—G.

ROYAL HORTICULTURAL SOCIETY.

MAY 2ND, 1916.

QUITE an interesting exhibition was got together on the above-named date, when, in addition to the ordinary meeting, the annual show of the Southern Section of the National Arnicula and Primula Society was also held. While there were no features of outstanding merit, there were many good displays, including the brilliant lot of Rhododendrons brought from Falmouth by Messrs. Gill, the splendid lot of *Prunus pseudo-Cerasus Watereri* from Mr. Allgrove, and the display of Gentian blooms from Exeter, all worthy of special mention. Several important novelties received recognition. Following are some particulars of the show:—

ALPINE AND HARDY PLANTS.

Of these, the small collection staged by Messrs. R. Tucker and Sons, Oxford, contained many choice and rare examples, notably *Oxalis adenophylla*, *O. enneaphylla*, a lovely pan of the 2 inches high alpine Pink (*Dianthus microlepis rumelicus*) (Award of Merit), whose rounded, miniature, rosy-carmine flowers hid the tuft of glaucous leaves from view, *D. m. albus* which is more starry of blossom and white, *D. glacialis gelidus* (pale pink), *Ranunculus cortusæfolius*, *R. Sequieri* (both white-flowered species, far from common in cultivation), *Primula spectabilis*, together with *Androsace helvetica* and much else of interest to the lover of choice alpine. The true *Daphne arbuscula* (a rare kind) was also noted.

Messrs. John Waterer, Sons, and Crisp, Bagshot and Twyford, arranged an extensive bank of alpine, giving considerable prominence to the beautiful *Ethionema armenum* Warley Rose. *Daphne Verloti* is best described, perhaps, as a small-growing *D. Cneorum* of like colour and great freedom of flowering. The rare *D. petraea* (*rupestris*) was also in this group, and a superb lot of the too-rarely-seen *Draba* (*Petrocallis*) *pyrenaica*, the inch-high tufts freely flowered.

Mr. Clarence Elliot, Stevenage, showed a group of *Daphne petraea* (*rupestris*) flowering in pots. The greater attraction, perhaps, was the beautiful *Ribes crenatum*, which gained an Award of Merit. Only sprays of the plant were shown, these were, however, very freely covered with the maroon-crimson and pink flowers.

Messrs. Wallace and Co., Colchester, secured an Award of Merit for *Primula conica*, a new hardy Chinese species having drooping purple flowers in a dense head; both leaves and stems carry a short pubescence. A smaller-growing nearly-allied species was unnamed.

Mr. J. C. Allgrove, Middle Green, Langley, Slough, showed established pot-grown *Aubrietias* in variety. The examples, in 7-inch pots, were two years old, nearly a dozen plants of each variety being staged. In this way were such as *Eyrei* (a very old sort), *tauricola*, *Dr. Mules*, *Sonvenir de W. Ingram*, *Lilac Queen*, *Lavender*, *Fire King*, and many others full of bloom. The whole was backed by 4 feet long flowering branches of *Prunus pseudo-Cerasus Watereri*, one of the best of these plants.

Messrs. Barr and Sons, Covent Garden, W.C., showed *Saxifraga* (*Megasea*) *cordifolia* *purpurea maxima* (one of the best of the set), *Lencojum Hernandezi* and *Iris Haynei* (*Cushion*) were also remarked.

Mr. G. Reuthe, Keston, had the rare and beautiful *Schizocodon soldanelloides* (the reddish, drooping flowers deeply fringed), *Haberlea Frederici Augusti* (in more than one good form), *Mertensia angustifolia*, *Iris lacustris* (a rare miniature), *Ranunculus rutæfolius*, *Primula Forresti*, and other good plants.

Messrs. Whitelegg and Page, Chislehurst, showed *Silene pennsylvanica* (of good pink colour) and *Draba* (*Petrocallis*) *pyrenaica* very finely.

Messrs. T. S. Ware, Feltham, showed alpine extensively, including *Trilliums*, *Lithospermum*, *Aubrietias*, Mossy *Saxifrages*, *Lychnis Lagasceæ*, and much besides.

Messrs. Piper, Bayswater, showed a fine lot of *Lithospermum Heavenly Blue*, indispensable among good rock-garden plants. *Primula Queen Alexandra* (yellow), *Cytisus Daisy Hill*, *C. Dallimorei*, and others were in nicely-flowered examples.

Messrs. R. H. Bath, Limited, Wisbech, had a group of Polyanthuses (in crimson, white, yellow, gold-laced, and other colours) of a particularly good strain. Mr. J. Crook, Camberley, Surrey, had many of a shade savouring of reddish-orange and terra-cotta, which among fancy sorts is very remarkable. Among Polyanthuses it is an important break. Miss C. M. Dixon, Edenbridge, had an effectively arranged table showing well flowered examples of these plants in many colours.

Baker's, Wolverhampton, and Mr. G. W. Miller, Wisbech, also showed hardy flowers in variety, Messrs. Carter Page and Co., London Wall, staging an attractive collection of Tufted Pansies.

CARNATIONS.

Messrs. W. Cutbush and Sons, Highgate, N., showed particularly good flowers of their new red perpetual Malmaison Sabina, also Lady Ingestre (a lovely pink), Carola, and Mrs. Mackinnon (scarlet).

Messrs. Allwood Brothers, Haywards Heath, had vases of the new Dragon, Lady Miller (fine pink), Wivelsfield White, White May Day, and Mikado surrounding a central colony of the unique-coloured Mary Allwood.

Messrs. Stuart Low and Co., Enfield, had

magnificent examples of the new red perpetual Malmaison Hon. Charlotte Knollys, together with Alice, Mrs. C. F. Raphael, and Marmion, among many.

Messrs. W. Wells, Limited, Merstham, showed the new pink-flowered Lord Kitchener (Award of Merit), delightful in colour, of pronounced fragrance, and with tall, stiff stems.

ROSES.

Mr. Elisha Hicks, Twyford, had pot-grown examples of the single crimson Princess Mary and Mrs. George Norwood (both highly fragrant), together with stands of Mrs. John Foster (crimson), Ada Pauline (flesh-pink), and the fine single pink Queen of the Belgians. A Rose group on the floor from

Messrs. W. Cutbush and Sons, Highgate, N., was made up of Jessie, Mrs. W. J. Grant, Yvonne Rabier (a white cluster sort), Mme. Edouard Herriot, and others.

Messrs. B. R. Cant and Sons, Colchester, showed well of Cupid (a lovely flesh-tinted single), Rose du Barri, Mrs. Foley Hobbs, Mme. Cochet, and other good sorts. Rambler and pillar sorts were also prominent.

FLOWERING SHRUBS.

Messrs. R. Gill and Sons, Falmouth, showed a number of choice species and many good varieties of Rhododendrons. The finest thing was the giant cream and yellow K. Nuttall, half-a-dozen big trusses demonstrating its true worth. *R. glaucum*, *R. Keysi* (tubular, salmon-coloured flowers), a very good form of *R. Kewense*, *R. Aucklandi* (pure white), and *R. cinnabarinum* were all excellent. The brilliant crimson *R. Thompsoni* was very good.

Messrs. Fletcher Brothers, Chertsey, showed nice plants of *Deutzia discolor major*, a fine white introduced from China by Messrs. Veitch.

Messrs. J. Cheal and Sons, Crawley, showed a number of Magnolias in the cut state, *Soulangeana*, *alba superba*, *Lennei*, and *Alexandrina* among others.

GREENHOUSE FLOWERS.

Messrs. H. B. May and Sons, Edmonton, contributed Ferns, *Hippeastrums*, *Clematis*, *Hydrangeas*, and other plants. Messrs. Cannell and Sons, Eynsford, had a considerable collection of Zonal Pelargoniums in the cut state, also flowering examples of fancy and regal Pelargoniums in pots. Messrs. Stuart Low and Co. Enfield, had a considerable display of *Acacias*, *Boronia megastigma*, *B. heterophylla*, with *Streptocarpus* in several distinct colours, Messrs. Piper contributing *Azaleas*, and *Clematis* of sorts with *Acers* interspersed. Messrs. R. and G. Cutbush, Southgate, N., had many well-flowered examples of *Streptosolen* (*Browallia*) *Jamesoni*, with Tulips and Narcissi as a groundwork.

ORCHIDS.

Messrs. Charlesworth and Co., Haywards Heath, had finely-flowered examples of *Dendrobium infundibulum* (white), *Brassia Cattleya Bradshawia*, and the handsome *Miltonia vexillaria* Lyoth (rose-pink, blotched crimson).

Messrs. Sander and Sons, St. Albans, showed a variety of *Odontoglossums*, *Odontiodas* (very rich in colour), and the somewhat remarkable white-flowered *Angraecum infundibulare*.

Messrs. Stuart Low and Co., Enfield, staged well-flowered specimens of *Brassia-Cattleya Queen Alexandra*, *Cattleya Schroderæ Purity*, and *Harpophyllum spicatum* among many things. Mr. C. F. Waters, Balcombe, Sussex, showed beautifully-flowered examples of *Dendrobium nobile virginale* (a gem among white-flowered *Dendrobies*).

A complete list of the certificated plants and medals will appear in our next issue.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM APRIL 27TH.—*Cydonias* (in various colours), *Amelanchier Botryapium*, *Grevillea rosmarinifolia*, *Viburnum Carlesi*, *V. Lantana* (Wayfaring-tree), *Osmanthus Delavayi*, *Ribes sanguineum*, *Prunus* (in great variety), *Forsythias*, *Skimmia* (in variety), *Coronilla glauca*, *Rhododendrons* (in variety), *Chinese Quince*, *Exochorda Alberti*, *Periwinkles* (various), *Labrador Tea* (*Ledum latifolium*), *Sweet Gale* (various), *Berberis* (in variety), *Magnolias* (many), *Spiræa arguta*, *Andromedas*, *Hardy Heaths* (several species and varieties), *Double and single Gorse*, white and yellow *Broom*, *Daphnes* (various), *Camellias* (various), *Bush Honey-suckle*, *Colomia grandiflora*, *Veronica filiformis*, *V. pectinata rosea*, *Vesicaria utriculata*, *Doronicum*, *Lithospermum prostratum* *Heavenly Blue*, *Bellis carulescens*, *Brodiaea uniflora*, *Tulipa australis* and others, *Allium*, *Sandwort* (*Arenaria balearica*), *Erius*, *Omphalodes verna* (blue and white), *Corydalis* (in variety), *Geums*, *Tufted Pansies*, *Viola gracilis*, *Bloodroot* (*Sanguinaria canadensis*), *Hepaticas* (in variety), *Crown Imperial* (various), *Snakesheads* (in great variety), *Dicentra eaima*, *Romanzoffia sitchensis*, single yellow, white, and double *Arabis*, *Aubrietias* (various colours), *Honesty* (in variety), *Narcissi* (in numerous varieties), *Jonquils*, *Grape Hyacinths* (in variety), *Wind-flowers* (in great variety), *Bluebells*, *Algerian Iris* (*I. stylosa*), *I. cristata*, *Saxifrages*

(various), *Helichrysum bellidoides*, *Per-nettya serbica*, *Scillas* (in variety), *Chiono-dozas*, *Aponogeton grandiflorum*, *Caltha poly-petala*, *C. palustris*, *C. Tyermanni*, *Snowflakes*, *Auriculas* (various), the *Bardfield Orlip* (*Primula elatior*), *Foam-flower* (*Tiarella cordi-folia*), *Dog's-tooth Violets*, *Lily of the Valley*.

WORK OF THE WEEK.—Surplus plants of Giant Forget-me-not have been put in by the water-side and in other moist or boggy places. We always grow a few more Chicory than are required for kitchen use in order to provide a number of roots for grouping by the waterside. Many plants have been put out this week. This is a splendid plant for the purpose, the pale-blue flowers freely borne on stems each 3 feet or 4 feet in height, being always admired. The making of a small sandstone path has been completed, and a number of Michaelmas Daisies has been added to complete a long border containing a varied collection. The following plants have been added to fill vacant spaces in the mixed border:—*Dietamnus Fraxinella albus*, *Betonica grandiflora*, *Craspedia Richea*, and *Gypsophila venusta*. More Tufted Pansies have been planted among dwarf Roses, and *Primula Juliae*, of which a few plants were propagated last year, has now been put out in a shady spot. Everlasting Peas raised from seed last spring have now been put out among thinly-planted summer-leaving shrubs. The Bracken covering has now been removed from African Lilies, Crinums, and Sweet Verhena, and the ground will be forked over at the earliest opportunity. A site for Dahlias has been selected and deeply dug, and the ground among a number of herbaceous Phloxes has been cleaned and broken up. The plants are growing freely and should be given every encouragement from now onwards. Saxifrages have been broken up and planted among dwarf Roses. A few *Crocus Sieheri* have been lifted from a border and planted among the Grass. *Vihurnum macrocephalum* and *Carpentaria californica*, having outgrown their positions, have been lifted and replanted in a new piece of ground. *Olearia acicenniaefolia* and *Exochorda macrantha* have also been added. A large number of the tall Evening Primrose (*Eriogonum Lamarckiana*) has been planted out among Clematis, and a large plant of the Californian Tree Poppy (*Romneya Coulteri*) has been transferred to a sunny hed as the position previously occupied is now shaded by a porch which prevents it flowering freely. Seeds of Scabious, Lavatera, annual *Gypsophila*, Flax, Larkspurs, Mignonette, *Coreopsis*, *Gilia*, and Everlastings (*Helichrysum*) have been scattered among shrubs where vacant spaces occur. Beds containing dwarf Roses have been broken down to a fine surface, and Mignonette, Phacelia, Pimpernel, *Rhodanthe*, *Acroclinium*, *Clarkia*, *Swan River Daisy*, *Violet Cress*, *Alyssum*, *Gilia dianthiflora*, *Clintonia pulchella*, and other dwarf annuals have been sown, consideration being given to the colour of the Roses before sowing.

Sussex. E. M.

SOUTHERN COUNTIES.

Pot Vines.—Directly the berries begin to change colour a modification of previous treatment is necessary to obtain a perfect finish. The amount of humidity supplied by syringing and damping must be gradually lessened, as dry, warm air is essential for the colouring. Liquid stimulants must also be withheld in the same gradual manner, so that by the time the berries have more or less changed colour plain water alone will be the daily diet. A free circulation of air, which must be admitted from the front, though in less volume, as well as at the top of the house, is necessary whenever the state of the weather will allow of the ventilators being opened. When mild, a chink may be left on at the front all night, while the top ventilators should be left slightly open at night from the time colouring commences until the finish. Fire-heat at night cannot be dispensed with until the berries finish colouring, but when the day promises to be bright and an abundance of solar warmth available, it should be shut off in the morning. Damping of the floor is admissible during the forenoon and again when the reduction of air commences in the afternoon. When finished the temperature at night must be reduced from 65 degs. to 50 degs., and in the daytime to 55 degs. when dull, but when fine the house should be kept as cool as circumstances permit with the ventilators and doors open to their widest extent.

Early vinery.—A final scrutiny of the bunches when the berries have finished stoning and begin swelling off is a fixed rule, as it can then be seen at a glance whether there is ample space for all to swell to maturity without wedging taking place. The cutting out of a herry here and there, and in some cases it is confined to hut two or three, averts all trouble in future in this direction, while the scissors can be more conveniently manipulated now than later on. On the completion of stoning the final dressing of artificial manure is applied to the surface of the border and washed in with tepid water. Stopping of sub-lateral growths should be done regularly every week, this obviating all risk of a check, as happens when they are allowed to grow out and a knife has to be used. To assist the berries to continue swelling without check a certain amount of humidity is necessary. This is obtained by a free syringing of the walls and border surfaces and by damping the

floor in the early morning, at intervals during the day and again at closing-time. The maximum day temperature should be 80 degs. to 85 degs. with sunheat, 70 degs. to 75 degs. without it, and 60 degs. to 65 degs. at night.

Successional house.—This must be kept warm and fairly dry until the berries are properly set. A somewhat higher temperature is more necessary for the successful setting of Muscats than for Black Hamburgh, but when the two can be had in flower together less anxiety need be felt as to the ultimate result if the pollen of the latter is employed for the fertilising of the former. When the flowering is past the border should, if it is in want of moisture, be well watered when the bunches on each rod of Black Hamburgh, etc., can be reduced at once to the required number and thinning started as soon as the berries are well formed. Both operations are best deferred for a time, in regard to Muscats until it can be seen which of the bunches contain the least number of seedless berries, and so that none of the latter are left by mistake when thinning does take place. From now and onwards, dull days excepted, thinning is best done in the early morning and evening.

Late Vines.—With the assistance of a considerable amount of sunheat, late Muscats have broken well. They have also been disbudded, and the shoots stopped at the second leaf beyond the bunch, after reducing the bunches to one on each lateral. There being ample time between now and the middle of September for the crop to ripen, the vines will not be hurried, consequently the night temperature will not, until the flowering stage is reached, be allowed to exceed 60 degs., and that by day 65 degs.—i.e., with artificial aid. Other late varieties which are in a less forward state are breaking strongly and allowed to progress slowly; free ventilation and the employment of a minimum of fire-heat are the means resorted to for the prevention of a too rapid development of growth.

Figs.—The flowering stage being safely past, direct syringing can now be resumed without risk of water entering the apex of the fruits and causing them to decay and drop. They will now swell fast, and that they may attain to full size and have high quality the roots must be generously fed up to the time the fruits begin to ripen both with liquid-manure and artificials applied either from the surface or dissolved in the water. A great deal of nutriment will also be derived if a mulch of manure is placed on the border, the manurial properties of this being washed down whenever water is required. Early closing with a high temperature followed immediately by a copious syringing largely influences the rapid swelling of the fruit.

Later Figs.—The pinching of all young growths to induce the first crop to swell the more quickly as well as to expedite the production of a full second crop having had attention, the usual routine in the way of syringing, border watering, and ventilation will be adhered to. Tying of the young wood to the trellis is being done where opportunity offers. Pot trees with fruit fast approaching the ripening stage must be given a drier atmosphere and watered with plain water only. To avert a possible attack of red-spider during the ripening period, the floor of the house should be well damped daily in favourable weather.

Shelves.—Strawberry-forcing having been abandoned, all shelves in fruit-houses have been taken down and stored away.

Melons.—With brighter weather, which allows of the employment of a greater amount of humidity in the house, greater progress will now result, especially if the needs of the roots are properly attended to. Tepid liquid-manure and guano-water applied alternately will ensure the fruits attaining full size before they commence to show colour, after which plain water only must be given. To keep the foliage clean and healthy is of great importance, consequently both the under as well as the upper surfaces must be thoroughly moistened twice a day with the syringe. Lateral growths must be kept regularly pinched to concentrate the energies of the plants on fruit production alone. As the weight of the fruits increases it is necessary to examine the supporting net and see that the ties are quite secure.

A. W.

MIDLAND COUNTIES.

Fruit-trees on open walls will need more attention during the next few weeks than at any other season. Nothing is gained by allowing a lot of strong growths. By constant stopping fruit buds are formed and the trees rendered fertile. Where old spurs have been cut back on Plum or Pear trees and the shoots are coming away strong these should be stopped at the third or fourth leaf to induce them to form other spurs close to the main branches, these in time forming fruiting wood. An equal degree of vigour should be encouraged all over the tree, shoots not required being removed, so that the remaining growths may be strengthened.

Raspberries.—Old plantations will receive much benefit if a good mulch of farmyard manure can be given. Much good may also be done by watering with diluted liquid-manure. Remove suckers as they appear from between the rows, and thin out all weakly growths from the stools, retaining only suffi-

cient for the production of next year's crop. The autumn-fruiting varieties produce, as a rule, far too many growths. If these are not severely thinned the crop will be disappointing.

Strawberry plants that have been forced are now being thoroughly hardened before being planted out. Before planting out, the plants will be stood for a few minutes in water so as to thoroughly moisten the soil. Remove all runners and the crooks before planting, but do not break up the ball. Make the soil firm around each plant. The rows should not be less than 2½ feet apart, and the plants 2 feet apart in the rows. As soon as planting is finished mulch with stable litter or half-decayed manure, and in dry weather water occasionally until the plants are established. Very little attention will be needed until the fruit turns in in September, with the exception of removing all flower-stalks till the first week in August, and all runners.

Perpetual-flowering Carnations.—The main batch of plants for autumn and winter flowering has been given the final shift, using pots from 5½ inches to 7 inches in diameter, according to the strength of the plants and the vigour of the variety. The plants are now stood in cold-frames on beds of coal-ashes, and ventilated freely in favourable weather.

Malmison Carnations coming into flower are shaded from bright sunshine, abundance of air and occasional stimulants being given. The flowering-shoots should be neatly staked and the buds thinned to one on a stem as soon as they appear.

The flowering house is kept gay at this period by introducing the show and fancy Pelargoniums, also Ivy-leaved varieties, Fuchsias, Hydrangeas, Begonias, Gloxinias, Liliiums, etc. Primulas and Cinerarias that are over are cleared away, and Azaleas removed to a warm temperature and kept well syringed until they complete their growth.

Forced plants.—Hardy plants which have been forced, now that the outside temperature is more favourable, may be removed to the open under the shelter of a wall or hedge, where they may mature their growth before being again planted out. Plants forced this season should not be lifted next autumn.

Cinerarias.—A sowing of all the varieties of these will now be made. Seeds sown in shallow pans filled with a light compost of fine loam, leaf-soil, and coarse silver sand, placed in a pit with a temperature of 50 degs., will soon germinate. Avoid fire-heat if possible, and continue cool treatment throughout. *Primula sinensis* will also be sown now and treated similar to Cinerarias.

Climbing plants.—Special attention must now be given those that make rapid growth, as the shoots are very liable to be broken off by rough winds or become entangled. The aim should be to cover the supports without the least overcrowding, allowing some of the growths to hang loosely. In tying, allow plenty of room for the growth to expand.

The rock garden now requires much attention, taking care that strong-growing plants do not overgrow the choicer alpine. As Aubrietias go out of flower they will in places be cut back. The resulting growth will then, when sufficiently hardened, be available for cuttings, which should be dibbled into 3-inch pots filled with sandy soil, five or six in each pot. Place the pots in a cold-frame, keeping it close and shaded until roots are formed. In making Aubrietia cuttings do not remove the flower-buds, but allow them to develop, as this has a material effect upon their striking freely. A good selection includes the following:—*Dr. Mules*, *Fire King*, *Lavender*, *Lilac Queen*, *Moerheim*, *Mrs. Lloyd Edwards*, *Pritchard's At*, *Souvenir de William Ingram*, *Royal Purple*, and *Violet Queen*. As soon as the young growths of alpine Phloxes are sufficiently hardened they should be secured for cuttings. Treated in the same way as Aubrietias, they will root readily and make good plants to put out in the autumn.

Asparagus.—Careful attention must be given to the cutting of Asparagus as soon as it is ready. It is important that the shoots be removed from the bed whether required for immediate consumption or not. If tied in bundles and placed in an upright position on wet sand Asparagus may be kept in good condition for a week or ten days. When the supply is likely to be greater than the demand a hed or two may be allowed to run to be taken up for forcing next autumn or winter.

Cauliflowers.—Successional breaks will now be planted, selecting ground which has not been occupied by any of the Brassica family for at least twelve months. The earlier plantings are kept well watered with manure-water, and should the weather set in dry a mulching of stable-litter will be afforded.

Early Peas, owing to the long spell of cold weather, will be late this year. They may be forwarded considerably by pinching out the points of the growths as soon as a fair quantity of pods has set. Give plenty of water at the root and damp overhead on fine afternoons. Large sowings of late varieties will be made during this month to come in after the mid-season kinds. Trenches prepared as for Celery will be three parts filled with good rotten manure. Autocrat, Gladstone, and Ne Plus Ultra are all good kinds for this sowing, and generally succeed in most parts of the country.

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Campanula persicifolia, tall, blue, or white, 6 for 6d. Campanulaglomerata, large heads, deep violet, 6 for 6d. Campanulas macranthas, large mauve pyramidal, 6 for 6d. Campanula pyramidalis, blue or white, 4 for 6d. Campanula Wahlenbergia, dwarf, clematis flowered, blue and white, 6 for 6d. Campanula grandis Backhouse, tall, blue or white, 6 for 6d. Carnation, blue, mxd., 9 for 6d. Carnation, scarlet, crimson, yellow ground, or white, 6 for 6d. Chelone barbata coral, 6 for 6d. Canterbury Bells, single, blue, mauve, white, pink, 12 for 6d. Canterbury Bells, Dean's lovely hybrids, 15 for 6d. Canterbury Bells, Cup and Saucer or large double, 6 for 6d. Catananche, blue, 4 for 6d. Centaurea, new pink, 2 for 6d. Centaurea montana, blue or white, 6 for 6d. Cerastium, improved, 15 for 6d. Christmas Roses, 2 for 6d. Chrysanthemum Maximum, King Edward, Mrs. Daniel, Davesi, 12 for 6d. Chrysanthemum Mrs. Lot hian Bell, Robinsonii, The Speaker, Duchess of Abercorn, Earl Roberts, enormous blooms, 6 for 6d. Cistus Rock, 6 for 6d. Commelina caelestis, 6 for 6d. Cowslips, red, 12 for 6d. Crucifera stylosa, 15 for 6d. Delphinium, dark or pale blue or new large flowering hybrids, 3 for 6d. Dianthus, named varieties, all colours double or single, mxd. colours, 12 for 6d. Echinops ritro, 3 for 6d. Erigeron or Stenactis, 4 for 6d. Eryngium, Mrs. Holly, 6 for 6d. Eupatorium Frasieri, 6 for 6d. Evving Primrose, 12 for 6d. Everlasting Peas, white, red, or pink, 6 for 6d. Forget-me-nots, Kelway's and Sutton's best dwarf compact blue, 20 for 6d. Foxgloves, spotted or white, 12 for 6d. Fresh hardy Marguerites, all colours, 4 for 6d. Funkia, Plantain Lily, 2 for 6d. Fuchsia Riccartoni, hardy crimson, 6 for 6d. Gaillardia grandiflora, 6 for 6d. Galega, white or blue, 9 for 6d. Galtonia, hand-some tall summer flowering Hyacinths, 3 for 6d. Geum, Mrs. Bradshaw, grand new, 2 for 6d. Gypsophila glabrata, 12 for 6d. Geum, new double scarlet, Glory, 4 for 6d. Geum, semi-double scarlet, 6 for 6d. Gladiolus, early flowering, 9 for 6d. Gladiolus, large flowering, late variety, 6 for 6d. Gypsophila paniculata, white, 6 for 6d. Gypsophila, rokejeja, 6 for 6d. Helenium, Golden, 6 for 6d. Helianthus, Miss Melish, etc., 6 for 6d. Hemerocallis Day Lily, 4 for 6d. Heuchera, scarlet pink, or white, 4 for 6d. Hollyhocks, double, 4 for 6d. Hollyhocks, single, 9 for 6d. Honesty, 12 for 6d. Hops, rapid climbers, 2 for 6d. Hypericum St. John's Wort, 4 for 6d. Iceland Poppies, 6 for 6d. Iris florentina, 3 for 6d. Iris germanica, 6 for 6d. Iris hispanica, 15 for 6d. Kniphofia (Torch Lily), 2 for 6d. Lavender, fragrant, 3 for 6d. Lilium, lovely hardy varieties, croceum, tigrinum & speciosum, 4 for 6d. Linaria Dalmatica, 6 for 6d. Linum, blue flax, 12 for 6d. Lobelia cardinalis, London Pride, 3 for 6d. Lupinus, tree, yellow, white or mauve, 3 for 6d. Lupinus, new pink, 4 for 6d. Lupinus, blue or white, 9 for 6d. Lupinus, mixed, 12 for 6d. Lychnis, coronaria, 9 for 6d. Lychnis, new Salmon, 6 for 6d. Lychnis, scarlet, 6 for 6d. Lythrum superbum, 6 for 6d. Mimulus cardinalis scarlet musk, 6 for 6d. Montbretias, mixed, 15 for 6d. Onochea macrocarpa, very fine new dwarf variety, handsome large yellow blooms, 4 for 6d. Pansies, best exhibition varieties, Belgian, Odiers, Bugnots, Carriers, Covent Garden, English Prize, 12 for 6d. Pansies, all colours, separate, 12 for 6d. Periwinkle, blue, 4 for 6d. Periwinkle, violet, 3 for 6d. Pansies, giant flowering Trimardean, Parisian, Non Plus Ultra, Rival, etc., 15 for 6d. Paonia, mixed, 3d & 6d each. Paeoever Oriental, Apricot Queen, Salmon Queen, Mrs. Perry, Goliath, etc., 6 for 6d. Pentstemons, Scarlet Southgate Gem, Scarlet Newbury Gem, and Sutton's, Kelway's and Forbes' grand large flowering varieties, strong rooted cuttings, 4 for 6d. Pinks, coloured, 9 for 6d. Pinks, Her Majesty and Mrs. Sinkins, 4 for 6d. Pink, double white, 12 for 6d. Polyanthus, blue, 12 for 6d. Polyanthus, East border, 9 for 6d. Polyanthus, deep or pale yellow, very large blooms, 6 for 6d. Polyanthus Primrose, 6 for 6d. Poppies, Oriental, large crimson or scarlet, 9 for 6d. Potentilla, mixed, 6 for 6d. Primulas, lovely hardy varieties for rockeries, shady places, cool-house, pots, etc., Capitata, Cortusoides, Japonica, Malacoides, Krenessis, Florabunda, Sikkimensis, Verticillata, Bulliana Denticulata, 3 for 6d. Pyrethrum, double, new flesh pink, 2 for 6d. Pyrethrum hybridum, 4 for 6d. Pyrethrum roseum, 4 for 6d. Ranunculus, giant, 9 for 6d. Ribbon grass, variegated, 12 for 6d. Rocket, Sweet, 12 for 6d. Rose Campion, 15 for 6d. Rosemary, fragrant, 3 for 6d. Rudbeckia, double, 4 for 6d. Rudbeckia, Newuanu, 4 for 6d. Rudbeckia, new red, 2 for 6d. Saponaria ocycoides, 12 for 6d. Saxifraga, mossy, 6 for 6d. Saxifragas, very choice Bathoniensis, large flowering crimson and pink, also Muscoides superba small pink, 2 for 6d. Sedums spectabile, Azoon purpureocens, macrophyllum, large clumps, 3 for 6d. Scabiosa caucasica, 2 for 6d. Scabiosa japonica, 4 for 6d. Scabiosa, sweet, 9 for 6d. Shirley Poppies, 15 for 6d. Silene Schafra, pink, 6 for 6d. Spiraea aruncus (Goat's Beard), 2 for 6d. Spiraea Palmata, crimson or pink, 2 for 6d. Stachys (Lamb's Ears), 12 for 6d. Star of Bethlehem, 9 for 6d. Statice, Sea Lavender, 4 for 6d. Stokesia, new handsome North American border plant, perennial, showy double blue flowers, 4 for 6d. Sweet Williams, Dobbie's Auricula-eyed, 12 for 6d. Sweet Williams, Kelway's New Scarlet Beauty, 6 for 6d. Sweet Williams, Kelway's New Pink Beauty, 9 for 6d. Symphytum, creeping plant for shady places, 9 for 6d. Tritoma Saundersi, rich orange-scarlet, 1 for 6d. Tunica saxifraga, 15 for 6d. Valerian, crimson or white, 15 for 6d. Verbascum, d.f. or tall, 6 for 6d. Veronica gentianoides, lovely blue, 4 for 6d. Veronica spicata, blue, 4 for 6d. Viola Marchioness, and Snow Queen, splendid white, 9 for 6d. Viola admirabilis, 9 for 6d. Viola Cornuta, for bedding, rockery, etc., Kelway's Mauve Queen, Purple Queen, white and blue perfection, lovely for edging, 9 for 6d. Violas, strong, transplanted plants of the following varieties, mixed, Blue King, Duchess of Sutherland, Lady Majorie, Ardwell Gem, King Cup, John Forbes, Royal Sovereign, Kitty Bell, Pembroke, John Quarton, 9 for 6d. Violas, strong autumn struck, rooted cuttings, true to name, Maggie Mott, mauve self; White Swan, white self; Kitty Bell, blue self; Councillor Waters, purple self; Primrose Dame, yellow self; Kitty Hay, yellow self; Mauve Queen, self; Blue King, 6 for 6d. Violas, white, yellow, blue, purple, red, mauve, large flowering, 12 for 6d. Violas, giant flowering, blue, fragrant, blue, Princess of Wales, La France, The Czar and Marie Louise, 6 for 6d. Queen of Climbers, self-clinging Ampelopsis Veitchii, large with several trails, 6d and 9d each.

Pansies, giant flowering Trimardean, Parisian, Non Plus Ultra, Rival, etc., 15 for 6d. Paonia, mixed, 3d & 6d each. Paeoever Oriental, Apricot Queen, Salmon Queen, Mrs. Perry, Goliath, etc., 6 for 6d. Pentstemons, Scarlet Southgate Gem, Scarlet Newbury Gem, and Sutton's, Kelway's and Forbes' grand large flowering varieties, strong rooted cuttings, 4 for 6d. Pinks, coloured, 9 for 6d. Pinks, Her Majesty and Mrs. Sinkins, 4 for 6d. Pink, double white, 12 for 6d. Polyanthus, blue, 12 for 6d. Polyanthus, East border, 9 for 6d. Polyanthus, deep or pale yellow, very large blooms, 6 for 6d. Polyanthus Primrose, 6 for 6d. Poppies, Oriental, large crimson or scarlet, 9 for 6d. Potentilla, mixed, 6 for 6d. Primulas, lovely hardy varieties for rockeries, shady places, cool-house, pots, etc., Capitata, Cortusoides, Japonica, Malacoides, Krenessis, Florabunda, Sikkimensis, Verticillata, Bulliana Denticulata, 3 for 6d. Pyrethrum, double, new flesh pink, 2 for 6d. Pyrethrum hybridum, 4 for 6d. Pyrethrum roseum, 4 for 6d. Ranunculus, giant, 9 for 6d. Ribbon grass, variegated, 12 for 6d. Rocket, Sweet, 12 for 6d. Rose Campion, 15 for 6d. Rosemary, fragrant, 3 for 6d. Rudbeckia, double, 4 for 6d. Rudbeckia, Newuanu, 4 for 6d. Rudbeckia, new red, 2 for 6d. Saponaria ocycoides, 12 for 6d. Saxifraga, mossy, 6 for 6d. Saxifragas, very choice Bathoniensis, large flowering crimson and pink, also Muscoides superba small pink, 2 for 6d.

Sedums spectabile, Azoon purpureocens, macrophyllum, large clumps, 3 for 6d. Scabiosa caucasica, 2 for 6d. Scabiosa japonica, 4 for 6d. Scabiosa, sweet, 9 for 6d. Shirley Poppies, 15 for 6d. Silene Schafra, pink, 6 for 6d. Spiraea aruncus (Goat's Beard), 2 for 6d. Spiraea Palmata, crimson or pink, 2 for 6d. Stachys (Lamb's Ears), 12 for 6d. Star of Bethlehem, 9 for 6d. Statice, Sea Lavender, 4 for 6d. Stokesia, new handsome North American border plant, perennial, showy double blue flowers, 4 for 6d. Sweet Williams, Dobbie's Auricula-eyed, 12 for 6d. Sweet Williams, Kelway's New Scarlet Beauty, 6 for 6d. Sweet Williams, Kelway's New Pink Beauty, 9 for 6d. Symphytum, creeping plant for shady places, 9 for 6d. Tritoma Saundersi, rich orange-scarlet, 1 for 6d. Tunica saxifraga, 15 for 6d. Valerian, crimson or white, 15 for 6d. Verbascum, d.f. or tall, 6 for 6d. Veronica gentianoides, lovely blue, 4 for 6d. Veronica spicata, blue, 4 for 6d. Viola Marchioness, and Snow Queen, splendid white, 9 for 6d. Viola admirabilis, 9 for 6d. Viola Cornuta, for bedding, rockery, etc., Kelway's Mauve Queen, Purple Queen, white and blue perfection, lovely for edging, 9 for 6d. Violas, strong, transplanted plants of the following varieties, mixed, Blue King, Duchess of Sutherland, Lady Majorie, Ardwell Gem, King Cup, John Forbes, Royal Sovereign, Kitty Bell, Pembroke, John Quarton, 9 for 6d. Violas, strong autumn struck, rooted cuttings, true to name, Maggie Mott, mauve self; White Swan, white self; Kitty Bell, blue self; Councillor Waters, purple self; Primrose Dame, yellow self; Kitty Hay, yellow self; Mauve Queen, self; Blue King, 6 for 6d. Violas, white, yellow, blue, purple, red, mauve, large flowering, 12 for 6d. Violas, giant flowering, blue, fragrant, blue, Princess of Wales, La France, The Czar and Marie Louise, 6 for 6d. Queen of Climbers, self-clinging Ampelopsis Veitchii, large with several trails, 6d and 9d each.

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Runner Beans.—As soon as the soil has become warmed the first outdoor sowing will be made on ground that has been deeply trenched and well manured. Well-manured trenches will be prepared as soon as possible, allowing a distance of 10 feet between each. These will be left until the end of the month for receiving the plants raised in boxes under glass, by which time the soil should be in a good workable condition. Great advantage is gained by raising the first batch in boxes and planting them out after being properly hardened. These will commence to bear much earlier than those sown in the open, and are practically safe from frost and the attacks of slugs, which often do much damage in the earlier stages of their growth. Best of All and Scarlet Emperor are the best and most profitable varieties I am acquainted with.

French Beans.—Large sowings of these will now be made on sheltered borders, and pods will be ready for picking before the earliest Runners. F. W. GALLOP.

SCOTLAND.

Vegetable garden.—All late Potatoes have now been planted. It is quite certain that failing to allow sufficient space in the case of late Potatoes is the cause of light crops, and, further, should disease appear, crowded-up haulm is infested in a very short time. A good sowing of Autocrat Pea was made in a drill 50 yards long. The quantity allowed was not quite 4 lb.—that is to say, about 2 quarts. In practice this is quite thick enough, for Autocrat is naturally of a branching habit, and if it be at all crowded the crop is never so heavy, and is more quickly exhausted than when the haulm has plenty of room. More Broad Beans were sown, the variety being Harlington Windsor. This sowing will be supplemented by at least three others at fortnightly intervals. Instead of sowing the Beans in drills I prefer to dibble them in, 6 inches from seed to seed. At times pheasants are troublesome when the Beans are drilled in, but they do not appear to find them so readily when dibbled in. Brassicas for midsummer planting were pricked off into nursery beds, and a good sowing of Turnip Golden Ball was made. A former sowing concerning which some doubts were entertained has germinated freely and looks very promising. Sown-out Parsley has germinated well, and some little thinning has been done, while plants raised in heat and afterwards pricked out into cold-frames have been put out. A look round showed that previously sown seeds, including Leeks, Onions, Carrots, and Parsnips, have come away very evenly. More seeds of Vegetable Marrows were sown, and plants intended for frames were moved from 5-inch to 7-inch pots. Celery seedlings for maincrop and late planting were pricked off on a partly exhausted hotbed, and as it is intended to make a new bed of Mint, a considerable quantity of cuttings was put in. Many prefer to lift rooted pieces of Mint for forming new beds, but I think cuttings develop into bushier and equally profitable plants.

Hardening off has now begun in the case of the more robust of the bedding plants. These are placed at present closely in frames, and on all suitable occasions the sashes are removed—indeed, if the thermometer is reasonably high in the neighbourhood of 10 p.m. the plants are exposed throughout the night.

Begonias for the flower garden, having now made excellent growth, were removed from the bed of Cocoa-fibre on which they had been started and planted out meantime in cold-frames. The soil in these frames was freshened up by the addition of a few harrowfuls of roughly-sifted leaf-mould, in which the roots soon get to work. For a short time the sashes will be matted up at night.

Hardy plants.—If for any reason it may be necessary to lift clumps of Kniphofias, the present is a very good time to do so. Let the station be of a good depth and circumference, and have it prepared in advance. After transplanting has been done, a good soaking of soft water will settle the plant, and a mulch of rotted manure will be of additional benefit. If it is intended to cut over or to divide any clumps of Pampas Grass there must not be any further delay. Similar precautions as in the case of Kniphofias should be observed. Large accumulations of *d'bris* in the stools of large pieces of Pampas Grass may quite safely be burned out. The plants may be a trifle unsightly for a time, but the growth at this time of the year is rapid and soon effaces the marks of burning. New Zealand Flaxes are benefited by a top-dressing of some good soil, or, preferably, by a mulch of manure. In any case, large plants require something to carry them on, unless they are planted in a rich and naturally deep staple. Although it is getting rather late, such things as Phloxes, Asters, Pyrethrums, and similar robust hardy plants may yet be divided or replanted with a fair prospect of success.

Gladioli.—The companion bed to that planted with Dahlias was filled with Gladioli. These were put out rather thickly, and after the bulbs had been planted *Eschscholtzia californica* was sown on the surface.

Plant-houses.—With more sun, more watering is now needed, and any plants which have obviously filled their pots with roots may be allowed occasional doses of liquid-manure or of chemical aids in solution. When a plant

after having been watered in the morning shows symptoms of flagging before night, it may be assumed that the roots have occupied all the soil or that the ball has become too dry. The remedy is easily found. In the first case, liquid-manure after a good watering; in the second, standing the pot in the tank for an hour or so. Ventilation must now be free, any closeness in the atmosphere being almost certain to result in outbreaks of insect pests. Fires may now be dispensed with in the greenhouse, and on bright days in the stove until night. By shutting up comparatively early, sun-heat will keep the stove fairly comfortable for some hours, but it is unwise to do away with fire-heat at night yet awhile. A check now may result in stunted plants at a later date. Stove temperature at night can be kept up now to about 68 degs. with quite a moderate fire.

Sweet Peas.—During the week a quantity of Sweet Peas was got out. This batch consists of the old grandiflora varieties, and was planted in a long line in order to screen a vegetable break. To prevent damage at present from wind a trench about 4 inches deep was taken out with the hoe, and in this the Peas were planted. As growth increases the soil will be returned, after which the plants will be staked without delay.

Hardy Chrysanthemums.—A long line was closely planted with hardy Chrysanthemums during the week. These are intended chiefly for cutting from, and as the situation is sheltered by a Beech hedge the early frosts at the close of September will do no harm to the plants. These will be supported with Spruce branches to form a hedge, and as the varieties—all of the Masse type—bloom simultaneously, a fine display, apart from the value of the blooms for cutting, may be relied upon.

Lavatera trimestris, var. splendens.—A good hedge of this showy and durable hardy annual was also made. Last season the mistake was made of sowing it in a very rich border, and as a result it grew to a great height—over 7 feet—and, while it made a magnificent show for a time, the autumn gales ruined it early in September. It has been now sown in a more sheltered place and in poorer soil. Other annuals sown some time ago are now appearing through the soil; and, in order to discourage slugs, dustings of soot are being given at intervals. Pricking off has now been almost completed. Ten-week Stocks and similar things pricked off at this time will soon make useful plants which will be ready for planting out in May.

Fruit-trees on walls.—So far, no frost of any great importance has been registered, and the outlook is encouraging. W. MCGUFFOG.

Balmie Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Plants for the wild garden (Tadworth).—In addition to the plants you mention, you may try the Winter Aconite, Anemone Robinsoniana, A. apennina, A. stellata, Fritillarias, Cornflower, Crocus, Crane's Bill, Cyclamens, Day Lily, Foxgloves, Grape Hyacinths, Lungwort, Meadow Saffron, Omphalodes, Plantain Lily, wild Roses, St. Bruno's Lily, Scabious, Scillas, Snowdrops, Snowflake, Solomon's Seal, Ornithogalum, Wood Lily.

Asparagus plumosus (A Reader).—The best and quickest method of growing Asparagus plumosus is to pot it in a good open compost, consisting of about two-thirds loam to one of well-decayed leaf-mould or peat, with an admixture of silver sand, and keep it in a stove temperature. Treated thus it will grow rapidly; but in a cooler situation, though its rate of growth will be slower, the shoots are firmer, and will last longer when cut. It is seldom satisfactory in a greenhouse temperature, and needs a structure which in winter does not fall below 50 degs. A shaded rather than a sunny position is most conducive to its welfare.

Removing foliage from bulbs (Daffodil).—It certainly weakens bulbs to remove them from the ground before the foliage has died down. If they have to be taken away to make room for bedding plants they should be lifted with as large clumps of soil as possible, and planted carefully in spare beds in the kitchen garden or elsewhere, care being taken to disturb the soil about their roots as little as possible. When they are in their new position should be filled in which they have been placed should be filled in and well watered, so as to solidify the soil round their roots. Leave them in this position till the foliage has ripened off, when they may be lifted, the foliage removed, dried, and kept until planting-time again comes round. However much care is taken, the bulbs are sure to suffer more or less from the shift.

Treatment of Gloxinia seedlings (Nil Desperandum).—Prick the Gloxinias off singly into small 60 pots, and place in a shady position on a shelf. Pay careful attention to the watering to prevent damping off. When the plants are well rooted and making good growth, pot on into larger pots. A 4-inch pot will be quite large enough for this year, as Gloxinias do not make very rapid root-action. We recommend fibrous loam, peat, and sand to pot in. Grow in a temperature from 55 degs. to 60 degs., and always keep shaded

from strong sunlight; also keep free from cold draughts. When finished growing and flowering, discontinue the watering a little, gradually drying off to ripen the bulbs. Afterwards place them on their sides in a dry position until the spring, when they commence growth. They should then be watered, potting on the same as the previous year. A little stimulant may be allowed once a week when the plants are well rooted.

FRUIT.

Pear-leaf blister-mite (H. F. W.).—The infested leaves should be picked off and the rest sprayed with some insecticide, as paraffin emulsion. Be sure that the insecticide is applied to the undersides of the leaves. It would be well, also, when all the leaves have fallen, to spray the tree with the caustic alkali solution so often referred to in these pages and the recipe for making the same given.

The black Vine-weevil (W. C.).—The beetle you send is the black Vine-weevil (*Otiorrhynchus sulcatus*). It is very injurious to the foliage of many plants—Vines and Ferns are special favourites. As they hide themselves very cunningly during the day, and only come out at night to feed, they are difficult to destroy. The best way of catching them is to place a white sheet under the plants they are feeding on, and, when it is dark, suddenly throw a bright light on them. This often causes them to fall. If it does not, shake the plants well, or examine them carefully. Their grubs are fat, fleshy maggots, which are very destructive to the roots of Ferns, Primulas, Cyclamens, Strawberries, and many other plants.

VEGETABLES.

Tomatoes outdoors (H. A.).—Sow the Tomato seed as soon as possible, either in a warm greenhouse, in which case place the pan in the warmest spot, or on a hotbed. Sow thinly in a compost of loam, leaf-soil, and sand, and do not overwater in their young stage. Pot on when the rough leaf has formed, and get them as forward as you can before the end of May. Then gradually harden off previous to planting outside. It is very important to get them forward for outdoor culture, and you will do better to plant them 18 inches or 2 feet apart, and keep them to one stem only, pinching back the lateral growths. Any ordinary loam will grow these. It is more a question of early treatment and a warm season than soil.

MISCELLANEOUS.

Painting hot-water pipes (R. W.).—You should paint your pipes with a mixture of lamp-black and boiled oil, made into the consistency of thin paint. Before applying it light a fire to warm the pipes, as the work can be done better and more expeditiously when there is a little heat in the pipes. This will effectually prevent rust. There will be a little smell from the oil at first, but it soon goes off if the pipes are kept warm until the material is dry. You must not use varnish of any kind on pipes that are heated in plant-houses, or serious injury might be done to the foliage of the occupants.

Utilising house-refuse for the vegetable garden (J. C. C. M.).—There are several forms of the ordinary household refuse which, either dug in or used after burning, are most useful for dressing the land, notably bones, fish heads, Turnip and other Green tops, also waste Cabbage leaves, parings of vegetables, etc. Soot, of course, is very valuable as a nitrogenous manure, fine dust also we have used with benefit, while the household slops, slightly diluted, are also useful. Now, when labour shortage and other complications make it more difficult to obtain a full supply of the ordinary manure, we are compelled to fall back on other things which are likely to be of benefit, and while we wonder what things really are of use, we can be sure of one thing, and that is that vegetables grow by absorbing the materials of growth mainly from the soil, and if we can return only the waste portions of vegetables we shall be at least putting back some part of the ingredients which have been previously absorbed to form the tissues of the plants.

SHORT REPLIES.

R. F. S.—The trouble is evidently due to the unripened wood, which, being very soft, has been injured by frost. Cut out all the bad pieces, and we think the plant will very soon recover and throw vigorous shoots from the base. We have had the same thing happen to a Dorothy Perkins Rose trained on a trellis. —A. G.—So far as may be judged from the leaves you send us, the trouble is due to cold winds, and with warmer weather they will come all right.

NAMES OF PLANTS AND FRUITS.

Names of plants.—M. K. Wallace.—The Bird Cherry (*Prunus Padus*).—C. L. G. F.—The drooping Star of Bethlehem (*Ornithogalum nutans*).

CATALOGUES RECEIVED.

C. S. DANIELS AND SON, Wymondham, Suffolk.
—A Few Choice Plants for the Garden.

GARDENING ILLUSTRATED.

No. 1941.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

MAY 20, 1916.

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A CAUTION.

THE past winter was not a pleasant one, but it was not a severe winter by any means. The temperature was never at zero, and I am astonished, therefore, that some things suffered very much from a temperature which should not have hurt them. A frost of 16 degs., or about that, followed by very soft wet, open weather, caused things that had been happy for years, such as the Bamboos, to shrivel up. I was led on by Mr. Messel's example to put out things that I thought might do, such as the Lobster's Claw plant and a few others, and I find they have all given way before this slight frost. It seems, therefore, that some caution is necessary, and by far the best way I find is my first way of keeping only to things one knows to be hardy and taking our proofs from neighbours' gardens, if we can. The influence of region in our islands is very curious and instructive. A broken coast line invites us to plant things that do well with the nearness of the sea to comfort them, but it leads to many mistakes. Once we get away from the seashore—even a few miles—one finds quite a difference—things that will do well half-a-mile from the sea will not do at all four miles inland. One must be very wary indeed in our land, especially when planting trees and shrubs that come from better climates than ours. Such things may survive for a few years, and then all go. It follows that our experiments with such things should be on a small scale, though we must admit that many of them are much hardier than is generally supposed and acted upon. For instance, the Camellia is hardier than even the common Laurel, and all who care for it should plant it. I have it myself in perfect health and not protected in any way or encouraged by special soil or anything else. The trouble is the terrible old double kinds, which were common in greenhouses when the Camellia became so popular. The double form is not nearly so good as the single. I have no doubt that many of the single forms were thrown away in olden days when people thought of nothing but the double forms. So also the Lapageria, a splendid plant from Chili, which is hardier than many people think and does wonderfully well near the coast line in Wales and in England. W.

NOTES OF THE WEEK.

A Fairy Thrift (*Armeria cæspitosa*).—A Moss-like kind, with lovely pale lilac flowers. Plant and all about an inch high. From Sir Frank Crisp.

More prohibited imports.—In reply to a Parliamentary question by Mr. Needham, Mr. Pretyman said it was proposed in a few days to issue a further list of articles the import of which was to be prohibited, in order to secure additional tonnage space for essential needs. Among the articles affected are bulbs, flower roots, plants, trees, and shrubs, as also canned, bottled, dried, and preserved vegetables.

The Southern Heath (*Erica australis*).—This, the loveliest Heath of Europe, puts up with all our heavy rains in April, and, now, though knocked over a little by the storm, it is the most beautiful Heath of May. It is as good in effect in the house as it is out-of-doors. Anybody with time to look about the country where it grows—the south of Spain—might add to our treasures by finding varieties of it, one of which, the white, is now in cultivation.—W.

Primula leucophylla.—This species one does not often see in gardens, but it is well worth growing, and does not appear at all fastidious. Its habit is very much the same as that of the Cowslip, but the flowers are more drooping than in that species, and of a very pale yellow, even paler than in the common Primrose. Like most Primulas, it likes shade and not too dry a position, otherwise it is quite easily managed.

Narcissi in Scotland.—Looking round (May 7th) after a three days' storm of east wind and rain, it is disheartening to see the havoc wrought among Narcissi. Almost every variety represented is spoiled, even the Pheasant's Eye, not yet expanded, having shared the same fate as those in full bloom. It has been a cold and trying spring even in our comparatively mild climate, and I fear those less fortunately situated must have suffered more severely.—W. McG., *Balmac, Kirkcudbright*.

Iris stylosa.—What a long-flowering period this species has. My plants started blooming at the beginning of November, and ever since then they have been throwing up flowers almost continuously, the only times when they did not bloom being when the ground was frost-bound. The

blooming season is practically over now, but I noticed two flowers out on different clumps to-day (May 5th), so they have been blooming over six months. They are in a raised bed against a south wall in poor, gritty soil, and flourish very well.—NORTH LONDON.

Late Holly berries.—On the 22nd April my attention was drawn to a well-berried piece of Holly in a shrubbery. The berries were firm, plump, and well coloured, and the fact is interesting because, in a general way, Holly berries, owing to the attacks of birds, rarely hang after the New Year. Indeed, sometimes before that date the trees are entirely stripped. Missel thrushes are the chief enemies of the berries, and, curiously enough, these birds have never been more in evidence.—W. McG., *Balmac*.

Umbrella Plant (*Saxifraga peltata*).—This is now in flower by the waterside, where it forms a distinct and pretty feature. The flowers are produced in clusters, each from 4 inches to 6 inches in diameter, in colour a lovely soft peach-pink, with a deep red centre. The flowers are borne on stout, reddish, hairy stalks, each from 18 inches to 2 feet in length, before the leaves—which are the glory of this plant in autumn—appear. It is a grand plant for naturalising near a lake, stream, or for planting in boggy ground.—E. M.

Veronica laudiana.—I saw this described in 1913 as "the most beautiful of all; very scarce." I quite agree as to its great beauty. I wish some of your correspondents would say whether it is, as a rule, very tender, and requires protection in the winter. I had two plants in 1913—one in a sort of moraine, and the other on a rockery in deep, light soil, both facing west. Flower-buds were formed in February last, and both plants bloomed beautifully in the middle of April. They are under 1 foot in height.—E. CHARLES BUXTON, *Coed-Derw, Bettws-y-Coed*.

Anemone nemorosa Robinsoniana.—I have a considerable variety of blue forms of the Wood Anemone in my garden, yet, even although my allegiance may waver when it is attracted by a new variety with flowers of a slightly different hue, I always appreciate that now old but recognised favourite *A. nemorosa Robinsoniana*. To appreciate it properly it should be seen in a good clump, which can soon be secured in most gardens by leaving the plant alone.

I grow A. n. Alleni and several other good blue Anemones, but A. n. Robinsoniana is the best.—S. ARNOTT.

Rhododendron glaucum.—A dwarf and very pretty bush with many pale rose flowers; fragrant. An excellent rock plant. From Sir Frank Crisp.

Spring gardening economy.—I understand that some very showy gardens are given up this year owing to their great cost. The usual way of spending a lot of money to adorn the garden in spring is stupid and unnecessary. Any system of gardening that calls for renewal every year must involve much cost and labour. I have in Grass now some millions of flowers—Narcissi, Crocuses, Grape Hyacinths, and others—which have never cost anything for renewal or labour. Such things have to be adapted to the soil no doubt. I have a wood which is a picture now more than any garden.—W.

Viburnum Carlesi.—This, now (April 29th) in full bloom, is undoubtedly a valuable introduction. It makes a shapely bush, its tube-like flowers, produced in terminal, rounded clusters each 3 inches across, being pink in the bud, gradually becoming white as the blooms expand, and quite as fragrant as the best of the Daphnes. So far it appears to be quite hardy, and has come through the past trying winter unscathed, whereas many other shrubs have suffered severely. As a flowering shrub which does not require a vast amount of room to develop this deserves attention.—E. M.

Rhododendron cheiranthifolium.—Messrs. John Waterer, Sous, and Crisp, of Bagshot, tell me that a Rhododendron planted here in 1893 is R. cheiranthifolium. A few flowers were produced every season in April, but it never made much progress. Last summer it started to grow vigorously, and quantities of buds, which began to open early in April, were formed. I suppose there are now at least 200 blooms, and I never saw anything prettier. The plant never had any manure or top-dressing, so I suppose the warm, wet weather in the autumn, and especially in December and January, was the cause of the present success. There were also no severe frosts. Fifteen degrees on the Grass was about the worst we had.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

Notes from Yorkshire.—When I left Yorkshire in early April there were but few plants in bloom, but now (May 3rd), beds, borders, and rock gardens are gay with flowers. The following list of plants now flowering (compiled from my own and several other gardens in this district) may be of interest to your readers:—Saxifragas in great variety, Aubrietias, Fritillarias, Daffodils in great variety, Alyssums, Arabis, Doronicums, Geum Heldreichi, Adonis amurensis, Anemones, Athionema iberideum, Hepaticas, Iberis sempervirens, Polyanthuses, Primulas in great variety. Wallflowers, Tulips, Scillas, Grape Hyacinths, Hyacinths, and Forget-me-nots are also in bloom. People say that spring is late this year, but it is early to have some of the above in bloom by now in this cold district.—E. T. ELLIS, *Wetwood, Ecclesall, Sheffield.*

Trillium grandiflorum.—I put half-a-dozen plants into a somewhat shady bed in the spring of last year, giving them a compost of old gravelly leaf-mould, made from the leaves swept up from the gravel paths each autumn and thrown into an old brick pit to rot for two or three years. I find this makes splendid soil for many alpine, as it is rich and at the same time porous and gritty. The Trilliums were in two little clumps of three each, quite near

each other, and one clump has done very well, the plants increasing in size and the flowers large. The other clump, though apparently growing under exactly the same conditions, is not doing so well, although each plant is blooming. The flowers are of a lovely pure white and very refined looking.—N. L.

The white Garland Flower (*Daphne Cneorum alba*).—This is a welcome addition to the forms in cultivation, and I look forward to see it thriving. From Sir Frank Crisp.

Salix vittelina var. britzensis.—This is often grown for its beautiful red bark in winter, for which purpose it has no peer, especially if cut down annually. Its attraction when in flower deserves greater recognition on the part of planters. A group of large specimens of this Willow growing here (Sussex) in a boggy piece of ground is a charming feature in the landscape, winter or summer. These trees are now bearing myriads of bright yellow catkins, each about 2 inches long and produced from the axils of every leaf, the trees a mass of yellow. One of these specimens, 60 feet in height, was brought down by the recent gale, and as the tree was lying prostrate I was astonished at the quantity and brightness of its flowers. Some of these were cut for the house, but, beautiful as they are when first cut, the leaves flag quickly. A dark green background is necessary to set off the rich yellow of the flowers.—E. M.

Cannas.—Where Cannas succeed out of doors they make stately and handsome groups, but when they cannot be so employed, owing to exigencies of climate, they are equally well adapted for greenhouse or conservatory decoration. As is well known, the seed of Cannas is very hard, and unless steeped in hot water, or filed, is very slow to germinate. Occasionally, when the roots are stored in rather a dry atmosphere they, too, are slow to start into growth when introduced into heat in spring. During the past winter an experiment was made with two lots of Cannas after they had flowered and ripened off their foliage. The first lot was stored in the orthodox way and permitted to get quite dust dry in the pots. The second portion was kept not by any means moist, but received occasional waterings throughout their period of rest. The result of the experiment has been informative. The roots, which had been, from time to time, watered, when put into heat came away almost immediately, and, at the present time, are far in advance of those which were entirely dried off. The point may be of interest to others who are interested in the Canna, either as an inside plant or for the outdoor garden.—W. McG.

Rhododendron fastigiatum.—This is one of the more recently introduced Chinese Rhododendrons, seeds having been received from Mr. Forrest in 1911. It was collected in Western China, where on certain mountains it is said to form a considerable part of the shrubby vegetation. In many respects it resembles the pretty blue-flowered R. intricatum, which was introduced a few years before, being of low, compact growth, about 1½ feet high, with small evergreen leaves. The flowers, larger than those of R. intricatum, being an inch or so across, are bluish-purple in colour and very attractive, for they are borne freely by quite small plants. It is an excellent species for planting on rock-work, where it may be grown in large or small groups. Like many more of the dwarf Rhododendrons, it can be increased quite easily from cuttings of short, half-ripe shoots inserted firmly in pots of sandy

peat in a close and slightly warm frame in summer. It is also easily grown from seed, which should be sown as soon as ripe. The seedlings flower whilst quite small. Although seeds were only introduced in 1911, plants flowered, out of season, in the autumn of 1912. The proper flowering time is April.—D.

The Daffodil.—It seems a pity that the cultivation of this charming flower has now developed into quite a craze. In some of the horticultural journals one reads column after column descriptive of new varieties and their supposed points of difference. They may be counted by the score or hundred, every one of which is thought to be an advance on that gone before. The specialists buzz around them at exhibitions, measuring this and comparing that, and if a flower is an eighth of an inch longer or wider than another the claim for novelty is supposed to be sufficiently justified. So numerous are the so-called new varieties that names for them in some cases seem to be exhausted, and they are now known by numbers. How many sections the Daffodil is supposed to be divided into I cannot say, yet there always seem to be differences of opinion as to which class some variety or other should be placed in. The fact is that Nature draws no hard and fast line, whatever arbitrary ones man may set up. It follows as a matter of course that when flowers are crossed and intercrossed any dividing lines are soon broken down. Signs are not wanting that the Sweet Pea is falling from the lofty pinnacle on which it was placed by some, and the Daffodil craze is likely to follow suit, though, as a charming outdoor flower and a delightful harbinger of spring, the old, well-tried sorts will always hold their own.—K. R. W.

Iris reticulata.—It is not likely that anyone can better the instructions given by Mr. W. R. Dykes for the treatment of this lovely plant. "As to cultivation," he says, "all that can be said is that shelter from wind is advisable. . . . It is impossible to say that any particular soil is more suitable than another, and except that humus in some form may with advantage be added to a very poor soil, no directions can be given." ("Irises," "Present Day Gardening," page 11.) To this I would only add that, like many other bulbous subjects, this Iris seems to derive much benefit from wood-ashes which have never had the potash washed out of them by exposure to wet. Nine years ago I planted a dozen bulbs in gravelly loam, without lime, at the foot of a south wall. These have had a shovelful of wood-ashes thrown over them once or twice. They have grown into a large clump, which produced over one hundred blooms last February. Mr. Dykes would recommend lifting and replanting, but I fear this is impossible, for the bulbs are inextricably entangled in the roots of a large *Sophora* (*Edwardsia*) *grandiflora*. I incline to think that much of the trouble met with in dealing with this and many other bulbs—American *Erythroniums*, the smaller *Fritillarias*, etc.—arises from the feeble condition in which they arrive after lying in the dealer's store. This can only be overcome by potting them and keeping in a cold-frame till they have recovered a plump and healthy appearance.—HERBERT MAXWELL, *Monreith.*

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PLANTS AND FLOWERS.

ROOM AND WINDOW.

HARDY FLOWERS FOR THE HOUSE.

IN the old days we used to think hot-houses essential to the supply of cut flowers for the house, but where there is a fair number of good hardy flowers much may be had in that way for the decoration of the house. This year, in spite of the inclement spring, we began to find hardy things quite useful, as in the case of this noble Kingcup (*Caltha polypetalá*) and the Forget-me-not shown with it. This is not the Wood Forget-me-not, but one rather nearly allied to it—the *Myosotis*

changes is truly remarkable. Cold winds, heavy rains, and snowstorms such as we have this year experienced have absolutely no effect on the blooms. This little Anemone is one of the most valuable hardy flowers in cultivation, and should be made note of by window gardeners. A plant that will bloom freely in the open in the most inclement months of the year will be at home in a cool room. I strongly advise your readers who have not the means for forwarding things in artificial warmth to try this little Windflower. In growth it is ideal, the deep green foliage covers the soil, and the pale blue blossoms, which are freely produced, stand up well above it. Put three or four bulbs into a $\frac{4}{2}$ -inch pot not later than November, in

foliage with profusion and quality of bloom. This is really a fine thing for window gardeners, as the habit of growth is perfect, while the handsome trusses of bloom, of a soft, pleasing shade of pink, are thrown up boldly above the foliage. Although rather slow of growth, it is by no means "miffy," but has a sturdy, much-enduring nature. The slowness of development is an advantage in the case of a window plant, as Zonals and many other things outgrow their quarters and have to be much pruned or discarded. This variety can be kept in the same pots for two or three years without suffering any loss of blooming power if fed in the growing time, which is another point in its favour. The old Happy Thought, with



The Pontic Kingcup and Swiss Forget-me-not in Japanese basin.

dissitiflora, Swiss kind. It is very useful indeed, not raised from seed, but increased by division. It is rather apt to die out if not frequently divided.

WINDOW PLANTS.

ANEMONE BLANDA.—The worst time for window gardeners is, of course, the first two months of the year. Narcissi, Hyacinths, and Tulips do not come into bloom until March is well advanced, that is, if they have to come on in the natural temperature of the dwelling. With me *Anemone blanda* expanded its first blooms in the last week in January, and was effective up to the middle of April. The power of resistance which this charming little hardy plant displays to weather

nice, free soil, and stand them in a cool room, but never in a constantly-heated apartment.

VARIEGATED PELARGONIUMS.—It is a curious fact in connection with these that they are almost immune from the damping that is the worst enemy of the plain-leaved kinds, and for this reason they are very suitable for windows. Those old kinds, such as *Flower of Spring*, are, I think, much neglected by window gardeners, probably because they do not produce big trusses of bloom, but they are compact of growth, need but little pruning back, look very nice in winter, and form a pleasing contrast to other things. The gem of this silver-leaved section is *Mrs. R. Parker*, which combines beauty of

its quaint markings, is one of the best. It keeps its character in a living-room all through the winter. *New Life* is more delicate, is very dwarf, and lavishly variegated. It is a pretty little kind, and does best in pots and in rather lighter soil. If overpotted it is apt to die away in parts in the dull months. That old and still unrivalled Ivy-leaf, *L'Elegante*, is a most satisfactory plant. It may be kept in the same pot for several years with a little feeding. The variegation is good and constant, and, unlike many variegated things, it has flowers of good quality which are freely produced. It is really an admirable plant for growing all through the year in the house.

ANNUALS FOR WINDOW-BOXES.—Economy

being the order of the day, it may be well to direct attention to the fact that window-boxes may be effectively furnished without having recourse to Zonal Pelargoniums, Lobelias, and other tender things commonly used for this purpose. I have seen window-boxes filled with the common Nasturtium and Tropæolum canariense, and very fine they looked, the shoots hanging down in festoons and smothered with bloom. The taller-growing annuals, such as Clarkias, Godetias, etc., are not suitable, as they may be broken off by rough winds, but there are many of prostrate habit, such as Nemophila, Eschscholtzia, scarlet Linum, Dianthus Heddeewigi, Virginian Stock, Phacelia, and Nemesias, which will keep up a display through the summer months. No special compost is needed; any free garden soil that has been well sweetened will do.

FUCHSIAS.—If these have not been pruned they should be seen to at once. It is late for the operation, but better be a bit late than let them run up into a loose, weak growth. Cut into the preceding year's growth, and, when they break, shake away all the old soil and repot in a nice, free, fairly rich compost, watering very carefully for a time.

BYFLEET.

ORCHIDS.

Ceologyne cristata.—I should be very glad to know how best to ensure that the *Ceologyne* of which I am sending a flower and bulb should flower freely as it ought to do. I have pots and pans full of bulbs, but no flowers. Should it be kept dry at certain seasons? I should be grateful for any hints as to management.—MRS. T. B. KENNEDY.

[This generally blooms in March, but if it is grown under warm conditions the flowering period will be a month or six weeks earlier. After the spikes are cut, new roots will soon appear at the base of the young growth, when any repotting or top-dressing may be done. The plants only need repotting at rare intervals, but a little top-dressing may be done annually if the old soil is decayed. An average temperature of 60 degs. Fahr. should be maintained throughout the growing period, and the plants must be kept well supplied with water, while shade from all direct sunlight is necessary. The resting season begins directly the pseudo-bulbs are fully matured, when the temperature should be from 50 degs. to 55 degs. Water must not be entirely withheld, and no hard-and-fast rules can be laid down in this direction, as so much depends upon the intelligence and observance of the grower. The object should be to just keep the pseudo-bulbs from shrivelling, and even when growth begins water ought not to be applied frequently, or both growth and scape may decay.]

GARDEN PESTS AND FRIENDS.

Bean leaves unhealthy.—Can you tell me what is the cause of the brown spots on these Bean leaves? Is it Bean-rust (*Uromyces*), and, if so, is there anything to be done? It has attacked plants in every row, though not all the plants, and that I send is one of the worst specimens. March here has been very bad—snow every day—and as everything had pushed forward in January, which was exceptionally mild, perhaps the trouble may be due to the weather.—R. N. FERRALL.

[We do not find any of the Bean-rust on your Broad Beans. The damage has probably been caused by bad weather, and, if so, no doubt the Beans will grow out of it to some extent. Similar symptoms are sometimes caused by trouble at the roots, but your specimen being incomplete does not enable us to ascertain whether all is right there. In future when sending queries please write on one side of the paper only.]

GARDEN FOOD.

BOTTLING TOMATOES.

(REPLY TO "L. C. D.," PAGE 180.)

BOTTLING Tomatoes offers no difficulty. Select firm, fleshy fruit, of a small or medium size, as these pack better in the bottles or jars. They should be perfectly ripe, but not at all soft, and, if possible, freshly picked on a sunny day. Do not wash the fruit, but if at all dirty wipe with a damp cloth, dry with a clean one, and set in the sun for fifteen minutes. Some housewives use large bottles or receptacles, but I find a bottle containing sufficient Tomatoes for either one or two cookings better than the larger size. Once the jars or bottles are opened it is difficult to keep a large quantity of Tomatoes in good condition until all are used up. If, however, the Tomatoes are bottled for trade purposes the best selling size of bottle has to be considered. Where expense is no object, it is just as well to buy a special steriliser for cooking the bottled fruit, and a six-bottle size is a useful one for family use. These sterilisers can be heated by a gas jet, and the whole of the work can be done on a table. I always use the homely copper or a boiler placed on the stove. A fish-kettle does very well. Naturally, screw-top bottles are best, but I frequently bottle the Tomatoes in any large-mouthed glass jars and bottles I can procure. I have found the glass jars in which the large French prunes are sold do very well, but with these I employ the mutton-fat method of bottling.

The bottles must be perfectly clean, and it is as well to sterilise them by holding each over some burning sulphur so that the fumes will fill the bottle and kill any germs of fermentation lurking in the crevices. After this, put them all into the oven or on the top of the stove to get very hot. The skins can be left on the Tomatoes, but for home use it is better to remove them, as then the fruit can be packed rather tighter. Place a quantity of the fruit in a large colander and dip the whole for two minutes into some fast boiling water. This loosens the skins and they peel off very easily. Fill the bottles quite full, pressing the fruit down slightly, otherwise there will be many spaces between the Tomatoes. Do not crush the fruit too much or the beauty of the whole will be spoiled. When filled, stand the bottles on the stove until very hot. Have ready some actually boiling water in which sufficient salt to flavour has been dissolved, and pour this over the Tomatoes. The bottles must be quite full and no air-bubbles must be left anywhere between the Tomatoes. Now place the screw-tops and corks in position, and tie a cloth over the larger jars. Stand these latter in the fish-kettle, and surround with boiling water. Place the whole over the fire and cook until the Tomatoes show a very slight tendency to leave the bottom of the bottle. It is difficult to tell the exact time, as some Tomatoes cook quicker than others. Have ready some melted mutton suet, remove the cloths from the mouths of the jars, and pour an inch layer of fat on the top of the fruit. Stand the jars on a cloth-covered table and when quite cold tie parchment paper over the top and store in a very dry cupboard or larder. The layer of fat must not be broken until the Tomatoes are used, as otherwise they will not keep. The screw-top and corked bottles can be placed in a copper, with some wisps of hay laid between to prevent breaking during the process of boiling, and then fill the copper with boiling water, place the lid on top, and make a moderate fire underneath. Cook until a thin line of

water appears at the bottom of the bottles. Take up, see that the screw-tops are firm, and corks well fixed, and when cold store in a dry place. Some housewives use vinegar or acetic acid dissolved in water instead of the salted water, but the fruit absorbs some of the acid during the process, and this detracts from its usefulness for cooking, besides being much more expensive. If carefully bottled, Tomatoes will keep for many months, and probably for years. H. THORBURN-CLARKE.

NOTES AND REPLIES.

Lettuces.—I suppose each has his fancy as to the materials that go to make a good salad. With the exception of a tiny bit of Mustard and Cress, just the suspicion of young Onions, and a slice of Tomato when available, I care for nothing but a good Lettuce, and, that being so, try for a constant supply all through the season. The garden, being small, I rely solely on the Cabbage types. One row of Tom Thumb or Commodore Nutt is useful for the first cutting, but for the remainder of the season I use Golden Queen and Perfect Gem, both types of what a thoroughly good Lettuce should be, hearting well, with little or no waste, crisp, and standing as long as one can reasonably expect. With little opportunity for watering, I choose a partially shaded spot, draw the drills, soak with water if the ground is dry, sow as thinly as possible, and thin the plants to 8 inches or 9 inches. Birds are apt to be troublesome, so, as forewarned is fore-armed, some twiggy sticks are laid along the rows until the young plants are out of danger. A bit of short Grass is shaken between the rows while the plants are yet in a young stage, to obviate the necessity of watering. One occasionally has a slight break in the supply, but this is generally the fault of overlooking the time for the successional sowing. The sorts above named, with Continuity, are much more profitable for small gardens than the big-leaved, straggling kinds.—E. B. S., *Hardwick*.

Kohl-Rabi stewed.—Tender and fine-leaved Kohl-rabi might well be more cultivated on this side of the Channel, and it should be sown and then transplanted in May or June. Besides providing the orange-like bulbs, the greens in late winter are delicious. Here is a recipe for cooking both roots and greens. Peel and quarter the root of a Kohl-rabi, cover with cold salted water, and boil until tender; then cut the quarters into dice. Put the tops into cold water for a short time; drain them, chop them, and fry them in butter. Then add to them the diced roots; season with salt and pepper, and add about $\frac{1}{2}$ pint of stock. Stew until the vegetables are quite tender; thicken with a little browned flour, and serve immediately.

BAKED KOHL-RABI.—Peel, cut into slices, and parboil in salted water a Kohl-Rabi. Drain the slices and put them into a buttered casserole. Sprinkle with salt, pepper, and bread-crumbs. Moisten with milk or stock, and bake until brown.—*Guardian*.

Salade des légumes.—In a note about salads recently I left out one important one, which is the French *salade des légumes*. This is one of the best salads for the hot weather, and is often made of cold Peas, Beans, and other vegetables, with a light dressing.—W.

Onions.—For many years we have been so accustomed to an abundance of these that we take badly to the high prices they have made of late. A greengrocer lately told me he had bought Onions in Covent Garden some few years ago at one quarter the price he was now paying. In the light, sandy soil I have to deal with, Onions are not a profitable crop, the best results being obtained by sowing in boxes and planting out. Where Onions are difficult to grow, then Leeks should be grown.—DORSET.

TREES AND SHRUBS.

THE POPLARS.

THE Poplars are essentially moisture-loving trees, for although they grow well in ordinary garden or park land, development is most rapid when they are planted in the vicinity of water, and, like the Willows and Alders, they give good results in swampy ground or in land that is subject to periodical flooding. A short time ago a very wet area of land was pointed out to me in the north of England from which a crop of Poplar trees had recently been removed. From its appearance the land must have been valueless for ordinary purposes, yet many fine trees had been grown which, at fifty years of

foliage, and flowers may all be considered. The fastigate habit of the Lombardy Poplar, for instance, appeals to many people. It is also of value for planting in places where trees of a wide-spreading habit would be out of place. The European and American Aspens, again, are excellent for garden planting, their dainty quivering leaves being always admired. The white Poplar and its varieties, also the grey Poplar, may well be planted for their light-coloured bark and silvery or grey foliage. The Balsam Poplar is worth growing for its fragrance, whilst the flowers, particularly catkins of male trees, are often very beautiful.

Most of the Poplars are easily increased from cuttings of year-old shoots cut to the length of 12 inches and inserted in a border out of doors. The Aspen group is

those recommended for commercial planting are indicated, but perhaps better than the species are certain hybrids which are more vigorous than their respective parents, growing more rapidly and producing timber more quickly than the species. Prof. A. Henry, of Dublin, has interested himself a good deal in hybrid Poplars, and in addition to the old hybrids, he has raised, during recent years, a number of new ones, which are making remarkably rapid growth and promise to become valuable for commercial planting.

P. ALBA is very useful for planting about the margins of lakes and ponds, for in such positions its white leaves are very effective. It does not grow very large here, but is sometimes 100 feet high on the Continent. It is not worth planting as a timber tree here. The variety *pyramidalis*



Populus angulata at Danny Park, Sussex.

age, averaged about 60 cubic feet of timber each, and the wood had been sold at 10d. a cubic foot. At the time of my visit preparations were being made for replanting the area with the same class of tree. In some places the wood of the Poplar is not liked on account of its short life when in contact with the soil. Posts, for instance, made of the wood last but a very short time if they are not creosoted. The wood of the Poplar is, however, popular for many purposes, such as box-making, brake blocks, and colliery trucks, and is also in demand by cart and wagon builders. Large quantities of Poplar are imported to the eastern counties from N. Europe, the wood being split up for the manufacture of "chip" flower and fruit baskets, whilst Poplar wood is a favourite kind for match-making.

When planting for ornament only, habit,

less easily raised from cuttings, and is often propagated from suckers. Poplars can be raised from seed, but it is rather difficult to find the seeds amongst the large amount of cottony-looking fibre or fluff which surrounds them. When collected they may be sown in boxes and kept in a frame until the seedlings appear. When a plantation of Poplars has to be made it is wise to place the plants out whilst small or plant the cuttings where the trees are to grow. If the ground is very wet, advantage should be taken of any slight rise for the insertion of cuttings or trees, whilst it may even be wise in some cases to make little mounds upon which to start the trees. Once well rooted they will look after themselves. They withstand wind moderately well, and may be planted fairly close together for wind-breaks.

In the following selection of species, etc.,

is of close, erect habit, and can be used as a substitute for the Lombardy Poplar.

P. ANGULATA is a large-growing tree from the S.E. United States. It is peculiar by reason of its winged or sharp-angled branches. Although not very common, fine specimens are seen here and there, a notable one being in the gardens at Syon House. The accompanying illustration is of an old example of this species.

P. BALSAMIFERA is the common Balsam Poplar of N. America. It forms a handsome tree and bears long yellow catkins in spring. Its buds are sticky, and from them a pleasant odour is given off. A closely allied and equally ornamental tree is *P. trichocarpa*.

P. CANESCENS.—This, the grey Poplar of gardens, is often mistaken for *P. alba*. Here it is a more vigorous tree, growing 70 feet to 100 feet high, with a handsome

grey trunk and large, spreading head. It may be planted for ornament and also for the production of timber.

P. EUGENI is one of the hybrid Poplars, and perhaps the best of the older ones for general commercial planting. It is fast-growing, of erect habit, with a narrow head, and is largely used on the Continent as a hedgerow tree and for avenues. It originated near Metz about 1832.

P. LASIOCARPA is a new species from Central China. The leaves are each often a foot long and up to 9 inches wide, with red stalks and veins.

P. NIGRA, the common black Poplar, is sometimes found as a very large tree with a prominently burred trunk, but the black Poplars distributed from nurseries are not always the typical tree. Although it forms a large tree it is inferior to the hybrids for commercial planting. The common Lombardy Poplar is *P. nigra* var. *italica*.

P. SEROTINA, commonly called the Black Italian Poplar, is a hybrid between *P. nigra* and *P. monilifera*, and is a better tree than *P. nigra* for commercial planting. It grows rapidly and forms a fine large-headed tree. Few Poplars have been more widely planted. *P. marylandica* is another fast-growing hybrid with a wide-spreading head.

P. TREMULA (the Aspen) is a native of Europe and wild in the British Isles. It is very handsome when covered by its purplish catkins in spring. There is a weeping form of this. *P. tremuloides* is the American counterpart of *P. tremula* and an equally handsome tree. Of this there is also a pendulous variety known by the common name of Parasol de St. Julien.

The value of the various kinds of Poplar for planting in the vicinity of the sea does not appear to be fully appreciated, but they withstand sea air well and grow very fast. Those with erect branches and comparatively narrow heads might be used with success for street planting. Poplars are used for this purpose in some parts of Westcliff-on-Sea. D.

NOTES AND REPLIES.

Storm-resisting trees.—Mr. Elwes, in the *Gardeners' Chronicle*, has some remarks about the fitness for our climate of certain popular foreign trees:—

"No species has suffered so much as the common Spruce, a tree which has been most unduly praised by many foresters, but which, in my opinion, should be no longer planted as a forest tree except in very special localities. As an ornamental or shelter tree it is far less valuable than many others, because on deep soils, where it grows fast, it forms coarse, knotty, inferior timber, and on dry soil it grows slowly and soon decays at the heart. Ash, Beech, Larch, and Sycamore resist wind much better, and their timber is much more valuable. Poplars have suffered considerably, and even Scots Pine had their tops broken off by the weight of snow. Lawson and Nootka Cypress and *Thuya plicata* have come through the ordeal wonderfully well, for where their branches hold the snow they bend but rarely break, and I feel confirmed in the opinion which I have often expressed, that these three trees will eventually prove valuable for general forest planting."

The double-flowered Bird Cherry (*Prunus Padus flore-pleno*).—The common Bird Cherry is very ornamental in May, for at that time it is covered with white flowers and is a conspicuous object in many parts of the country. For gardens there are selected forms that have been given varietal names and which are even

better than the type, one of them being the double-flowered variety. It is a fast-growing tree, if anything, more vigorous than the ordinary form, and bears long racemes, each 6 inches or so in length, of semi-double, white flowers which last a week or more longer in good condition than those of *P. Padus*. Two other effective varieties which are more free-flowering than the type are *Alberti* and *Watereri*, the former producing racemes 4 inches or 5 inches long, whilst in the latter case they are up to 8 inches in length. It must not be supposed, however, that all the named varieties are superior to the type, for several of them ought never to have been named. This applies particularly to those with variegated leaves, notably *aucubifolia* and *aurea*, the variegation in both cases being poor. The variety *comutata*, too, though very attractive and earlier than the type, is not always a success, for it is a native of Manchuria; and, like several other trees from that country, it begins to grow too early here, and the young shoots and flowers are often seriously injured by late spring frosts.—D.

OUTDOOR PLANTS.

BEAUTY IN THE GARDEN.

ONE of the features of all small gardens should be the herbaceous border. Once started, with a little renewal each year, it is a source of continual pleasure. All plants in it should be grouped, as stray plants here and there give no effect. Have the border wide—6 feet or 8 feet at least—and the full length of the garden, and if possible facing south. Group the larger plants, such as the Lupins, Delphiniums, and Hollyhocks, at the back, coming down in height towards the front. Clumps of *Marguerites* are showy, and the purple of the *Stenactis* is always pretty, for filling up the various spaces which always occur. Buy some dark Snapdragons and group them together into a space occupying about a yard superficial, fill in another space with *Zinnias*, yet another space with *Nemesia*, and do not forget a nice clump of Pinks somewhere near the front of the border. It is surprising what effects can be got by quite simple means and a little trouble in a garden.

Paths are always difficult to deal with. Gravel gets kicked up and weedy, and asphalt is, of course, out of the question from an artistic point of view, but with stone flags the difficulty disappears, and immediately charm and tone are given to the garden. A narrow stone path with a Grass margin on both sides gives a delightful effect. Portland stone flags are excellent for this purpose, as they keep a bright whitish colour. It is better to keep the stones roughly in squares and oblongs of varying sizes than to go in for what is known as crazy pattern. The main lines of the garden should be kept simple. In a small garden straight lines are much better than wobbly curves, and much greater dignity is maintained. If at the end of your paved walk you can fix up a pergola so much the better. Have the up-rights of 4-inch rustic Oak posts, with 4-inch cross pieces on top and project them well over each side. Group the dwarf Roses together in a bed by themselves with a sunny aspect. Lavender between the Roses gives a very pretty effect. At the top of the path, and nearer the house, an arch in French trellis work may be erected—*i.e.*, the trellis work square with arched iron top. This should be constructed with sawntimbers and treated with a wood preservative, and at each angle of the arch a purple Clematis may be planted. Very often at the back of

a house there is a recess formed by the projection of the outbuildings. This, if possible, should be raised a step or two above the general level of the garden and form a small terrace.

GERALD McMICHAEL.

THE GLORIES OF THE SNOW.

(CHIONODOXA.)

THESE have been extremely beautiful this year, the first blooms having opened during the early part of February, reaching their highest state of perfection at the latter end of March and early April. There are several kinds which vary in colour from deep gentian-blue to the softest lavender-blue, and there are some approaching pink, while others are pure white. When first planted they are not—as a rule—so fine as in following years, when, if in good soil and left undisturbed, they not only increase in numbers but in length of stem and number of flowers. We grow them in masses in the Heath garden, intermingled with dwarf Heaths and the Sand Myrtle (*Leiophyllum buxifolium*), whose pink buds are on the point of bursting. Near by are Daffodils peeping from among the rich brown seed vessels of the Cornish Heath, which serve as a background. In the distance a brilliant group of the Scarlet Windflower comes into view. Apart from their use in grassy banks, the Snow Glories are used—three or four rows wide—as edgings to flower-beds, where they grow through some permanent edging plant which comes into prominence as the bulbs pass out of flower. In some instances they are allowed to trail out into the beds, and a pretty carpet they make to the Roses and other things above them, which as yet are scarcely awake. Others are charming, peeping out of retaining walls and from among summer-leaving Ferns. A few of the best include

CHIONODOXA LUCILLE, a beautiful species reaching nearly 1 foot in height, and bearing many flowers, which vary in colour from purple to the palest blue, with a white centre. It is a distinct and most attractive kind, which has withstood the trying weather we have lately had. Growing near is

C. LUCILLE ALBA, which was found by Mr. George Maw. It seems more free flowering than the blue, sending up several graceful spikes from each bulb, each carrying from ten to fifteen flowers, which, when first expanded, are slightly tinged with pale blue, but develop with age to the purest white. This charming form will be much sought after when better known and more plentiful. In

C. GIGANTEA, sometimes known as *C. grandiflora*, the flowers are almost twice the size of those of *C. Lucille*, the petals broader, and the whole flower of a decided colour, although the shades may vary on different plants. The colour of the type is porcelain-blue. I recently discovered a delicate rose-coloured variety among a colony of plants. This is the last of the Snow Glories to bloom with me, and therefore is valuable in extending the season.

C. SARDENSIS is perhaps the most graceful of them all, the flowers smaller than in the foregoing sorts, being of the deepest blue with a conspicuous white centre. This is the predominating colour, there being a total absence of the paler shades so frequently met with in those previously mentioned. It is a very telling flower and looks well in the mass, the bronzy foliage and flower stalks adding to its beauty.

E. MARKHAM.

Dahlias. During the week a large bed was planted with tubers of Dahlias in a dormant state. These are the stock plants from which, under the circumstances, it was decided not to propagate. Among them are some of the

Pæony-flowered section, which, if a trifle coarse, are always singled out for admiration on account of the huge size of the blooms. I have lost taste for them, although, no doubt, in a large bed such as the one in which they are planted, they are very showy and rather striking, more especially when viewed from some little distance.

NARCISSUS MRS. JAMES H. VEITCH.

DOUBTLESS one of the difficulties which beset the amateur cultivator of Daffodils to-day is what sorts to select which are suited to the ordinary methods of outdoor gardening, and reasonably cheap withal. To any such the above named, of which an illustration accompanies this

good idea of its general character. Happily, too, it is among the cheap Daffodils of to-day, and a dozen may be purchased for seven or eight shillings. The variety is of Dutch origin and is grown by the leading specialists in England. E. H. JENKINS.

Orchis mascula.—This well-known native plant makes a very pretty subject for a semi-wild part of the garden. It grows very well here in North London in a half-shady bed of a rather rich, heavy vegetable soil. It appreciates dampness, though it may often be found growing in

garden. It usually flowers in July or August, but the date of planting would determine the month of blooming. Planting can be done in May in a well-drained soil. In warmer districts April would not be too soon, while planting can also be deferred until June. The flowers are of a salmon-scarlet shade with crimson blotches at their base.—C. TURNER.

Jonquils.—The ever-increasing varieties of *Narcissi* in bloom have been augmented by the Jonquils, which now (April 23) are in hue form. Both the large-flowered and the smaller kinds are represented, and as they are sweetly-scented they are always welcomed for cutting. Jonquils, too, force well, and are equally appreciated as pot plants early in the year.—KIRK.

Limnanthes Douglasi.—This is a useful free-blooming hardy annual. Sow out-of-doors now in any good soil. It averages about 6 inches high, so should be sown in the front of the border in patches or as an edging. It can also be sown in August and September in warm districts, and treated thus it blooms much earlier.—E. T. ELLIS, *Wetwood, Ecclesall, Sheffield.*

NATIONAL AURICULA AND PRIMULA SOCIETY.

THE annual exhibition of the southern section of this society was held in the Royal Horticultural Hall on May 2nd last, the occasion marking the fortieth of its kind. As might have been expected, the exhibition was not a large one, the competition being less keen than in previous years. At the same time, it should, in fairness, be stated that the exhibits in the leading classes were particularly good, and came in for a large share of attention. The James Douglas Memorial Challenge Cup, the "Blue Riband" of the occasion, offered this year for six alpine Auriculas (amateurs), was won by Miss Lowinsky, Sunninghill, Berks. Mr. James Douglas, Great Bookham, was, as usual, a chief prize winner. Following are some of the more important exhibits:—

For twelve Auriculas dissimilar two competed, Mr. James Douglas, Edenside, Great Bookham, being a good first, having, among others, excellent examples of Harrison Weir (the best of the crimson selfs), Richard Headley (superb grey-edged variety), Rachel (white edge), Sir John Falstan (yellow), and Ringo. Messrs. Phillips and Taylor, Bracknell, Berks, were second, Mikado, Mrs. Phillips, and Acme being some of the finer sorts. These two exhibitors were in the same positions for six Auriculas distinct, Mr. Douglas showing W. Smith (green edge), the variety being awarded premier in its class, Harrison Weir, George Lightbody, Ringo, Marmion (grey edge), and Acme (white edge). For four Auriculas distinct, the before-mentioned exhibitors being ineligible to compete, Miss Lowinsky, Sunninghill, Berks, was first, her best being Acme, favourite, and Smiling Beauty; second, Mr. J. C. Allgrove, Slough, who staged George Lightbody, Favourite, and Mrs. Henwood. Mr. C. Turner, Slough, led in the class for a single specimen self with Mikado (one of the best dark varieties); Mr. Douglas following with the indispensable crimson Harrison Weir. For four show Auriculas open to amateurs only, Mr. H. W. Mason, The Hutch, Banstead, was first, having Victor, Colonel Champneys (fine grey edge), and Heather Bell (white edge).

Alpines.—The class for twenty-four alpine Auriculas, not less than twelve distinct varieties, was a considerable attraction, albeit only two collections were staged. In this, Mr. Douglas was first with an admirable lot, his set including Argus (fine red, white centre), also awarded premier, King George (good centred maroon, shaded reddish-bronze), Gold Eye (crimson and gold), Phyllis Douglas (the finest white-centred alpine known), Duke of York (red and gold), Prince of Tyre (violet-purple, pure-white centre, very handsome), Mrs. J. Douglas (purple, white centre), and Day Dream (red and gold). Messrs. Phillips and Taylor, who were second, showed the white-centred and crimson Silverwood (premier), Argus, Phyllis Douglas, Majestic, Antonio, and Miss Lowinsky (red and gold). The two exhibitors just named were in the same order for twelve Auriculas, Mr. Douglas having very fine plants of Argus, Prince of Tyre, Actæus, St. Vincent, and Firefly (glowing red and gold). For six alpine Auriculas distinct, amateurs, two competitors staged, the James Douglas Memorial Challenge Cup being awarded to Miss Lowinsky, Sunninghill, Berks, for an excellent set comprising Claude Halcro, Mrs. J. Douglas, Thetis, Phyllis Douglas, Argus, and Antonio. Mr. J. L. Gibson, Belmont, Surrey, the cup winner in 1914, showed Pilatus (First-class Certificate), Mrs. J. Douglas, Claude Halcro, Roxborough (violet, white centre), Prince of Tyre, and Argus, indispensable to any collection. Another attractive class was that for twelve fancy Auriculas. Here Mr. Douglas was alone, showing Golden Dream, Cassius (red, white centre), Cato (a particularly good yellow), Sir Edward Cassell (yellow, white centre), Sunrise (green, reddish-claret ground, and white centre) (a most remarkable combination), Kestrel (green edge), and Spectre (the nearest approach to a pure white Auricula). Mr. H. W. Mason, Banstead, was first for six alpine Auriculas and six fancy Auriculas, Prince of Tyre, Brilliant, Muriel, and Mrs. J. Douglas being best in the former, and Lady Veitch (fine red) and Great Warley (pale mauve) in the latter. In the class for six



Narcissus Mrs. James H. Veitch.

note, may be recommended without the least hesitation; not because of a special beauty or refinement exceeding all others of its class, but because of a general utility, boldness, and constitutional vigour which, combined, are not readily surpassed. It is of the yellow trumpet class, and produces a flower of great size and substance. Because of these attributes it has more than once been compared to a giant Emperor, though of a somewhat deeper yellow tone than that well-known sort usually assumes. Than this surely no greater tribute is needed, while the flowers depicted in the illustration give a

quite dry situations. It transplants quite easily when in flower, but it is necessary to dig deeply when moving it, as the tubers are some way below the surface. My plants came from a damp meadow where they were growing in thousands, and they seem quite happy in a town garden where they are mixed with Cowslips, Primroses, Bluebells, etc., making quite a pretty picture just now. The pretty spotted leaves begin to appear about December if the weather be at all mild.—N. L.

Anomatheca cruenta.—This charming little bulbous plant is well adapted for the rock

alpine Auriculas for those amateurs who have never won a first prize, Mr. F. Pain, Seven Kings, was first, having Prime Minister, Argus, Duke of York, and J. T. Bennett Poë.

Primulas.—For a group of *Primula* species and varieties on a space not exceeding 12 feet, Mr. J. C. Allgrove staged the double crimson Pompadour Primrose, also Mrs. Berkeley, Forresti, sibirica chinensis, marginata, Julia, verticillata, frondosa, and others. This exhibitor was also first for six Primulas, having Veitchi and the peculiar red-flowered tangutica among others. Mr. G. W. Miller, Wisbech, was first in each of the following classes: Twelve fancy Polyanthus, single specimen Polyanthus, twelve single Primroses, and six double Primroses (not necessarily one plant of each).

Mr. John Crook, Camberley, in a non-competitive display of Polyanthus, showed a considerable variety of his new terra-cotta strain, which represents quite a new break in this popular race of spring flowers.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MAY 4TH.—*Rhododendrons* (in several varieties), *Azaleas* (in variety), *Cydonus* (in great variety), *Berberis* (in variety), *Pyrus alatus* (in variety), *Prunus* (in variety), *Camellias* (in several varieties), *Amelanchier coronaria*, *The Snowy Mespius* (*A. Botrydium*), *Labrador Tea* (*Ledum latifolium*), *Sand Myrtle* (*Leptophyllum buxifolium*), the *Pearl Bush* (*Exochorda*), white and yellow *Broom*, double and single *Gorse*, *Salix Britzensis*, *Daphnes* (in variety), *Lilacs*, *Evergreen Laburnum* (*Piptanthus nepalensis*), *Coronilla glauca*, *C. Emerus*, *Viburnums* (in variety), *Keria japonica* (single and double), *Japanese* and other *Cherries* (in variety), *Andromeda*, *Corylopsis* (various), *Ribes speciosum*, *Magnolias* (in variety), *Spiraea arguta*, *Laurus Miscchana*, *L. Zebelliana*, *L. nobilis*, *Arctostaphylos californica*, *A. Uva Ursi*, *Vaccinium Vitis Idæa* and its major variety, *Clematis alpina*, *Snowdrop-tree* (*Halesia tetraptera*), *Mexican Orange* (*Chorizanthe ternata*), *Heaths* (in variety), *Grevillea rosmarinifolia*, *Aubrietias*, *Windflowers* (in variety), *Saxifrages* (various), *Grape Hyacinths* (in variety), *Bluebells* (numerous), *Tulips* (in variety), *Narcissi* (in various colours), *Sandwort* (*Arenaria balearica*) *A. montana*, *Snowflakes* (in variety), *Crinus* (white, rose, and purple), *Fumitory*, *Solomon's Seal*, *Lily of the Valley*, *Tufted Pansies*, *Forget-me-not* (blue, pink, and white), *Alpine Phlox* (several kinds), *Brodæa unjora*, *Crown Imperial* (various colours), *Fritillaria Meleagris* (various), *Jonquils*, *Ranunculus amplexicaulis*, *R. spiciosus fl.-pl.*, *Ranunculus canadensis*, *Gentianas*, *Auriculas* (various), *Primulas* (in variety), *Foam-flower* (*Tiarella cordifolia*), *Achusa myosotidiflora*, *Othonnopsis chetrefolia*, *Helichrysum bellidoides*, *Veronicas*, *Omphalodes verna* and its white form, *Chrysogonum virginianum*, *Armeria Lauchiana rubra*, *Geums* (in variety), *Viola cornuta*, *V. gracilis*, *Sun Roses* (*Helianthemum*) (in variety), *Lithospermum prostratum* and its variety *Heavenly Blue*, *Potentilla alba*, *Mazus rugosus*, *Bleeding Heart* (*Diclytra spectabilis*), *Ornithogalum* (various), *Honesty* (white, rose, and purple), *Doronicum*, *Megaseas* (various), *Barrenwort*, *Calthas* (in variety), *Water Hawthorn* (*Aponogeton grandiflorum*), *Globe-flowers*, *Meconopsis sinuata latifolia*, *Woodruff* (*Asperula odorata*), *Hutchinsia alpina*, *Houstonia cœrulea*, *Cytisus Ardoini*, *Callonia grandiflora*, *Pentstemon Scouleri*, *Dryas octopetala*, *Oxalis corniculata*, *O. tropæoides*, the *Green Columbine* (*Aquilegia viridis*), *Linaria aquitiloba*, *L. Cymbalaria alba*, *Camassia Cusicki*, *Draba gigas*, *Oxalis enneaphylla*.

WORK OF THE WEEK.—A further planting of Violets (*Ascania* and *J. Raddenbury*) has been made to furnish a narrow border in the full sun, while in the shade and on the ledge of a retaining wall the variety *Baron Rothschild* was used. The weather being favourable, further sowings of annuals have been made. *Pentstemons* have been planted out, one large bed being devoted to them entirely, with the exception of permanent tripods of *Clematis*, which stand among them. The varieties *Newbury Gem* and *Southgate Gem* were used, and the same kinds have been planted as a groundwork to *Henry's Lily*. *Felicia abyssinica* has been put out as an edging to a large bed of mixed Lilies. *Cherry Pie*, raised from seed, has been potted up and given a light position near the glass in a warm house. The removal of plants to cold frames is now of daily occurrence, and these will be thoroughly hardened before planting out. Tubs and vases containing large specimens now receive attention, but this must be carefully done, as extremes of temperature will ruin them for the season. Seedlings of *Delphinium*, *Erigeron strigosus*, *Cynoglossum amabile*, *Aethioppus pulcherrima*, *Lupinus*, hardy *Geraniums*, and *Sweet Williams* have been pricked out a few inches apart in the nursery beds. The final staking of *Sweet Peas* is now being attended to. The stakes usually stand from 8 feet to 10 feet out of the ground. *Carnations* on the layering ground have been cleaned and the soil, which had become hard and caked, well loosened up among the plants. A number of *Salvia patens* and *Veronica Lyalli* has been planted in the flower garden, the latter as an edging. The *Lily tank*, which is now gay with the *Pontic* and *Tyermann's Kingcups*, and

Water Hawthorn, has been cleaned, as the Lilies are now on the move. A sunny bed has been planted with the *Chilian Bellflower* (*Nolana atriplicifolia*), and to break up any flat appearance small groups of *Canary Creeper* (*Tropæolum aduncum*) have been introduced at intervals, and will be supported on small *Pea-boughs*. A few *Perpetual-flowering Carnations* have been planted out in a specially prepared bed edged with *Shamrock Pea*, which has also been used to drape a low retaining wall in front of a bed of *Crinums*.
Sussex. E. M.

SOUTHERN COUNTIES.

Callas.—As a rule, these, after being hardened off, are stood in full sun in order that the crowns may become thoroughly ripened. Attention in regard to watering for some time after the plants are stood outside is, of course, necessary. To obviate this they are this season being planted out in a sunny spot, where they will remain until it is seen that the crowns are about to start growing. They will then be lifted and potted. The crowns of *Calla Eliottiana* have this season been purposely retarded, but as no advantage is to be gained by carrying this any further, they will now be potted in a mixture of loam, peat, a little leaf-mould and sand, and placed in a vinery until growth has sufficiently advanced to warrant their being placed in a warm greenhouse. Three corms are placed in an 8-inch pot.

Chrysanthemums.—These have been shifted on into 5-inch and 6-inch pots and stood in frames on a hard base of ashes and near a water-tank. When the roots begin to push through the new compost the plants will be freely aired and stopped as necessary to ensure a bushy habit of growth. In the meantime the pots into which they will finally be shifted will, as opportunity offers, be washed and crocked, so that when the time arrives the work can be carried out expeditiously. For the same reason the preparation of the compost, with the exception of adding the artificial manure, will be seen to.

Cytisus racemosus.—This is just passing out of bloom. To keep the plants dwarf and bushy they need to be cut back fairly hard every season. This leads to a quantity of new growth, which if properly ripened never fails to flower abundantly. A vinery is a good place in which to give them a start after having been cut back, the moisture and syringing greatly facilitating matters. As soon as they have broken, any repotting that is necessary should be done, and as soon as they recover from root disturbance less warmth is needed. When growth is complete they are moved outdoors and plunged to the rims of the pots in a bed of ashes in company with *Azaleas*.

Cyclamens.—Plants which have been flowering during the past winter and until recently have been moved into a cold pit to undergo the remaining period of rest, so that they can be shaken out, repotted, and started again not later than the middle of June. The young plants are making satisfactory growth, and require little or no artificial heat now that warmer weather has set in. Shade—not too dense—is required to protect the young foliage from the direct sunlight. A gentle spraying three or four times daily keeps them growing freely. Thrips and green-fly have to be watched for, and the house vaporised if signs of either or both are detected. As a rule, the former does not prove troublesome if the ashes on which the pots are stood are kept moist. The plants will very shortly be ready for transferring to the pots—6-inch and 7-inch—in which they are to bloom, the more robust-growing varieties being put into the latter-sized pot.

Perpetual Carnations.—These have been gone through again, and a few of the oldest and least desirable examples have been dispensed with. The general stock has been tied and dressed with manure and rearranged. To prevent an outbreak of red-spider the paths and beds are damped occasionally on hot days. The roof has been "stippled" with a green mixture similar in tone to that obtained by the use of the well-known "Summer Cloud." In the daytime all the air possible is admitted both at the top and sides of the house. *Malmaison Carnations* have been finally tied, and a dressing of *Carnation manure* applied to the surface of the soil and worked in with a pointed stick. It is now requisite to use the blinds during the hottest part of the day and afford the fullest ventilation. A certain quantity of clarified soot-water is put now and again into the tank from which water is obtained to supply the needs of the plants. The beneficial effects of this are reflected in the bold-looking, dark-green foliage and vigorous appearance of the plants.

Sweet-scented Tobacco.—This being in great demand for planting in borders or places where space can be found for a few plants on account of the delicate perfume emitted by them during the evening, a large number of plants has been pricked off into boxes, whence they will be transferred the last week in May to where they are to flower. A good number of *Sander's* variety will be pricked off at the same time.

Late Broccoli.—As a rule, the seed of late Broccoli is sown far too early, the result being that the heads turn in before the maincrop sorts are over and cause a glut. For the

south the second and third weeks in May are quite soon enough to sow. The plants can then be depended on to produce their curds in their proper season and cover the period elapsing between that of the last of the maincrop varieties and the commencement of the Cauliflower season. Unless closely watched and the young plants occasionally dressed with a mixture of soot and lime after having been sprinkled with water, they are more liable to fall a prey to the ravages of the Turnip-beetle than is the case with earlier sowings. Keeping the soil in a moist state tends in a great measure to ward off attack. The seed will be sown in drills drawn 1 foot apart on a piece of well-matured ground, the whole plot being securely netted afterwards as a precaution against the attacks of small birds.

Late Savoys and Coleworts.—These succeed best when sown and raised under similar conditions and at the same time as the preceding. Another and final sowing of Coleworts, when a heavy demand has to be met, should be made the second week in June.

Broad Beans.—The last sowing of these will be made on firm ground, the variety selected being the *Green Windsor*.

Peas.—Besides sowing again for succession, much time has to be devoted to the moulting and staking of those previously sown. If growth is too far advanced before these matters are attended to the haulm never clings to the sticks properly afterwards. The usual care bestowed on the staking of Peas is this season out of the question, and so long as the stakes can be placed in position for the support of the plants, this has to suffice.

Pricking-off, etc.—Further batches of *Celery* have been pricked off, also *Parsley*, on two long and narrow borders. *New Zealand Spinach* has also been sown in pots and placed in warmth to germinate. Early Turnips have been thinned to 9 inches apart, and afterwards damped and dusted over with soot and lime.

Strawberries.—The summer mulch of straw litter for keeping the fruit clean will at once be placed between the rows and around the plants, as this can be done far more conveniently and expeditiously now than when growth becomes further advanced. The hoe will be run through the surface first, both to aerate it and to get rid of weeds just springing up. Whatever manurial properties there may be remaining in the mulch, which will be of old stable litter, will, when rain falls and washes it out, be at once absorbed by the soil. On soils which are apt to be infested with slugs the surface should be dusted with soot and lime before the mulch is put on between the rows.

Peaches and Nectarines.—Disbudding now demands attention. The upper portions of the trees are dealt with first and the inner parts last. Too many growths must not be removed at one time, as the young fruits yet require some amount of shelter as well as support from a free flow of sap. When dull, with the wind blowing from an easterly direction, disbudding is for the time suspended. A. W.

MIDLAND COUNTIES.

Grapes on Vines started at the end of December are now colouring, and require a drier atmosphere. Gradually decrease the moisture, with a freer circulation of warm air, leaving the top ventilators open a little at night. Always guard against sudden changes of temperature, as these cause moisture to condense on the berries, which is detrimental to the bloom. The laterals may now be allowed freer extension until the Grapes are cut. The border, having been well watered and mulched, these Vines will not require any water until the Grapes are cut. In the case of succession vineries, damp them down as often as the dryness of the atmosphere demands. On dull days once will be sufficient, while on bright days it may be done four times. Ventilate freely so as to keep the leaves firm and healthy, beginning early in the morning to prevent scalding of the foliage, and increasing it as the temperature rises. As it declines in the afternoon reduce, and close when it does not exceed 85 degs. But little fire-heat will be required, except at night and on dull days. Frequently go over the Vines and remove all laterals. For Vines in flower, keep more warmth in the hot-water pipes during the day, except when the weather is very hot. About noon go over them, giving the rods a few sharp raps with the hand to distribute the pollen, and in the case of shy-setting varieties fertilise with a rabbit's tail. Do not stop the laterals during the time the Vines are in flower. Damp down but once, and on fine days only. Early in the afternoon is the best time to do it.

Strawberries in open quarters are showing splendid trusses this season. A mulch will shortly be applied to keep the fruits clear of the soil. As there is a shortage of straw this year I shall use long Grass mown carefully and laid straight. The sun soon dries it, being cut early, there is no need to scatter. Garden netting, which is used to preserve ripe Strawberries and other fruits from the birds, may be used with advantage to protect the open blossoms from the effects of late frosts. Place a few forked sticks into the ground at short intervals in breadths of Strawberry plants to be thus protected, so as to keep the netting clear of the blossoms. If the netting be doubled or trebled in thickness it will neces-

sarily be more effective. Maiden Strawberry plants from which the current year's supply of runners is to be obtained will be divested of their flowers.

Peach-trees on a south wall have set a very heavy crop of fruit, and severe thinning is necessary. A knowledge of the size to which the fruits of the several varieties attain under good cultivation is desirable on the part of those entrusted with the thinning. Fruits of such varieties as Alexander, Hale's Early, Amsden June, Bellegarde, and Stirling Castle being of medium size may be left a couple of inches closer on the trees than fruits of Royal George, Violette Hative, and Prince of Wales, whilst such large-growing varieties as Exquisite, Princess of Wales, Sea Eagle, and Late Admirable should be given still more space. Therefore, thin out the fruits upon the varieties named to 5 inches, 6 inches, and 7 inches apart, according to size, reducing the numbers by one-half a few weeks later, leaving, as a matter of course, the most even-sized and best-placed fruits to form the crop on each tree.

Spring-flowering plants.—Where these have to be cleared from the beds to make room for the summer occupants the lifting and removal to the reserve garden must now be taken in hand. Double Primroses must be increased by division, and the divided pieces should be planted out in a very moist piece of ground, choosing also a shaded site not overhung by trees. A north-wall border is an excellent position for them. For the single-flowered types of "Bunch Primroses, which bloom so freely, no method of division will equal the stock raised annually from seed. The yellow Alyssum (*A. saxatile*), which is regarded as a somewhat "miffy" plant in some gardens, and which certainly has a tendency to die out if allowed to become old, may be readily renewed by slips taken off and dibbled into sandy soil. The white Arabis ought also to be kept up by propagating young stock yearly for all purposes in which neatness of growth is necessary. When clothing a wall or rockery, the plants may be allowed to get old, and they increase in effectiveness each year; but for bedding, young stock is desirable each year. As the flower-beds are cleared of their spring flowers they should be liberally manured and deeply dug. This is frequently neglected, though to do so is a great mistake. The plants for beds and borders should now be gradually hardened off and made ready for planting out as soon as all fear of frost is over.

Annuals.—Many of those first sown now require thinning. In view of the unusual number of slugs and snails which are about, this must be done gradually or there will probably be blanks. All plants should finally be allowed ample room for development, and more seed may be sown now for future displays. The annuals raised in heat and pricked off into frames are now sufficiently hardened off to be transferred to their flowering quarters. If this can be done during dull or showery weather the check of removal will be slight.

Celery.—Plants from the earliest sowing are now ready for planting into the trenches prepared for them some weeks ago. At the first favourable opportunity they will be lifted with as much soil adhering to the roots as possible, and planted in double lines from 10 inches to 15 inches apart, according to the variety. The soil about the plants should be made firm, and a dusting of soot applied during the evening or early in the morning once a week. Celery should never be allowed to suffer from drought. Further trenches are prepared for later plants as opportunity offers.

Celeriac, or Turnip-rooted Celery, requires a long season of growth, an abundance of moisture, and rich soil. Strong plants should be put out at the present time on flat beds or borders that have been deeply trenched and heavily manured. Allow a distance of 2 feet between the rows and 18 inches between each plant. During the season of growth it is difficult to over-water this crop, and if possible liquid-manure should be given frequently. Dust the foliage with soot occasionally, as in the case of Celery.

Carrots as soon as large enough will be thinned out to 3 inches apart, and a dressing of soot and wood-ashes applied. Another liberal sowing of the stump-rooted varieties will be made during this month.

Turnips should be thinned whilst the plants are quite small, the surface-soil frequently stirred, and a dusting of soot applied at intervals of a fortnight. Small sowings should be made at frequent intervals to maintain a supply. Suitable varieties for sowing at this season include Orange Jelly, Snowball, and Red Globe.

Onions.—When Onion seed has matured properly it comes up, as ordinarily sown, too thickly, rendering a good deal of thinning necessary. When thinning, let all weeds be pulled up carefully, so as not to disturb the Onion plants, and in dry weather keep the Dutch hoe at work between the rows.

Broad Beans.—The last sowing will now be made, choosing a cool position. As soon as sufficient pods are set, the plants should be topped or they are sure to suffer from the attacks of blight.

Chicory sown in April is now ready for thinning to 10 inches apart. Frequent dustings of soot and lime are necessary as soon as the plants appear above ground, slugs being

particularly fond of this plant. Another sowing will now be made on deep, rich soil in rows 18 inches apart.

Brassicas.—Where seeds have been sown thickly it will be prudent to lift and prick out in nursery beds Brussels Sprouts, Broccoli, Kales, and Savoys in variety before they get drawn. A distance of 4 inches apart will be suitable, provided permanent planting is done in June and early in July. A sowing of walcheren and Self-protecting and of late varieties of Broccoli will now be made. The first two will prove useful late in the year, and the latter will prolong the supply in early summer next year.

Tomato plants should be hardened off as soon as possible and be planted out in sunny, sheltered positions by the end of the month.

F. W. GALLOP.

SCOTLAND.

Walks and paths.—The regravelling of garden walks will shortly be attended to. The annual wear and tear are more obvious in some parts than in others, but all over a freshening up with new material will be given as time permits. Being within easy distance of the beach, plenty of gravel of a suitable grade can be secured merely at the labour of sifting and carting. It is rather of a flat than a round grade, and makes very useful stuff for the purpose. Meantime, the garden walks, etc., have been dressed with weed-killer. There is a prejudice against weed-killer in some places, but its use undoubtedly saves a great amount of labour during summer and autumn. The strength of the majority of weed-killers is, of course, variable. The proportion recommended is usually one part of liquid to fifty of water; but I find equally good results from the use of 1 gallon of weed-killer to 70 gallons of water. Care, of course, has to be taken in the immediate vicinity of Box edges or of Grass verges. The best time at which to apply weed-killer is when the walks or paths are damp, but not wet, and when there is a likelihood of a period of settled weather.

Bare patches under trees have been sown over with Grass seed. Returfing has been given up as the herbage soon died off during summer, and although annual sowing has to be done it produces a green covering which lasts in fairly good order until the falling leaves cover it. Seeds from the hayloft are quite satisfactory for this purpose.

Potting and repotting.—At this time growth is rapid, and plants intended to make large specimens must never be permitted to become pot-bound before receiving a shift. Thus, Zonal Pelargoniums, Petunias, Begonias, and Fuchsias have received their final move, and when the roots fully occupy the soil they will be assisted either by chemical stimulants, by liquid-manure, or by soot-water. The last might be used to a much greater extent, for nearly every plant responds to its use. One exception is made in the subjects mentioned. Begonias, I think, are better without the use of chemical aid, for I have frequently noticed that tubers which had been highly fed are very liable to rot when stored. Small plants, including such things as Libonia floribunda, Primula obconica, Abutilons, Aloysia citriodora, Begonia Rex, Verbena radicans, and Campanulas of kinds, have had a shift commensurate with their needs.

Cinerarias, chiefly *C. stellata*, were pricked off during the week. For this purpose 10-inch pans are used, and twelve seedlings are allowed to each pan. This permits the plants to attain to some size before potting, and the disturbance, I think, is less than when frequent shifting is practised. Last year the plants were put straight into their flowering pots from the pans, and the success of the experiment was undeniable. The same course will be followed during the present season. The pots are plunged to the rims in cold-frames, and while at first very careful watering is necessary, yet this method results in a considerable saving of time. As the season advances the sashes are removed, and the plants are treated exactly as if they were planted out until the approach of early frosts.

Cucumbers.—Seeds have been sown to provide plants for putting out in pits at present occupied by Celery. The Celery will be fit to go out by the end of the month, and a mound of good material in the centre of each pit will be provided for the Cucumbers. These bear freely during summer and early autumn without the aid of fire-heat. The Cucumbers will be the third tenants of the pit since February of this year. Firstly, they were utilised for raising Onions. These, when put out, were succeeded by Celery, which, in turn, will be followed by Cucumbers.

Wallflowers.—Seeds of the various Wallflowers were sown during the week. As a rule, Wallflowers are sown too early. No doubt, the plants furnish better at planting-time, but the check is correspondingly greater. Smaller plants take hold more quickly, and, given favourable weather, soon make up the leeway. While the double Wallflowers are, in their way, showy, yet they have been discarded during the present sowing, reliance being placed solely on some of the older single sorts, such as Blood Red, Belvoir Castle, Harbinger, and Vulcan.

Pentstemons.—Several long beds were planted with Pentstemons of the Gem varieties. These are useful, enduring, and showy, while their wintering does not entail any out-

lay in respect of fuel. The plants, having been grown coolly, are thrifty and bushy, and soon fill up their allotted space. Good sorts for such beds may be found in Newbury Gem and Southgate Gem.

Gladioli.—A final planting of dormant corms has been made. A large oval bed, 12 feet by 24 feet, was planted thickly, the corms being put at intervals of 9 inches. Afterwards the bed was broadcasted with *Eschscholtzia californica* to correspond with a similar bed planted some time ago.

Sweet Peas and hardy Chrysanthemums.—The planting of these two popular and useful subjects was completed during the week. The Peas are grown in good groups, and after the supports of wire-netting were put in position shallow trenches were made in which the plants were placed. As growth progresses the soil will be returned, and will help to keep the roots cool. A further advantage of planting in such trenches is that, should it be necessary, watering is much more easily done. The Chrysanthemums were put out in lines where possible, and in groups through the borders. After planting, stakes were at once put in.

Hardening off.—As there is yet some little risk of frost, especially in the early mornings, the boxes and pans are so arranged that they can be easily protected if necessary.

Under glass the work now tends to become routine for a time. The usual attention to watering, syringing, and ventilation is given, and with a return of summer-like weather much less firing suffices to keep things in good order. In the case of plant-houses, with the exception of the stove, the fires have been stopped, except on an occasional dull day or an exceptionally cold night. It is considered advisable, however, to keep a moderate heat in the pipes of the stove for a short time yet.

Wall trees.—With the exception of Apples, wall trees are in full bloom. As previously indicated, stone fruit is very promising. In the case of Peaches and Nectarines a satisfactory set has been secured, and Plums appear to be setting quite freely. The absence of severe frosts up till now is all in their favour; and if in some instances the show of bloom upon Pears is not quite so encouraging, yet, all over, there is an average promise. Hand fertilisation is always done in the case of Pears on walls.

Vegetable garden.—Maincrop Carrots were sown, and full supplies of Beet were put in. The sorts preferred are Dell's Crimson and Nutting's Dwarf. Good breadths of Cauliflowers Early Erfurt and Walcheren, Red Dutch Cabbage for pickling, Early York Cabbage, Hearting Kale, and a few lines of Brussels Sprouts were put out for early autumn use. The soil was in excellent condition, and the plants already appear to have taken hold. More Turnips (White Stone) were sown, and further supplies of Spinach were got in. Early Cabbages were a little later than usual in being available, but they are now plentiful, and Asparagus is being cut as required.

Kirkcudbright.

W. MCGUFFOG.

OBITUARY.

JOHN WRIGHT.

IT is with regret we have to record the death, at the age of 80, of Mr. John Wright, who was for many years editor of the *Journal of Horticulture*. In 1888 Mr. Wright was awarded the gold medal offered by the Fruiterers' Company for his essay on fruit culture. He was also awarded a gold medal offered by Dr. Hogg for a paper on fruit culture, while the Veitch Memorial Medal was presented to him in 1894. In addition to his duties in connection with journalism he found time to produce a series of gardening guides, including the Fruit Growers', Flower Growers', and Vegetable Growers' Guides. He was for many years a member of the Fruit and Vegetable Committee of the Royal Horticultural Society, and also took a great interest in the United Horticultural Benefit and Provident Society. His work on behalf of school gardening was regarded by many people as his greatest contribution to horticulture.

MR. DAVID PRIOR.

WE regret to announce the death, at the age of 84, on Tuesday, May 2nd, of Mr. David Prior, founder of the well-known Rose-growing firm, Colchester. He first started as a florist and nurseryman at Myland, and in later years, assisted by his son, he specialised in the culture of Roses, winning many prizes, including the late King Edward's Challenge Cup, which the firm won outright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Cinerarias after flowering (Beginner).—In a general sense, Cinerarias after flowering may be thrown away, and be replaced by other seedlings raised annually; but, in the case of a very choice variety, which it may be desirable to propagate from, the bloom-stalks should be cut down nearly close to the soil, and the plants should be placed in a cool, moist frame, where they will soon send up suckers. These will strike root freely if potted off into small pots in a mixture of sandy loam and leaf-mould.

Mignonette in pots (A. L. S.).—Perhaps the best way to grow this in pots is to sow a dozen good seeds in a 5-inch or 6-inch pot. Reduce the number of plants to four when they have grown somewhat. When the seeds are sown, space ought to be left for a dressing of rich soil on the surface before the plants come into flower. If they are grown under glass see that they are placed in a light position, and the nearer the glass the better, as a close, compact growth is best, and this will not be obtained if the plants are shaded in any way or crowded up.

Gloxinias (G.).—These are very easy to grow when the conditions are suitable. Until the plants come into flower a moist position in a warm house or pit is the best. They do not like syringing, and they should be shaded from the sun when bright. A light, rich soil suits them well. Use peat and leaf-mould in equal parts, and a few rough bits of old turf, with plenty of sand to make it porous, and a few scraps of charcoal to keep it open. The pots must be well drained, as the plants will require liberal supplies of water when in full growth. A night temperature of 60 degs. will suffice, though they will bear more heat, and have been well grown in less.

Treatment of Pelargoniums after flowering (H.).—Large-flowered Pelargoniums, when they have done blooming, should be set out-of-doors for a time to harden the growth, and a very moderate supply of water should be given at the same time. When the wood has become brown and hard they may be cut down to about three or four eyes, then place them in a well-ventilated frame. Do not give much water, but syringe them twice daily to induce them to break freely. When this is the case they should be shaken out of the soil and have the roots shortened back a little, and be repotted in a sandy, loamy compost in pots a size smaller than they flowered in. Replace in

the frame, and shade a little, and keep rather close until active growth sets in, then ventilate freely. Later in the season pot on into larger pots, and give ordinary greenhouse treatment.

Symphandra pendula (Inquirer).—This is a showy perennial Campanula-like plant, with branched pendulous stems and large, cream-coloured bell-flowers. It is quite hardy, and rarely more than 1 foot high. Your best plan will be to raise it from seed, sowing this now, and growing on the plants until the early autumn, when they may be put into their permanent position. It is somewhat short-lived, and it is always advisable to have young stock to fall back on. Seeds can be obtained from Messrs. Thompson and Morgan, Ipswich.

Azaleas after flowering (L.).—As soon as the flowers fade, pick all the seed pods off at once, and if the plants need it, shift into a size larger pots, using good peat and some sharp silver sand. The pots should be well drained, and the soil made very firm around the roots. They should then be placed in a warm, moist growing temperature, be frequently syringed, and shaded from very bright sunshine. As the growth advances, inure to more air and sunlight, and when the buds are well plumped up at the points of the shoots, say by the month of August, they may be placed out-of-doors for a time, and in September they should be housed again.

FRUIT.

Treatment of Melons (Inquirer).—The main shoots of Melons should be stopped when they are within 6 inches or 8 inches of the sides of the frame. The laterals which spring out all along these main shoots should be stopped one leaf beyond the fruits. After the crop is set and swelling rub off all lateral growth when it shows, permitting nothing to shade or crowd the main leaves. As regards temperature, the Melon likes warmth both at the roots and also in the atmosphere. In summer a good deal may be done by early closing, shutting up the sunshine in the frame; but a little ventilation should be given early in the morning. Perhaps the most important thing in Melon culture is to have a firm bed of good, sound loam for the roots, so that the growth may be robust and at the same time firm. When Melons are planted in light rich soil it will be difficult to keep them right.

SHORT REPLIES.

Enquirer.—The fruits of all the crosses between the Raspberry and Blackberry are liable to go mouldy in wet weather.—A. T.—Short of ploughing and cleaning the field, we

know of no remedy, and this may not be possible, as the pasture, in spite of the Dandelions, may be good. The only way is to see to it that the plants do not flower and ripen their seeds.

NAMES OF PLANTS AND FRUITS.

Names of plants.—F. T.—1, Anemone blanda; 2, Doronicum caucasicum; 3, Anemone coronaria var.; 4, Anemone nemorosa.—M. L.—1, Brodiaea uniflora; 2, Anemone stellata; 3, Polemonium coraeum variegatum; 4, Muscari conicum.—W. H.—1, Habrothamnus elegans; 2, Cyperus alternifolius; 3, Streptosolen Jamesoni; 4, Clivia miniata.—Q. M.—1, Fritillaria Meleagris var.; 2, The Pasque-flower (Anemone Pulsatilla); 3, Polemonium coraeum; 4, Ornithogalum nutans.—S. H.—1, The Bridal Wreath (Francoa ramosa); 2, Arabis alba variegata; 3, Epimedium alpinum; 4, Anemone fulgens.—D. T.—1, Libonia floribunda; 2, Scilla sibirica; 3, Doronicum caucasicum; 4, Grape Hyacinth (Muscari botryoides).—T.—1, Anemone nemorosa; 2, Amelanchier Botryapium; 3, Kerria japonica fl.-pl.; 4, Choisy ternata.—A. G.—1, Lithospermum prostratum; 2, Caltha palustris; 3, Pyrus Malus floribunda; 4, Ribes aureum.—F. D.—1, Berberis Darwini; 2, Kerria japonica fl.-pl.; 3, Bird Cherry (Prunus Padus); 4, Doronicum austriacum.—E. C.—Brodiaea uniflora (syn. Tritelia uniflora).

BUSINESS NOTE.

There are times when labour has to be economically used, and when, nevertheless, good results are wanted in all gardens. Any deficiency of labour has to be made up by scientific methods. It is under these circumstances that many gardeners will be glad to be reminded of the excellent labour-saving preparations of Messrs. Tomlinson and Hayward, of Lincoln. We refer particularly to their Eureka lawn sand, so valuable for destroying objectionable growths on lawns, to their Eureka weed-killer, for clearing paths, and to their various sprays, insecticides, soil fumers, and sundries. It would be well to send a note to them asking for full particulars.



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NEGLECTED ORCHARD BEAUTY.

ONE should not need to go to the Weald of Kent, the valley of the Seine, the Carse o' Gowrie, or to Worcestershire in order to see the orchard beauty which is so conspicuous in those parts where they grow the trees best. There are vast areas of the United Kingdom quite bare of orchard beauty for no reason, because this orchard beauty is given to us by trees that are quite hardy, and there is hardly any soil in the kingdom which will not grow them. If we look at most of Ireland, we see it quite bare of orchard beauty, though it has as fine a soil as one could wish for fruit-trees, even Cherries and Plums that will not grow well in heavy clays.

The beauty seen in orchards where fruit-trees are grown most of all is very often that of one tree only—it may be Cherry, or Plum, or Apple—but the country gentleman with excellent land for the purpose may have a varied orchard, and, therefore, one much more delightful than an orchard devoted to one kind of tree. This glorious beauty is greater than that which the more favoured southern people possess in their Figs and their Vines, except, perhaps, in Normandy, where lovely pictures of cider orchards in flower or fruit may be seen. Our country for the most part, except the very mountainous, is well fitted for giving us this orchard beauty, which is so great that it is worth having for itself, but there is also the inducement that the lovely trees bear precious fruit. The Pear, for example, is naturally a noble tree, and very often in the great gardens of the country one never sees it grown as a standard as it deserves to be. There are excellent hardy varieties of Pears that might come into every orchard, but, unfortunately, the Pear has been spoiled very much by the constant preaching of the small form and the over-pruned bush, which is often a sad failure; also by grafting on the Quince, whether that suits the variety of Pear or not. Thousands of Pears are grafted on the Quince which can never grow well on that stock, as the best Pear growers will tell us. For the orchard this noble tree should always be grown on the natural stock, which is the wild Pear. Even as it is grown now, what a beautiful tree it is in flower. It seems to do best on the special soils of Kent and Worcestershire, but there is no need to confine it to those counties, as Irish and good Scottish soils will grow it admirably. Another badly neglected orchard tree is

the Cider Apple. I was so much struck with the beauty of a cider orchard in Normandy that I planted one, getting my trees from that country, there being no nursery here that I knew where I could get good strong trees. The result is marvellous with the beauty of the flowers in spring and the beauty of the fruit in the autumn. The trees require no attention, and cattle graze among them, no harm coming from it. The manufacture of cider as it is made in Normandy deserves our attention. English cider is so often rough and over-acid that any way of improving it is worth considering.

The varied orchard could be planted on a piece of rough ground which one cannot plough or garden, and might be made the most beautiful feature of a country place, where even things of less importance as food, such as the Medlar and the Quince, might have their place. The main thing should be the Apple in the best and noblest forms, such as the Blenheim and the Bramley. — W. R.

NOTES OF THE WEEK.

Hesperis humilis.—A soft purple, dwarf, wild Stock from Sir Frank Crisp. It seems worth growing as a rock plant. On some heavy soils double stocks are so poor that I often think the wild single stocks better worth a place.—W.

Tufted Pansy Maggie Mott.—At present (May 11th) both on old and on young plants the display of bloom is lavish, and the soft lavender-blue is beautiful. Although, perhaps, a trifle more straggling in habit than many others, I consider Maggie Mott the best all-round variety in cultivation—certainly, at all events, in its particular colour.—W. McG.

Roses in south-west Scotland.—The past season has taken its toll of the Roses in this district, especially in the case of those planted in spring. A larger proportion than usual of plants has been killed. This is not surprising in view of the severe weather in late winter, following upon a mild January, when many plants had made a good deal of growth.—Ess.

The Blood-root (*Sanguinaria canadensis*).—This does extremely well in the rich alluvial soil of the garden of Mr. E. A. Hornel, Broughton House, Kirkcudbright, and several fine clumps were in bloom the other day. Among them is the variety called multipetala, which has narrower, but more numerous petals. It is an in-

teresting variety, and quite pretty when seen in a good clump as at Broughton House. I prefer the large-flowered *S. canadensis grandiflora*, of which there are a good many clumps in the same garden. *S. canadensis* is quite happy in the full sun.—S. ARNOTT.

Iberis Little Gem.—Those who have small rock gardens may well be reminded of Candytuft Little Gem, which is well named, and one of the prettiest of its class. In May this dwarf trailing plant is covered with numerous heads of white flowers. This Candytuft appears to do as well in a northern exposure as in a warmer one, and does not seem to resent the small amount of sunshine it receives in some places.—S. ARNOTT.

A lovely blue Poppy (*Meconopsis sinuata latifolia*).—The most fascinating thing I have in mid-May is a very beautiful satiny blue Poppy of the Himalayan region. It came, I think, to me from Sir Herbert Maxwell. It is a dwarf plant as I have it on the north side of a low wall, with lots of buds coming at the base. It is much dwarfer than the kinds of *Meconopsis* I have had before. I have it in various sizes. It is a biennial and easily raised from seed, and so far is the most beautiful of its race, especially for the rock garden.—W.

The purple Aspen (*Populus tremula purpurea*).—The Aspen is a pretty, though neglected, native tree, delighting in moist situations, where it grows rapidly when once established. The variety mentioned above is a most desirable tree with attractive purple leaves, each from 2 inches to 3 inches across, and borne on shining purple stalks, while the newly-made wood is of the same colour. The trunk and old wood of this tree are almost white, and glistening in the sunshine show up the purple foliage to great advantage, especially on young trees. It is a rapid grower and promises to become a handsome tree. I notice self-sown seedlings appearing in the vicinity of a vigorous young specimen.—E. M.

Narcissi in Scotland.—I notice that Mr. Arnott refers in a recent issue to the lateness of Narcissi in the south-west of Scotland. Locality must account for that, because here all the varieties, and they are many, were slightly in advance of the usual time of flowering. At the present date (May 11th) there are three plants in bloom which I usually expect during the last week of the month. These are the

Poet's Narciss, Lily of the Valley, and Tulipa Gesneriana. The older Tulipa fulgens is also showing colour quite a fortnight in advance of the normal date. Of course, as Mr. Arnott knows, we are specially favoured in the way of climate and position, and these factors, no doubt, have much to do with our earlier display. I may add, however, that the weather since the opening of May has been cold, inclement, and generally unfavourable.—W. McG., *Balmae, Kirkcudbright.*

Abutilon vitifolium.—This deserves all that has been said for it on page 239. It is too tender for cold, exposed gardens, save in many parts of Ireland and the southern counties of England, and it is interesting to know that it thrives in Northamptonshire. There are a few gardens in the south-west of Scotland where it is quite hardy. The white-flowered variety, *A. vitifolium album*, is not, in my opinion, so pretty as the lavender-coloured one.—S. ARNOTT.

Clianthus puniceus in Sussex.—A friend gave me plants of this, assuring me of its thriving in the forest district, but my plant was killed by a sudden cold after a long mild time. Then comes in Mr. Gerald Loder in mid-May with a fine raceme of the flowers. I thought at first it was from a greenhouse, but it came from a plant on the open wall, so with care, and in not too low ground, this fine plant may be grown in Sussex. It is grown with great success near the coast in Ireland and the west coast of Scotland.—W.

Black Cottonwood (*Populus trichocarpa*).—Having had to deal with a quantity of young trees of this during the past winter the delicious fragrance of their dormant buds was very noticeable. The buds on examination were found to be coated with balsamic gum, of such sweetness as to leave its perfume on one's hands and clothes for many hours. Quite recently, too, while walking in the evening near the fringe of woodland, I came to a spot where the air seemed full of Daphne-like odour, and a little searching revealed the presence of a few young specimens of this distinct and fragrant tree just bursting into leaf. It is a very pretty tree in leaf, and might, except for colour, easily be mistaken for a large Eucalyptus.—E. M.

Corokia cotoneaster.—An odd-looking and charming little tangle of star-like yellow flowers and small spoon-shaped leaves. Clearly from another land, as it is so distinct from European or American plants. I now regret neglecting it as a "botanical plant," whereas it is pretty. It is a native of the mountains of New Zealand. From Sir Frank Crisp. At Nymans (Sussex) I was surprised to see this, in the Heath garden, a tall bush 6 feet or more high and starred all over with yellow flowers. It was away from a wall or any protection. Evidently it is a very interesting addition. The situation is 500 feet above the sea, but is not otherwise favourable, so that we can count on it for making a very interesting bush over a very large area of the land. The New Zealand plants, as shown by Mr. Messel's experiments, are clearly well worth looking after.—W.

Berberis stenophylla.—Of all hardy trees and shrubs, this Evergreen Barberry is probably the most generally useful, and certainly one of the most beautiful. It forms a large, shapely bush without pruning. A hybrid between *B. Darwini* and *B. empetrifolia*, it is a good example of the fact that hybrids are often more vigorous than the parents. Single plants may develop into bushes 10 feet high and 15 feet

or more through. It has long been a favourite shrub at Kew for massing in semi-wild places, and numerous large groups are to be seen about the grounds covering what were previously sandy or stony banks, forming undergrowth for thin plantations of trees, grouped in the vicinity of water, and used as hedges. In every instance it gives excellent results. It is increased by cuttings, which should be put into beds of sandy soil in a cold, but close, frame, for they do not root well in heat. After roots have been formed, they should be planted in a nursery border for two years, and then be transferred to permanent positions, as large plants are difficult to establish.—D.

Note from Ashbourne.—Have you got *Salix magnifica*? If not, you ought to do so. My small plant is a cutting in its second year from Kew, and is already in bloom—a peculiarly interesting group of flowers in the shape of an elongated cone—in its present state, purple on top and green below. Then the leaves are soft velvet in texture and glaucous-green in colour. Such a beautiful thing. Do you know that perhaps I am off to the Swedish clergyman and his dwarf Willows? He lives in a wild parish north of the province of Dalcarlia, in Sweden, with miles of driving from the railway station to his house, through Pine forests and mountains. I cannot start until the autumn, as things are not really settled here yet, but it will be a jolly journey in the wildest part of Sweden. Curiously enough, it is within some thirty miles of where I discovered the dwarf Water Lily. I can never thank you sufficiently for teaching me to appreciate the Heaths. I am in the Heath garden every morning watching the development of the various forms. Then there is no glare of colour, but just simple purples and whites, which are restful. I thoroughly agree with your opinion that it is futile to draw up paper plans for gardens. When we were making Mrs. Greer's rock garden we never knew where the next stone or mound was to be placed until it found itself there. With a natural taste, things form themselves naturally, and without that it is impossible to make a garden which is a pleasure to see. Next week I plant out a good collection of Praeger's Mexican and other Sedums which he has collected from everywhere and now intends to classify.—RICH. H. BEAMISH.

Adonis amurensis fl.-pl.—I should not care to put the double variety of *Adonis amurensis* on the same plane as the single one, but, all the same, it is not a plant to be despised, although I prefer single flowers. Seen at its best, *A. amurensis fl.-pl.* is well worth growing. It comes later than the type, and when the flowers first open they are decidedly pleasing. After a few days, however, they lose much of their beauty. In the Edinburgh Botanic Gardens this *Adonis* does very well and is justly appreciated. Of course, opinions differ, but in view of the fact that *A. amurensis fl.-pl.* helps to bridge the gap between the single variety and *A. vernalis*, and that it flowers for a considerable period, I consider it a useful plant.—S. ARNOTT.

— I wish that my friend Mr. Arnott were a trifle more discriminate in commending plants to the notice of readers. His notes, as a rule, are invaluable; but it passes my comprehension how he can say a word in favour of the double-flowering Amoor *Adonis*. I saw the specimen which impressed him favourably in the Edinburgh Botanic Garden, and it tended only to confirm my dislike of its impure yellow flowers with green centres. The single-flowered Amoor *Adonis* is desirable

because it is almost, if not quite, the earliest herb to bloom after Christmas; but, even so, it is inferior in beauty to our old friend *Adonis vernalis*. There is such a bewildering abundance of choice in border flowers nowadays that plants of inferior merit should be rigorously excluded. The double-flowered *Adonis amurensis* is one that I should place in the Index expurgatorius without hesitation.—HERBERT MAXWELL, *Monreith.*

FRUIT.

SEASONABLE NOTES ON GRAPE VINES.

This year Grapes will be somewhat later than usual in ripening, chiefly owing to the fact that less fire-heat has been used in the early stages. The early varieties, such as Black Hamburgh and Foster's Seedling, will not cause any anxiety in this respect, as both the wood and the berries will be thoroughly matured by the end of the first week in September, even if the Vines have been grown under cool conditions throughout. It will be different with the late sorts, such as Black Alicante and Gros Colman. If Gros Colman and other late sorts were started early in March, and only given a little fire-heat during the night, and grown on with the aid of sun-heat from the middle of May till the same time in September, the Grapes will not be ripe before the middle of October. If fire-heat is not used at all then the inexperienced cultivator must make the best of the heat from the sun throughout. This can best be done by closing the houses an hour or so earlier than usual in the afternoon. The closing of the ventilators must always be gradual, and during the stoning period, which takes about twenty-one days, do not close the structure quite so early in the afternoon. From the end of May onwards, after all danger from frost is past, the top ventilators should be opened about 1 inch every night, the ventilation being gradually increased, according to the weather, very early every morning. The temperature of the house must never be allowed to rise very high before opening the ventilators. When the berries begin to colour the house should never be entirely closed, and more front air must be admitted.

THINNING THE GRAPES.—This should not be delayed after the berries have set and commenced to swell. Those with round berries and short foot-stalks should be more severely thinned than others with oval-shaped berries and long foot-stalks. The inner parts of the bunches of late varieties must be more severely thinned than those parts of the bunches of early sorts. The laterals should be stopped at the second or third leaf beyond the bunch. When the berries have just formed the laterals may be tied down to the wires finally without fear of any being broken off. Give a thorough watering so as to saturate the soil to the drainage. Liquid and artificial manures should be given in weak doses after the thinning of the berries is completed, when the berries have stoned, and when they begin to colour. BOURNE VALE.

NOTES AND REPLIES.

Apples—keeping.—Soil and climate have much to do with the keeping of winter Apples. Since I have resided in Surrey on a light, sandy soil, I have found most Apples keep much longer than when grown on heavy soil and a moist climate in the west. About the middle of March I had given me fine, solid fruits of Bismarck grown in Camberley. This Apple I could not keep after the close of the year in the West of England.—J. CROOK.

TREES AND SHRUBS.

RHODODENDRON CILIATUM.

THIS, as may be seen by the illustration, is a remarkably free-flowering species, and is, when not more than 2 feet or 3 feet high, a mass of bloom. The leaves are hairy, and the flowers borne in loose clusters, as may be seen by the illustration, are rosy in the bud state, but after they are fully open become white. From its early-flowering character the blossoms are often injured by spring frosts and cold winds, and it is well to give it the shelter of a cold house so as to save the flowers. It has been largely used by the hybridist in the raising of new varieties.

THE NEWER WILD SPECIES OF LILAC.

THESE should not be planted widely in this country without considerable trials being made, for several have already proved that, although hardy in winter,

latter part of April, and although the buds were well advanced during the period of cold winds, they escaped serious injury.

S. PINNATIFOLIA has not had its leaves injured, but the flowers are crippled.

S. AMURENSIS is very badly injured, and the same thing happens nearly every year.

S. JAPONICA has had both young shoots and flower-buds killed, and *S. pekinensis* and its variety *pendula* are as bad. Now and then the flowers of these two species are produced, and they are then very striking plants, but generally they are not a very great success. Of the better known rare species,

S. VILLOSA is probably the best, and it is closely followed by the commoner *S. Emodi*, which is quite hardy in spring. Of the newer sorts, so far as can be seen at present, *S. affinis*, *S. reflexa*, *S. Julianæ*, and *S. tomentella* are likely to be the most useful. D.

DAVIDIA INVOLUCRATA.

ALTHOUGH originally discovered in 1869, it was not until 1897 that seeds of this re-

ing near the north end of the rock garden is blooming well, and another near King William's Temple is bearing a number of flower-heads. The blooms are in dense globular heads, and are white when expanded, but the conspicuous part of the inflorescence is found in the two large white bracts which surround the flower-head. These bracts are each 4 inches to 6 inches long, and 2 inches to 3 inches wide, a tree at its best presenting a most peculiar appearance, as if the branches were hung with white tissue paper. As the tree at maturity is said to be as large as an ordinary Horse Chestnut, an idea can be gained of its value for decoration. So far as can be seen at present, it is perfectly hardy, grows with the vigour of the common Lime, is not very particular regarding soil, possibly thriving best in good deep loam, and is easily increased by soft cuttings inserted in a close frame in summer or by ripened wood inserted out-of-doors or in a cold-frame in autumn. D.

GARDEN PESTS AND FRIENDS.

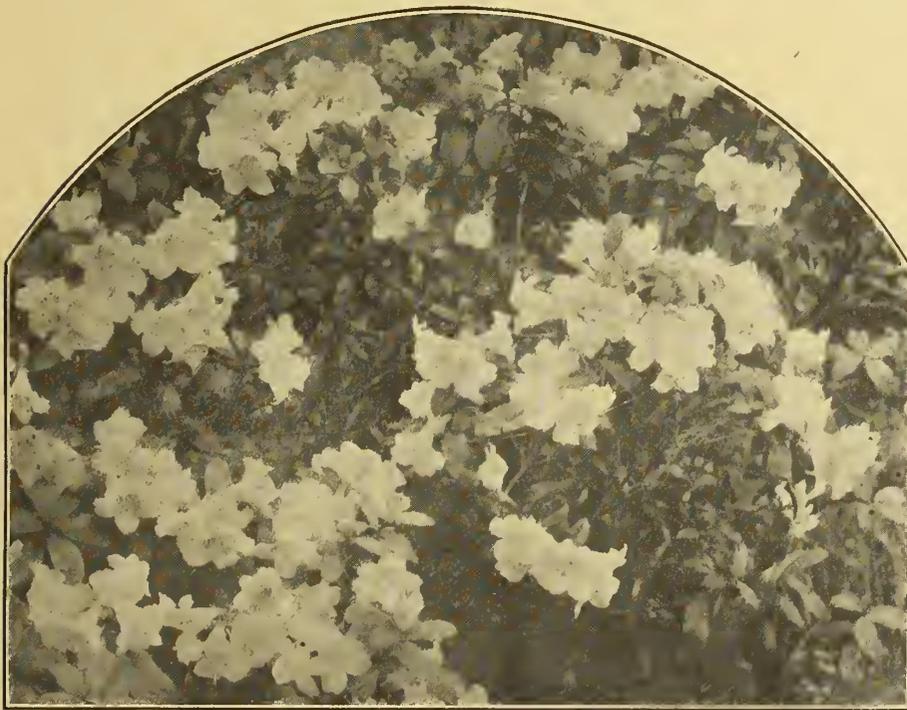
THE TURNIP GALL WEEVIL

(*CEUTHORHYNCHUS PLEUROSTIGMA*, Marsh. = *CEUTHORHYNCHUS SULCICOLLIS*, Gyll.).

THE Turnip gall weevil, or beetle, is at times a source of considerable loss to Turnip and Cabbage crops, though, owing to the fact that injury caused by the weevil somewhat resembles that due to the more serious "finger-and-toe," the presence of the former is not always realised. In the case of finger-and-toe a fungus (*Plasmiodiophora brassicæ*) is responsible for the malformation of the root, while in the case of an attack by the gall weevil the growths are definite galls formed by the larvæ of this insect. Care should be taken to distinguish between the two diseases, as the methods of control are different.

DESCRIPTION OF INSECT.—The adult insect is a small beetle about $\frac{1}{8}$ inch in length with the long proboscis characteristic of the true weevils (*Rhynchophora*). In colour it appears to be black above and greyish on the underside, but if it be examined through a lens it will be seen that the upper surface is sparsely dotted with grey and white scales. Several other species of the genus *Ceuthorhynchus* are harmful to Turnips—e.g., *C. assimilis*, the larva of which lives in the seed pods, *C. quadridens*, which in the larval state feeds in the stems of the flowering plants, and *C. contractus*, which as an adult attacks the seed leaves (cotyledons) of the young plant. The differences between these various species, and, in fact, between the genus *Ceuthorhynchus* and other allied genera of the *Rhynchophora*, are minute, and from the growers' point of view not worth entering into, since each species may be known by the form of injury it produces. The larva is a small shining white or yellowish maggot with a brown head. It is legless, and is found inside the galls usually in a curled up or semi-circular position. The pupa is white. It lies in the earth in a cell formed of particles of soil glued together by a sticky material secreted by the larva.

LIFE HISTORY.—The adult beetles emerge from the pupæ in spring and summer, and the females then lay their eggs in or on the roots of the food plants. On hatching, the young larva feeds on the root, which is stimulated in some way so that it forms a gall. The gall at first is small, but grows gradually until it may attain the size of a small marble, and in many cases several galls coalesce to form a single large out-growth



Rhododendron ciliatum. From a photograph in temperate house in the Royal Gardens, Kew.

they are tender in spring, and both flowers and young shoots are often injured by cold at that season. It is not only the newer ones that are affected in this way, for several of the older wild kinds fail to do themselves justice for the same reason. In the neighbourhood of London during the present spring

SYRINGA ALBO-ROSEA and *S. WILSONI*, referred to by E. H. Wilson in a recent article in *The Garden Magazine* under the name of *S. tomentella*, have escaped injury, and the flowers will now, doubtless, be perfected.

S. REFLEXA is growing well and the shoots are uninjured; no flowers are, however, showing.

S. OBLATA has been badly injured, and it rarely flowers well. Some plants, however, appear to be hardier than others, and a crop of flowers is borne occasionally. It cannot be recommended.

S. JULIANÆ is growing well, and neither young wood nor inflorescences show signs of injury. The same can be said of *S. villosa*.

S. AFFINIS was in flower during the

markable tree were received in Europe by M. Maurice de Vilmorin. The seeds were sown, but one only germinated, and that was planted at Les Barres, where it developed rapidly, and bloomed for the first time in 1906. Cuttings from that tree were rooted, and one was sent to Kew. This was planted in the Himalayan House, where it has grown into a fine tree. In the meantime, Messrs. Veitch sent Mr. E. H. Wilson to China to collect seeds of various plants hitherto known only by herbarium specimens or descriptions, and the *Davidia* was one specially commended to his notice. He succeeded in introducing a large number of seeds about 1900, which germinated well, and a great many seedlings were raised which two or three years later were widely distributed about the country. The tree has grown remarkably well in many places, forming strong and long annual shoots and branching freely. It has flowered in several gardens, and at present several trees are in bloom at Kew. The large plant in the Himalayan House is carrying about 200 inflorescences, whilst one grow-

in which may be found a number of chambers each tenanted by a larva. When full fed the larvæ bite their way out of the galls and enter the earth, where they form the cells described previously and there pupate. The length of time spent in the various stages seems to vary within wide limits. The larval period is said to occupy a minimum of four weeks and a maximum of fourteen weeks, and it is sometimes stated that the majority of the larvae leave the galls in autumn, a few only remaining until March. In opposition to this view were some observations made in the early months of 1914 and 1915, when there were received numerous specimens in which most of the galls were still tenanted by larvæ, none of which pupated before the month of March. The probable explanation is that the beetles emerge irregularly in spring and summer and that the eggs from those appearing early produce a second brood of beetles in late summer, which in their turn may perhaps give rise to a third brood in September. These later broods will also infect a Turnip crop, and larvæ of various ages may be found in the same crop at the same time. The insect, therefore, may spend the winter either as a larva or pupa, and this point is of some importance in considering the various means of control.

PLANTS ATTACKED AND NATURE OF INJURY.—The various forms of Turnip, Mustard, Charlock, Rape, Cabbage, Brussels Sprouts, Savoy, and Kohl-rabi are attacked, but complaints most often refer to the Turnip and Cabbage. In the case of root crops the damage lies in the great loss of crop, which is most marked when the plants are attacked at an early stage. If Cabbage plants are badly attacked they are much stunted and make little "head." The growths produced by the weevil may always be distinguished by the fact that they are hollow and frequently contain a larva. The galls are always more or less rounded, and there is never a production of the elongated finger-like growths formed in an attack by "finger-and-toe." Roots injured by the beetle show little tendency to rot, even after the larvæ have left the galls, while the fungus usually causes extensive decay.

DISTRIBUTION.—The Turnip gall weevil is widely distributed throughout the United Kingdom, and records of its attacks have been received from most English counties. It is also well known on the Continent, and is said to be destructive in France, Russia, and Germany. From the economic standpoint it may be regarded as an insect which is present everywhere, and one which, under certain conditions, may increase sufficiently to cause serious damage. It is likely to become prevalent wherever crops of the Cabbage and Mustard family are widely grown from year to year, or where weeds of this family (such as Charlock) are allowed to spread unchecked. On the other hand, it is controlled, though to what extent is not known, by weather conditions, and by its natural enemies, among which birds must be included. A badly infested field which is not suitably treated must, of course, serve as a centre from which the beetles spread to neighbouring districts.

METHODS OF CONTROL.—(1) Where the Turnip crop is attacked, the Turnips should be consumed as soon as possible, so as to destroy the larvæ before they leave the galls. (2) If a Cabbage crop is attacked the stumps and roots should be burned. (3) After an attack the land should be deeply ploughed to bury or destroy the pupæ. In the case of a garden, trenching may be resorted to or a soil insecticide may be dug in. (4) It is better to

avoid growing Turnips or Cabbages on land adjacent to that which has been attacked the previous year, and in no case should affected land carry in succession two crops liable to attack.—*Leaflet No. 303 Board of Agriculture and Fisheries.*

Wasps.—Already over a dozen queen wasps have at this early date (April 26) been accounted for. Every queen killed now means a nest less to reckon with, and all gardeners—and others—ought to make an effort to lessen the numbers of these destructive and, at times, dangerous insects. In the present case a penny for each queen produced is paid, and this reward results in increased vigilance. A similar premium is given for rats, sparrows, and their nests.—*W. McG., Balmac.*

GARDEN FOOD.

PAPPY FOODS BAD.

ALL food reformers should guard against pappy foods, which are one of the great dangers, owing to the modern facility for milling, by which the noblest of our cereal foods are too often ground to dust and made into unwholesome, soft, wet mushes. These need little or no mastication, so that children and others usually bolt them, to their injury. Such foods should be eaten with the addition of toast or unsweetened biscuit, but they are best avoided altogether. Among the best foods that are spoilt in this way are Oats, Barley, and Rice. Oatmeal is often reduced to a sickly pap, whereas to be good for food it should be cooked dry.

Garden vegetables fare no better from the same pappy treatment; for example, Asparagus and Cauliflower. So cooked, they are only fit for the pig tub, as they leave no residue for the stomach to work upon, and what physiologists call cellulose is an essential in wholesome food.

I lately read in a good-class paper a description of Lettuce cookery, in which good Lettuce is taken from the garden and half-a-dozen things are added to it to spoil it, among them chopped liver and spices. Over-cooking of any food is bad, and all who eat garden food should encourage the free use of salads and other foods, particularly fruits, that do not need cooking as now practised. A very ugly form of pappy food is the use of stuffings in salads. That is defeating the very purpose for which we eat salad, viz., for its wholesome salts and pleasant flavour.

NOTES AND REPLIES.

The best late Apples.—I was pleased to read the remarks of "E. B. S., Hardwick," in your April 15th issue, and to note that he is in agreement as to the four best late winter Apples. In order to increase the number I believe we shall have to go back to the old varieties which have disappeared from most nurserymen's lists. I hear good reports of Ashmead's Kernel, a very old Gloucestershire variety, and I have had some stocks grafted this year. Sykehouse Russet and Rosemary Russet are also recommended, and will be tested. With regard to the Wyken Pippin mentioned by "E. B. S." I quite agree that this is a very nice late Apple, coming in about Christmas. It is crisp, fairly juicy, and clean on the palate, but perhaps a little wanting in flavour, and, consequently, not up to the standard of the other four Apples mentioned. It used to be grown a good deal round here, probably coming over the county borders from Warwickshire, and claims its origin at a village near Coventry called Wyken. As a boy I remember very many old trees in our town and county, but probably they have now died out and have not been replaced, except to a limited extent. One always sees, however, this Apple for sale in the shops of our town about December.

The variety is quite good enough to be included in every good collection of dessert Apples. These Apples make a very nice-looking dish on the table, owing to their perfect shape and pretty appearance.—*F. B., Springfield, Northampton.*

The Peccan (Mrs. Tyndall).—This, known also as the Illinois Nut Hickory, is *Carya olivæformis*, common on the banks of the Ohio and Mississippi, and attaining a height of 60 feet or 70 feet. The Nuts of this species are enclosed in a thin woody husk, and are of a light brown colour, shaped like an Olive and distinctly marked by four slightly-raised longitudinal ridges. They are much superior in flavour to those of the rest of the genus, and can be purchased in our English fruit shops. *MM. Vilmorin et Cie., Paris*, can supply the Melon seeds.

EUGENIE ON SALADS.

LAST summer, when Eugénie first came to live with me, she introduced me to her delightful Belgian salads, and now that the warm days are returning she has her oil-bottle and vinegar-flask out once more, and begs that as I like her salads so much I will write about them for the benefit of other English people. "There are two faults you make," she will often say, "one is that you put too many things in your salad. In Belgium we never have a salad with Lettuce and Watercress and Beetroot and Tomatoes and slices of egg all together; we much prefer to put only one or two different kinds of greenstuff and no egg. And in the second place, there is a great art in the proportions of the dressing. Never have I tasted a salad in England in which the dressing had not too little pepper and oil, and far too much vinegar. You English are afraid of oil."

Eugénie says that in Belgium, as here, the staple vegetable for salad is the Lettuce. Often a Belgian salad is composed of nothing but a Lettuce, properly prepared and dressed, and very refreshing it is, but another way is to mix Lettuce and Endive in equal quantities, or sometimes Endive and just a little Watercress. The quantities must not be equal in the last case, Eugénie taught me, as Watercress is so much stronger in flavour, and would predominate unpleasantly if much were used.

Eugénie blames the way we English housewives wash our greenstuff for salad, often letting it lie in water for a long time till it loses its crispness. Her own method is to wipe the leaves over (after removing two or three of the dirtiest and outermost) with a clean, damp cloth. This takes time, it's true, and when she is in a hurry she plunges it instead into a bowl of very cold water for five minutes.

"So often English salad is too wet. You do not dry it properly," she told me. "In Belgium we have a special wire basket in which to swing it till every drop of water has drained away. But here you can manage quite well if you first drain in a colander, and then shake in a clean cloth till all the moisture has gone. Salad can never be nice if it is sodden with water."

BELGIAN SALAD DRESSING.—Ingredients: 1 tablespoonful of salad oil, 1 saltspoonful of salt, pepper to taste, 1½ dessertspoonfuls (3 table-spoonful) of vinegar, 1 saltspoonful of mustard (if liked).

These are the correct proportions; the actual quantities used must depend on the size of the salad. It is easy to mix too much, more than the salad will absorb; there should never be a little pool of dressing left at the bottom of the bowl.

Mix the ingredients well together in a cup, and only add to the salad a minute or two before serving—in Belgium, in fact, the dressing is made and mixed in actually at table. Put in about half a table-spoonful at a time, mixing that quantity well before adding more, and your salad is certain to be delicious.—*Home Cookery.*

PLANTS AND FLOWERS.

ROOM AND WINDOW.

TWO HARDY SHRUBS IN MARCH.

IN spite of the disusual rainfall and cold spring the Portuguese Heath was as beautiful as ever, and, gathering it, I put a few sprays of our native *Andromeda* (*A. polifolia*) in a vase with it. Both did very well together and looked very well indoors. Both are of easy culture in our own land. There is a large as well as a small variety of the native *Andromeda*,

and rest. To keep plants pent up for weeks and months without any air is not the way to keep them healthy. All plants require air more or less, and although the freshness of the air may be said to be very seldom felt in our large towns, yet, by keeping the leaves of the plant clean, they are the better able to breathe what there is. A

SOIL most suitable and most comestable for all window plants to grow in can be found in any locality where there is a hedge. Pull up the first big tuft of Grass from the side of the hedge by the roadside, shake the soil from it, add a handful of sand, and the mixture will suit almost

leggy; try, by timely stopping of the shoots, to keep them as bushy as possible, and near the pot. We now come to the rest of plants. Nearly all plants grown in pots require rest in due season, and that season is usually after they have done flowering. All plants that have flowered during summer, such as *Pelargonium* and *Fuchsias*, are easily rested by being kept moderately dry at the roots all through the winter. In fact, the *Fuchsia* should be taken out of the window altogether during that season, and placed away in some dryish cellar, or on a shelf, free from frost, to remain there until spring again comes round. It should then be brought



The Portuguese Heath (Erica lusitanica) and our native Andromeda (A. polifolia).

and both are worthy of much more attention than is given them. W.

WINDOW PLANTS.

WITH plants cleanliness is essential to healthiness. Therefore, whatever plants may be growing in the window, the dust of the dwelling must not be allowed to accumulate on the leaves week after week. They should be carefully washed every now and then with a sponge and tepid water. This should be done carefully leaf by leaf, so as not to injure the plant. This operation not only keeps the leaves free from dust, but also from insects. Window plants require air, food, light, training,

any window plant. In potting plants be sure to give them good drainage. To effect this, before putting the soil into the pot fill up about one-sixth part with rough pebbles or broken brick. This will enable the water to run freely from the soil and prevent its becoming sour. Press the soil evenly and firmly round the plants, and you have now the chief features required in potting all plants. In summer-time the plants will require almost daily waterings, and an occasional sprinkling over the foliage will be beneficial. This brings us to the

TRAINING. Plants of the *Pelargonium* tribe should never be allowed to become

forth, re-potted in fresh soil, set in the window, and away it goes on the journey of life.

Thus, it will be seen, to keep window plants healthy the leaves must be kept clean, they must have plenty of air, must be potted in good, sandy soil, well drained, and have a sufficiency of water when growing. Train them carefully, and after the exertion of flowering give them a rest.

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OUTDOOR PLANTS.

NATURALISING SPRING FLOWERS.

It is only necessary to see a good example of natural grouping to realise its importance as compared with the more common practice of planting in beds. Groups of Daffodils of uneven outline with a few bulbs breaking away from the main group, here and there, are far more picturesque than any set arrangement. In a meadow some five or six acres in extent, and which is mown each year for hay, the following, flower freely. Falling rather sharply to the south it is thus an ideal place for such a form of gardening. Along the lower side is a small lake, on the banks of which are long drifts of Daffodils, which revel in the cool, moist soil at the water's edge. With the advent of the New Year a few flowers of *Crocus Imperati* appear on the higher ground, and these are followed by other species, such as *C. Sieberi*, *C. biflorus*, *C. vernus*, *C. susianus*, followed also in their turn by other species and numerous varieties. With the end of January and early February a few flowers of the beautiful pale sulphur Bayonne Daffodil (*Narcissus pallidus præcox*) and the little *N. minimus* appear, and close on their heels come the Tenby Daffodil and the Dutch and Cornish minor. February and March bring a further variety of flowers, including Snowdrops.

THE SPRING SNOWFLAKE (*Leucojum vernum*), and the larger form, *L. vernum carpathicum*, both succeed in the Grass. Some of the Snowflakes are in bloom in January, but they do not display their greatest beauty until the following months, when their drooping and sweetly-perfumed flowers, tipped with green, are very attractive. The Summer Snowflake (*L. æstivum*) is a taller plant, which bears several flowers on 2 feet stalks. It is an excellent plant for moist or even boggy places, and should be planted by the waterside, where such exists, or near a small stream if there happens to be one passing through the garden, or in low woodland soil. A little group of this Snowflake—with me—has been under water all the winter, having been planted by a small stream where it enters the lake, and this is stronger and healthier than others less favourably situated. There are other varieties, of which one called Gravetye Giant is the finest I have seen. This handsome form grows 3 feet high in strong loam and carries many flowers.

DOG'S-TOOTH VIOLETS (*Erythronium*) thrive in the Grass, their mottled leaves—always a source of attraction—and delicate-coloured flowers endear them to all lovers of hardy plants. There are several kinds, ranging in colour from white to pale pink, rosy-purple, and yellow. To enjoy them, sunny, sheltered positions should be chosen, as hailstorms are liable to destroy the delicate blooms. A small colony of these is beautiful when pushing the half-expanded blossoms through the Grass. They are also lovely planted at the base of deciduous shrubs, where the flower-stalks are usually longer.

THE WINTER ACONITE (*Eranthis hyemalis*) comes about Snowdrop time and flourishes in the Grass, although it seems happiest in thin woodland, where it spreads rapidly, especially on warm, light soils. Snowdrops planted near by give additional beauty to these yellow carpets.

WINDFLOWERS.—The Scarlet Windflower (*Anemone fulgens*), perhaps the most striking flower for naturalising in Grass, is annually a feast of colour and does not die out as it often does when planted in rich, made-up soils. Plant where it may

get the full amount of sunshine during the early part of the day. Usually at its best during April. The Star Windflower (*A. stellata*) is not happy in our heavy soil, but, given a warm, sheltered position on sandy soil, it would probably be a success. *A. nemorosa*, both single and double forms, unless abundant in the district, should be included, as it comes into bloom towards the end of March and roams about in an interesting manner. There are some forms of this much better than others. The Yellow Wood Anemone (*A. ranunculoides*), another little native, strikes quite a different note of colour among the Windflowers. Its deep yellow flowers, each about $\frac{3}{4}$ inch across, are a feature towards the middle of April. This requires a warm, sheltered spot to bring out its full beauty. A distinct feature of this kind is that it occasionally bears two flowers on a stem. The Blue Wood Anemone (*A. Robinsoniana*) is undoubtedly one of the most lovely spring flowers in cultivation, and, beautiful as some of the other Windflowers are, would be my selection from this large family were I limited to one kind. Scarcely taller than the other Wood Anemones, and in colour a delightful soft lavender, when fully expanded under the influence of the morning sunshine it becomes one of the most fascinating subjects of this large collection of spring flowers. With me it is growing and flowering in profusion on both the sunny and shaded sides of this meadow; indeed, whether it be in cold, bleak spots by the waterside or under the shade of trees, the flowers are equally plentiful, and a few plants quickly spread into small colonies. The soft colour of the flowers is lit up by a central bunch of bright yellow stamens. As an edging to beds on the rock garden or in shady hedges it is very satisfactory. The Greek Windflower (*A. blanda*) commences to bloom early in February and continues in great beauty until the end of April. There are pale blue, deep blue, pink, and white forms of this, and the charming new variety (*A. blanda scythica*), whose petals are white inside and pale blue on the outside. *A. blanda* is the first of the Windflowers to bloom, and for this reason is a most valuable plant, growing rarely more than 6 inches high and bearing flowers each 2 inches across. This should be planted in sheltered nooks, where the storms—so prevalent during its flowering period—are somewhat broken. The Greek Anemone does not spread with the same rapidity as does the Apennine Anemone (*A. apennina*), which, although easily mistaken for *A. blanda*, is a different plant, and comes into bloom quite a month later. *A. apennina* has a creeping rhizome, whereas *A. blanda* has a round bulb-like root. About the middle of April the majority of the

DAFFODILS which create such a wealth of colour come into bloom. Here the large and handsome forms are grouped in great numbers, generally one variety in a place, and in certain instances other dwarf flowers are springing up amongst them. Such miniature species as the Cyclamen Daffodil (*N. cyclamineus*), *N. triandrus*, of which Angels' Tears (*N. triandrus albus*) is a great favourite, Hoop Petticoat Daffodil (*N. Bulbocodium*), Musk Daffodil (*N. moschatus*), *N. Johnstoni* Queen of Spain, a flower as beautiful and graceful as the choicest Lily, are so fragile that they should be grouped near the paths. Planting should not be done in any haphazard manner, such as is often seen in illustrations where the whole surface of the turf is covered with plants, but the most promising positions for the various

subjects should be selected, taking care to leave stretches of bare ground, which give relief and go far to enhance the beauty of the flowers themselves. If this is done no further care or attention is required for years.

GRAPE HYACINTHS (*Muscari*) are excellent for naturalising in the Grass, and where they are allowed to intermingle with Narcissi or the scarlet Windflower a beautiful effect is obtained. Sufficient numbers should be planted to emphasise their real meaning, and a plantation should be made in both sun and shade. Here they are grouped on the higher ground, but this is not absolutely essential to their success. There are several kinds, but the following have proved very satisfactory here: *Muscari conicum* Heavenly Blue, perhaps the gem of this group, of delicious fragrance and in colour a lovely rich Gentian blue. The little bells are freely produced on stout stalks a foot in height, half of which is clothed with flowers which last a long time. *M. racemosum*, a native plant, has very dark flowers, almost black, with little white teeth at the mouth of the bells. *M. botryoides* is an old garden favourite and eminently suitable for this class of planting. All these spread freely. A single bulb will form a number of side bulbs in a few years, and these will send up between fifteen and twenty flowers, which are at their best during April. They are very beautiful as edgings to beds or planted among Azaleas and other summer-leaving shrubs.

SNAKES' HEADS (*Fritillaria Meleagris*).—The flowers of these range in colour from pure white to claret-purple, many of them beautifully mottled; indeed, the variety of colour is one of their great charms. The flowers are freely borne on long, graceful, arching stems. A plantation was made here many years ago in a moist position on the rising ground above the water, and these have annually seeded and increased to such an extent that they now cover a considerable space. We also have them planted on the higher ground of this meadow, but they are not so happy as when growing in moist places. Under trees and in long, wide lines by the sides of little streams they are splendid.

CROWN IMPERIAL (*Fritillaria imperialis*) is a stately plant admirably adapted for grouping in open woodland near the rides or in the warm soils of hedgerows, where its stout stems reach from 2 feet to 3 feet in height and bear several bell-shaped flowers beneath a crown of fresh green leaves. There are various colours, all of which are handsome, but emit a rather unpleasant odour. April and May are the months for their flowers.

LILY OF THE VALLEY is quite happy in loose soil, such as is often met with in old woodlands where decayed leafy material has accumulated.

STAR OF BETHLEHEM (*Ornithogalum*) succeeds in the Grass and in open woodland soils.

SQUILLS.—The Italian Squill (*Scilla italica*) is one of the most valuable Squills for grouping. It has spread so freely here that it annually forms a sea of lovely pale blue not more than 6 inches high. There are light and darker varieties. The Spanish Squill (*Scilla hispanica*) is a fine, robust plant which grows from a foot to 18 inches high and produces numerous large, bell-shaped, deep blue flowers. This is the largest of the Squills and is a grand plant for slightly shaded spots. It will also succeed in the sun. Flowers in May and June. Should a small grove or cool wood be near the garden the native Blue-bell in the various colours should be freely planted. Should a small stream wind its

way through the garden Solomon's Seal should grace its banks, and the Pontic Kingcup as well as our native *Caltha palustris* be planted at the water's edge.

This list could be greatly extended, but I hope sufficient has been mentioned here to show the endless variety of hardy spring and early summer flowers. In this

THE BLOOD-ROOT.

(*Sanguinaria Canadensis*.)

The Canadian Blood-root, so called on account of the coral-red colour of its root, is a charming spring-flowering plant too seldom met with in gardens. As the accompanying illustration shows, it grows



Part of a group of the Blood-root (*Sanguinaria canadensis*) at Lilford Hall, Oundle, Northants.

form of planting the great danger is that of overcrowding and the indiscriminate mixing of colours instead of grouping freely those of distinct shades separately. Some of the blues are beautiful if planted alone or near yellow or scarlet flowers, but if another shade of blue is brought near, the effect of both is lost.

Sussex. E. MARKHAM.

BLUE WINDFLOWERS IN THE GRASS.

THESE have been very beautiful this year, and best of all, perhaps, the azure form of our native Wood Anemone. *A. apennina* is very good, too, but it is apt to go too quickly in the sun, and its right place is a shady lane, if one has it. The Greek Anemone, *A. blanda*, is also very beautiful, and some of its flowers are unusually large, but we have yet to prove that it will survive on our close turf where the Apennine and the English blue Windflowers do so well.

I have striven for many years to praise our English blue one, but, looking at it this year in the full sun, I think I have not said quite enough. It beats them all for beauty and perfect hardiness and freedom of growth. It came originally from Ireland, where our Anemone, in certain gritty soils, varies very much. In turf in April it is one of the most lovely things one can have for the wild garden, and that without any labour or care beyond the first planting. The ground in which these blue Anemones grow with me is mown in May, by which time all the flowers and leaves are gone, and the ground is even mown a second time in the autumn without the least hurt to anything. I have had it in all sorts of positions—on low walls, running about among the wild Primroses, in the Grass, on banks, and it is happy in all. W. R.

The Caucasian Leopard's Bane.—The oft-given advice to break up certain perennial plants at intervals receives strong support from the behaviour of a big plant of the Caucasian Leopard's Bane, which the force of circumstances has prevented me from breaking up at the same time as others. It has spread into a mass about 2 feet across, and has gradually become less and less free flowering. Other much smaller plants, which had been properly attended to, are really fine in their way with their golden blooms, but this one has hardly any flowers, and these are small and on short stems. *Doronicum caucasicum*, even at its best, may not be a first-class plant, but we must not be too fault-finding with early-flowering plants.—S. A.

with us on a bit of low rockwork facing east, in a position partially screened from the direct rays of the sun during the greater part of the day, and when the flowers open the plant produces a dazzling effect. The glaucous, whitish leaves, too, are ornamental in the border or rock garden. It thrives in a sandy loam. The best time for planting is from October until February, and there are many favourable sites to be found which would



Veronica repens in the rock garden. From a photograph sent by Mr. C. Turner, 3, Kenwood-road, Highgate, N.

gain in beauty by the introduction of this pretty, inexpensive plant.

F. W. GALLOP.

Lilford Hall, Oundle.

NOTES AND REPLIES.

Trumpet Daffodil Van Waveren's Giant.—Possibly a little coarse, this is yet a noble and valuable variety. It is not possible to judge of its value by a bloom or two, but in good clumps in the garden or when a few are arranged in a vase their value may be best

understood. I saw some clumps in the gardens of Sir Robert W. Buchanan-Jardine, Bart., at Castle Milk, Dumfriesshire, the other day, and very handsome were the flowers. The deep-yellow trumpet is flanked by a broad, lighter-coloured perianth, which is of great substance. It is, of course, not a novelty now.—S. A.

Arabis alpina grandiflora.—The desire to possess something better than usual leads one to purchase some novelty under the name of *grandiflora*, or *major*, or *superba*, or even *magnifica*, and the result is often disappointment. *Arabis alpina grandiflora*, which was sent out with a flourish of trumpets, is a coarse grower, and not nearly so desirable as the closer-growing *Arabis alhida compacta*. *A. alpina grandiflora* does not flower freely, and the slightly larger blooms do not compensate for the loss of other qualities.—S. A.

Tulipa sylvestris.—This is a pretty species for naturalising in short Grass. A small group has been in existence here for ten or more years, but the bulbs are now getting very weak and flowers are but few. No doubt, the heavy soil of this garden has had much to do with the failure, added to which the bulbs were planted where they get too much shade from the overhanging boughs of an Oak-tree. In light soil the shade would not matter. A desirable quality of this yellow Tulip is its fragrance.—G. T.

Trumpet Daffodils at Castlemilk, Dumfriesshire.—Narcissi are very largely grown in the gardens of Sir E. W. Buchanan Jardine, Bart., Castle Milk, Lockerbie, both in the Grass and in the garden. King Alfred is a favourite, the flowers on their sturdy, erect stems being very useful for cutting.—A. S. D.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

VERONICA REPENS.

The illustration we give to-day shows how valuable this Speedwell is as a carpeting plant. I have seen enough of it to think it preferable to the two most acceptable for that purpose—the dwarf *Mentha* and the green *Sedum Lydium*. It is a dense, close-growing creeper, covering the soil as it extends with a soft carpet of bright-green leafage, only needing occasional lateral trimming to keep it within bounds. It seems to thrive well on

soil that is moderately dry. Those in want of a good carpeting plant should try this mountain Veronica. T.

Corydalis Alleni.—For an alpine-house this *Fumitory* may be recommended, as well as for the rock garden. A pan of this *Corydalis* in one of the houses of the Royal Botanic Gardens, Edinburgh, was attractive in the beginning of February. It was raised by the late Mr. James Allen, of Shepton Mallet, and is charming with its heads of creamy-white flowers prettily marked with purple.—S. ARNOTT.

INDOOR PLANTS.

SWEET-SCENTED RHODODENDRONS.

One of the most fragrant of all Rhododendrons is the Himalayan *R. Edgeworthi*, which is readily distinguished by its somewhat straggling habit and woolly branches. The leaves have strongly-marked veins, and are clothed on the undersides with a rusty-coloured tomentum. The flowers, borne in loose heads, are pure white, except a yellow stain on the upper part of the interior. Unless in particularly favoured parts of the country, such as in Devon and Cornwall, this Rhododendron is tender, hence it is commonly regarded as a greenhouse kind. The fragrance is so pronounced that a very few expanded blossoms will make their presence manifest in even a good-sized structure. This delightful feature has led to its being employed by the hybridist in the production of new varieties, in all of which the fragrance of the original species has been perpetuated. One of the first was Princess Royal, a hybrid between *R. Edgeworthi* and *R. ciliatum*, while others that owe their origin to *R. Edgeworthi* are *R. fragrantissimum*, *R. Sesterianum*, *R. Lady Alice Fitzwilliam*, and *R. Fosterianum*, the last a cross between *R. Edgeworthi* and the Moulmein *R. Veitchianum*. It is scarcely so fragrant as some of the others, but the blossoms, white with a yellow blotch, are magnificent. The late Mr. Isaac Davis, of Ormskirk, raised a dwarf-flowering race from *R. Edgeworthi* and *R. multiflorum*, this last itself a hybrid. These Ormskirk hybrids include Countess of Derby, Countess of Sefton, Duchess of Sutherland, and Mrs. James Shawe, all fragrant. All of the above-named Rhododendrons can be propagated by cuttings of the half-ripened shoots, dibbled into pots of sandy peat, and placed in a close propagating-case in a warm structure. They stand some time before rooting, but, as a rule, the loss is small. When grown into good-sized plants these Rhododendrons form during their flowering period a delightful feature in the greenhouse or conservatory. They may, with advantage, be stood out of doors during the summer months. In the case of large specimens established in pots or tubs they will stand for years without re-potting, though they are greatly benefited during the growing season by an occasional dose of weak liquid manure and soot-water combined. W. T.

NOTES AND REPLIES.

Forcing the Laburnum.—Would the Editor kindly say how to bring on flowering trees in the greenhouse, as there are some young Laburnums which look as if they would bloom if brought into the house for next spring?—J. H.

[Unless the Laburnums have been moved annually, or are established in pots, we cannot hold out any hope of your being successful in flowering them in the greenhouse. Some shrubs with close masses of fine roots, such as Azaleas, Deutzias, etc., may be lifted in the autumn directly the leaves drop, and, if potted at once and watered when necessary, can early in the New Year be taken into a structure where a temperature of 45 degs. to 55 degs. is maintained, shifting them, as they develop, into a house 10 degs. warmer. With this treatment they will flower in a perfectly satisfactory manner. In the case of the Laburnum, however, the root-fibres are very few, the main system being a few stout roots of a deep descending nature. It is, therefore, obvious that if the plants have not been lifted recently their long roots will suffer so much in digging them up that flowers the following spring cannot be hoped for. The only

course open to you in dealing with your own plants is to lift them carefully in the autumn and pot them in some good soil, after which they should be plunged out of doors and kept watered. The summer after this they should make good growth if attended to with water and given an occasional stimulant. It is very necessary that they are plunged in a spot fully exposed to sun and air. They should then form flower-buds which will develop under glass if treated as above advised. In the autumn you can always purchase Laburnums which have been especially prepared for forcing.]

Salvia patens as a pot plant.—Having tried various ways I found the best results were obtained by growing three plants in an 8-inch pot. This is easily done either by striking three cuttings in a 4-inch pot or putting three seedlings into the same sized pot. When well rooted they are shifted into the 8-inch pots, using good rich soil and placing them in an open position out-of-doors. When the pots are full of roots they should be given manure-water twice a week. It is a good method to pinch them to make them break. Another advantage of these pot-grown plants is that the following spring they give fine, strong cuttings, and can then be planted out in the open air. By putting three of these pots 2 feet apart they make a big group and give a mass of colour for months. I have found the plants winter best in pots in a cold frame, protecting in very severe weather.—WEST SURREY.

VEGETABLES.

TRAPPING MOLES.

ALTHOUGH it has been proved that moles devour huge numbers of wire-worms, leather-jackets, and other noxious grubs, most agriculturists—especially gardeners—prefer their absence to their company, and for very good reasons. There are various ways in which they can be disposed of, poison being one. This generally contains strychnine, and some worms, being sprinkled with the powder, are distributed in the runs. Many people, however, have a dislike for using poison of any kind, and it is certainly liable to be picked up by fowls or other live stock. The alternative is to trap the moles, and as it is neither necessary nor essential to employ a professional mole-catcher (save where the area is great), a hint or two here may enable the inexperienced to succeed in the job himself.

There are two main types of traps in general use—the wooden barrel and the steel (or pincher) trap. The latter I generally use, for it is much easier to set. It can be purchased for about sixpence at most ironmongers, is very simple, and, if properly used, is an infallible device. The great thing to do is first to find the right kind of run in which to set the trap. For instance, never attempt to catch moles in those surface workings which make unsightly and injurious upheavals in straggling lines about our seed-beds or turf. These are merely feeding tracks, and the enemy will seldom pass that way more than once. We must go deeper, to those permanent highways which may be anything from 4 inches to 8 inches below the surface. To locate one of these is the hardest task, but a little observation will soon help one over the difficulty. There is always, for example, at least one such run between two mole-hills, and a trained ear can detect its position by the hollow sound of the ground above it. Then these runs often emerge into the open on the edge of a pathway, or from the walls of a surface

drain or hedge-bank. When discovered, one has only to cut through the passage a square hole sufficiently large to take the trap, with its extended prongs resting on the bottom of and upon either side of the line of traffic. When set, cover the trap with pieces of turf and put some soil on the top of that so as to exclude light, taking care not to prevent the free action of the springs (or handles), which expand when sprung. It is often said that moles are shy at the odour of one's hands, but I never take any precautions in that respect. There is, however, one particular point to observe. When the hole for the trap is cut, and before the latter is set, see that there is no loose soil left in the runs on either side. If there should be, the mole will push this ahead of it as it comes along, and the trap will be set off before the animal enters it.—A. T. J., in *Farm and Home*.

NOTES AND REPLIES.

Treatment of soil.—Would you please give me a little information as to what I can do with a piece of ground over which a shed has been built for some years. The soil is sandy, and though the shed has been removed since last December the wet has only gone down about 3 inches, consequently when dug it comes up like so much dusty sand; in fact more like silver sand. I have a heap of manure consisting of horse-droppings taken from the roads, rotten leaves, wood ashes, and garden refuse, over which have been thrown all kinds of household slops. Would this be good enough to dig in, and would the plot of land do for green stuff, such as Brussels Sprouts, Cabbage, Savoys, etc.? If so, please say whether I should put it in now or just before planting, and if it should be put in deep. The size of plot is about 30 square yards open to south.—L. J. M., *Woking*.

[Get the piece of ground deeply dug, incorporating with the soil all the refuse matter you speak of. After it has settled down you may plant on it any of the Cabbage family as you suggest.]

Sowing some vegetables.—More might be done with Beet. In order to extend the season at the beginning I always sow a crimson Turnip-rooted variety in boxes under glass, and after hardening the plants off plant them out as soon as ready. I have transplanted Beet, both Turnip-rooted and tap-rooted varieties, and always successfully. Good white and red Celeries should have been raised in a warm frame on a mild hot-bed, and pricked off when ready, the first batch in a frame, blanching with paper for flavouring, and others for planting in trenches when ready. Do not permit a check from drought or other causes, as that will result in pithy stems and inferior produce generally. Celery plants for very late use should be sown outside very thinly and transplanted into shallow trenches when ready—not later than August, early in the month—after an early crop of Potatoes or Peas.—E. H.

Hardiness and colour.—There may possibly be some connection between hardiness and colour in the case of vegetables. For example, red varieties of Celery resist extreme cold better than those which are white, and I have just been comparing two well-known kinds of garden Turnips—Golden Ball and White Stone. A sowing of each variety was risked on a warm border rather early in April. Both germinated well, and the lines were almost ready for thinning when rather a sharp snap of frost occurred. Of White Stone not a plant survived, while the line of Golden Ball, side by side, was unaffected. Of course, there is the danger that the check may yet result in wholesale holting; but the point is that, apparently, Golden Ball is hardier, and that, like the Red Celery, it is of a stronger constitution than the white varieties.—KIRK.

Savoy Dwarf Early Ulm.—A sowing made in the early days of May will give plants ready for putting out after the first Potatoes are lifted. Many who do not care for the strongly-flavoured larger Savoys might appreciate this fine little variety. It hearts in during the early winter after Cabbages are almost exhausted, and fills up a blank between these and Brussels Sprouts. Being a small variety, Early Ulm can be planted almost as thickly as Lettuces.—KIRK.

ROYAL HORTICULTURAL SOCIETY.

MAY 16TH, 1916.

The dominant note of the fortnightly meeting held on the above-named date was the display of late-flowering Tulips. In excellent condition, for the most part, some bore evidences of the recent heavy and continuous rains, which, when excessive, mar the beauty of these bold May-flowering sorts. Roses were very finely shown. Carnations and alpine plants were much below the average, though an assortment of the newer mossy Saxifrages marked the progress of this useful class.

TULIPS.

Messrs. Dobbie and Co., Edinburgh, had one of the finest displays, the flowers large, clean, and well and imposingly staged. Finer Tulips have rarely been seen. Some of the sorts of outstanding merit were Golden Crown, of Bouton d'Or colour, the flowers twice as large, Farncombe Sanders, a brilliant variety, La Tulipe Noire, one of the darkest, Clara Butt, indispensable, Orange King, Gesneriana lutea, Golden Beauty (syn. Bouton d'Or), Mme. Krelage, and Louis XIV., of old bronze tone.

Messrs. Barr and Sons, Covent Garden, W.C., arranged a magnificent bank of Tulips practically covering the whole of the western end of the hall. Here the stately Darwins vied with the Cottage kinds, each excelling in its own particular way. Salmon King, Clara Butt, Loveliness, Nauticus, Zulu, Psyche, Suzon, The Fawn, Europe, Margaret, and many others represented the former, while Inglescombe Pink, I. Yellow, Gesneriana lutea, Golden Bronze (a lovely thing), and Orange King were some of the better Cottage sorts.

Messrs. R. W. Wallace and Co., Colchester, arranged a collection on a low double table, and here, too, a great feast of the flower was set out in bold groups. Ellen Willmott (long, elegant form, pale canary colour), Louis XIV. (rich purple and bronze), Beauty of Bath (soft yellow), Avis Kennicott (a fine new yellow Cottage), Baron de Tonnay (still one of the best), Clara Butt, Chameleon, and La Merveille, whose pointed, orange-red, salmon-flushed flowers render it distinct, were some of the best.

Messrs. R. H. Bath, Limited, Wisbech, had a lovely lot of flowers, Queen of Roses, Maiden's Blush, Bronze Queen, Golden Crown, Clara Butt, and the very dark Philippe de Commines being a few of many well shown.

Messrs. Waterer, Sons, and Crisp, Bagshot and Twyford, staged a superb collection of the flowers interspersed with Acers and other things of a light character. In this collection Parisian Yellow was a notable sort. Other good sorts were Sunset (scarlet and gold), Inglescombe Scarlet, Fairy Queen (bronze and gold), Gesneriana spatulata (a giant of resplendent colouring), Zulu, The Sultan, and La Candeur. Cut trusses of Rhododendrons Alice, George Hardy, and Pink Pearl occupied prominent places at the margin.

Messrs. Robert Sydenham, Limited, Birmingham, also displayed a representative gathering of the best, while Walter T. Ware, Limited, Bath, showing a small collection, contributed the four novelties of the occasion.

ALPINE AND HARDY PLANTS.

Mr. G. Reuthe, Keston, Kent, staged a considerable collection of choice alpinists and hardy Orchids. Of these we remarked a particularly well-flowered lot of *Oxalis enneaphylla*, *Myosotis rupicola* (rich blue), *Pentstemon Davidsoni* (miniature, shrubby kind, with scarlet flowers), *Haberlea*, *Veronica cinerea* (greyish of leaf and blue flowers), and the too rarely

seen *Anemone narcissiflora* (red in bud, pure white when expanded). *Primula muscariflora* and *P. Forresti* were remarked, though even more beautiful and distinct was an unnamed *Primula*, in some respects a glorified *P. capitata* with imperial purple flowers horizontally disposed.

Mrs. Lloyd Edwards, Llangollen, had many hybrid mossy Saxifrages, two of which, J. C. Lloyd Edwards and R. F. Wickham, received Awards of Merit. Apart from these we noted Red Dwarf (very bright), *sanguinea* (one of the best reds), and White Lady (early and most prolific). A *granulata* hybrid, Mrs. Garnett Batfield, only suggests that the hybridist has gone too far, and that *S. granulata* and the Mossies are not happy marriages.

Mr. G. W. Miller, Wisbech, contributed freely of border Auriculas, Polyanthus, Violas, some two dozen varieties of *Trollius* in ample bunches, and other hardy flowers.

Messrs. Barr and Sons contributed freely of *germanica* and intermediate Irises. Messrs. Reamsbottom, Geashill, Ireland, showed Crown Anemones well and in great variety.

AURICULAS.

Mr. James Douglas, Great Bookham, had a delightful lot of these flowers, the alpinists being in particularly strong force and good variety, while fancy and show sorts were also prominent.

ROSES.

Of these, Mr. Elisha J. Hicks, Twyford, had both showy and interesting examples; also more than one novelty. Of the latter, the more conspicuous was *Rosa Moyesi Brilliant*, a seedling from the type, having larger flowers of rich reddish-carmine. *R. sericea pteracantha* (white) was also shown in flower. Charles E. Shea, new H.T., which received an Award of Merit, is of long and shapely outline, rosy-peach with salmon in colour, and delightfully fragrant.

Messrs. Frank Cant and Co., Braiswick Rose Gardens, Colchester, showed some excellent Roses, Mrs. Foley Hobbs, Lady A. Stakely (pink), Juliet, the velvety-crimson George Dickson, and Mrs. C. E. Salmon (single pink) being some of the good ones.

Messrs. B. R. Cant and Sons, Old Rose Gardens, Colchester, had a goodly showing of Fortune's Yellow, Silver Moon (single white), Cupid (single pink), Mrs. Herbert Stevens (lovely pure white of splendid form), Sallie (blush), Autumn Tints (apricot), Snow Queen, and others.

SHRUBS.

Messrs. Gill and Sons, Falmouth, brought a brilliant lot of *Embothrium coccineum*, *Andromeda japonica*, the miniature blue *Rhododendron fastigiatum*, *R. Kewense* (very fine form), and many other hybrid *Rhododendrons* were also staged.

Messrs. Piper and Co., Bayswater, had a table of Clematises, *Daphne Cneorum*, *Cytisus* of sorts, and other plants. Messrs. Cutbush had a fine display of *Azalea altaclarensis*, with *Hydrangeas* in blue, pink, and white, together with a big batch of *Primula pulverulenta* and *P. p.* Mrs. Berkeley.

GREENHOUSE PLANTS.

Messrs. Whitelegg and Page, Chislehurst, brought a particularly good lot of *Schizanthus Chislehurst* Giant strain, rich in violet and purple shades, the white and pink varieties being not less attractive. Messrs. H. B. May and Sons, Edmonton, had a table of Palms, Ferns,

and Verbenas in variety. Messrs. R. and G. Cuthbert filled a double table with tall-growing *Antirrhinums* in named sorts. The plants had not reached the zenith of their flowering.

ORCHIDS.

Only one group was staged, this coming from Mr. F. Menteth Ogilvie, The Shrubbery, Oxford. The group was particularly rich in *Odontoglossums* and *Odontiodas*, O. Mrs. F. M. Ogilvie, a very dark variety, being one of the best. *Cattleya Empress Frederick alba* (white with yellow throat) was also remarked. This exhibitor also showed the only novelty—*Miltonia Ilyeana* F. M. Ogilvie Shrubbery variety—for which an Award of Merit was granted.

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MAY 11TH.—*Rock Spray* (*Cotoneaster horizontalis*), *Genista hirsuta*, White and yellow Broom, Bush and climbing Honey-suckles, Hardy Heaths (in several forms), *Cydonias* (in great variety), Jew's Mallow (single and double), Lilacs (in several varieties), *Berberis* (in great variety), *Magnolias*, *Cornus florida rubra*, the Snowdrop-tree (*Halesia tetraptera*), the Judas-tree (*Cercis Siliquastrum*), *Spiraeas* (various), *Viburnum rhytidophyllum*, *V. Carlesi*, *V. tomentosum*, *V. t. Mariesi*, *Amelanchier canadensis*, *Daphnes* (in variety), *Salix* (in variety), Sand Myrtle (*Leiophyllum buxifolium*), the Labrador Tea (*Ledum latifolium*), Native, American, and Japanese Cherries (in great variety), *Pyrus Malus* (in great variety), *Weigelas*, the Alpine and Mountain *Clematis*, the Pearl Bush (in variety), the Evergreen *Laburnum* (*Piptanthus nepalensis*), *Laburnum vulgare*, *Camelias* (in variety), *Rhododendrons* (in variety), *Azaleas* (in great variety), *Andromedas* (several), Rocky Mountain Bramble (*Rubus deliciosus*), *R. spectabilis*, *Ribes speciosum*, *Maples* (various), *Corylopsis* (in variety), Mexican Orange (*Choisya ternata*), *Coronillas*, the alpine White Beam (*Pyrus Chamæspilus*), *Wistaria sinensis* and its white form, Japanese Orange (*Egle sepiaria*), *Akebia quinata*, *A. lobata*, *Kalmia glauca*, *Periwinkles*, *Griselinia littoralis*, *Elæagnus edulis*, Hawthorn, Siberian Pea-tree (*Caragana arborescens pendula*), *Azalea amœna*, *Narcissi* (in variety), *Honesty*, *Scilla campanulata* and its rose-pink form, Grape Hyacinths, *Cornus canadensis*, Star of Bethlehem (*Ornithogalum*) (in variety), the scarlet Windflower, the white, blue, and yellow Wood Anemones, *Anemone sulphurea*, *Megaseas* (various), Solomon's Seal, *Polyanthes* (in variety), *Auriculas* (in variety), late-flowering Tulips (in variety), *Anclusa myosotidiflora*, *A. Barrelieri*, *Viola cornuta* and its white variety, *Antennaria tomentosa rubra*, *Dianthus deltoides rubra*, Thrift (*Armeria*) (various), Wood Lilies (*Trillium*) (in variety), *Asphodelus luteus*, *Geums* (several), Tufted Pansies (in great variety), Bleeding Heart, Alpine Phlox (in great variety), Blue-eyed Mary (*Omphalodes verna* and its white form), *Oxalis*, *Lithospermum prostratum* and its Heavenly-blue variety, *L. purpureo-cæruleum*, *Iris germanica* (in variety), *Helichrysum bellidoides*, *H. trinerve*, *Jonquils*, *Meconosopsis sinuata latifolia*, *M. cambrica*, *Calthas* (in variety), Globe Flowers (in variety), *Gentianas* (in variety), the Foam Flower (*Tiarella cordifolia*), *Romanzoffia sitchensis*, Sun Roses (*Helianthemum*) (in variety), *Ranunculus speciosus*, fl.-pl., *Mazus rugosus*, *Luchnis diurna*, *Alpine Achilleas*, Summer Snowflake, *Kenilworth Ivy*, *Ethionema persicum*, *E. schizotomum*, *Pentstemon Scouleri*, *Gypsophila prostrata alba*, *Cytisus Ardoini*, *Saponaria ocymoides*, *Houstonia cærulea*, *Cheiranthus linifolius*, Iceland Poppies, *Pæonia officinalis*, *Rheum officinale*, *Doronicum*, and *Saxifraga peltata*.

WORK OF THE WEEK.—The alpine plants on raised borders are now very interesting, many of them being already in bloom. Old, disfigured foliage has been cut away and the surface soil loosened up wherever possible to promote a free, healthy growth. Very small plants have had a couple of flat stones placed round them as a protection, and large, encroaching kinds have been cut back severely. A bed of yellow Roses has been carpeted with *Cynoglossum amabile*, and *Monroe's Mallow* has been planted to form an edging to another bed where it may fall over stones raised above the ground level. A few plants of *Nierembergia frutescens* have been put out at the corner of a large bed, and *Arenaria montana*—perhaps one of the choicest alpinists—has been given a position where it can thread its way over sandstone blocks in the form of a wide and broken edging. A few more of the same plant have found a home on a raised bank in the foreground of *Azaleas*. A group of

Achusa italica has been carefully lifted and replanted to fill a gap in the hardy-flower border, and the plants are none the worse for their late shift. Several plants of the Transvaal Daisy (*Gerbera Jamesoni*) have been planted below the Californian Tree Poppy (*Romneya Coulteri*), using the little *Pistorinia hispanica* as a carpet to the whole bed. Clematises are now growing freely, and the alpine and mountain species are in bloom. A number of the old dark Antirrhinum has been put out to furnish one end of a long Rose bed. *Ethiopia Lamarckiana* has been used to form a wide line with lavender-coloured *Michaelmas Daisies* at intervals. These should provide a pretty autumn display.

Mowing occupies considerable time, as Grass grows very fast at this season of the year; the cutting of Grass edgings is also receiving attention, as this greatly improves the appearance of lawns and verges. During the recent storm a number of large spreading Yews was forced across a Grass path, and it became necessary to cut these back severely to allow light and air to reach the Grass and give a free passage. Hardening of vase plants and the removal to cold frames of such things as are required for the beds and borders are receiving constant attention. Cannas have been placed in cold frames, also Cardinal Lobelias, Verbenas, and a *Verbena*, Rose Queen, a beautiful variety which had been previously hardened off, has been planted as a groundwork to a bed of Roses, also as an edging. The charming variety Blue Bell is put out to form an edging to a bed of orange-scarlet Cannas, a few of the same *Verhena* being used as a groundwork to a column of pink Sweet Peas. E. M.

SOUTHERN COUNTIES.

Pentstemons.—These will be planted in their permanent positions. Being rather gross feeding, the soil needs to be made fairly rich. Each plant requires ample space for development, consequently the distance between them each way is 18 inches. A good soaking of water to settle them into place will be given as the planting proceeds.

Calceolarias.—These will also be planted where they are to flower, as frost likely to injure them need not be apprehended after this. Until they become established, the soil about the roots must be kept moist.

Agathæa cœlestis.—This, the so-called Blue Marguerite, is also fairly hardy, and can be planted without further delay. It is very useful as an edging to taller-growing subjects, and thrives equally as well in heavy soil as in that of a lighter and more friable nature.

Antirrhinums.—These have had the points pinched out to make them break and form bushy, shapely plants. Growth will now be rapid, and they will soon be ready for getting out into their summer quarters. The site has been manured and dug, and the soil is in good working order.

Fansies.—Seedlings which some weeks back were pricked off into boxes are now well hardened off and of the right size for planting out, the places selected for them being the margins of borders, etc., and the positions not too exposed, so that they may remain in good condition for as long a period as possible.

Marguerites.—As these pass out of flower indoors they are slightly cut back, and as soon as new growth is visible they are hardened off and planted in groups in suitable positions among shrubs and in flower borders, where they produce an abundance of bloom and prove very effective. Both the single and double varieties are equally valuable for the purpose.

Fuchsias.—Spare plants of these must now be hardened off to fit them for planting out towards the end of the month. Their value for the flower garden is well known, but they must not be planted in poor soil if they are required to look their best.

Other bedding plants.—Those of a more tender nature are now being exposed to the elements to get them thoroughly hardened by the last week in the month. The sashes are, however, kept handy in case a fall in the temperature should necessitate their use during the period between the 15th and 22nd, after which they will for this purpose be no longer required. The pots being full of roots, their requirements in the way of water are, and will be until they are planted, rather exacting, and take up a good deal of time, as supplies are needed twice daily in sunny weather.

Roses.—Both beds and borders will, with the idea of breaking the soil down to a fine condition, be thoroughly hoed through. When partly dry after rain is the best time to do this with the class of soil I have to deal with, as the rough lumps then crumble to pieces without an undue expenditure of labour. Roses are breaking strongly, and exhibit not the slightest sign of having experienced the check they did earlier in the year. Grubs must now be looked for, their presence being denoted by the rolled and twisted appearance of the leaves. A sharp pressure between thumb and forefinger is the simplest and most effective way of destroying them. Green-fly attacks quickly yield to one or two sprayings of *Quassia* extract. For mildew, which often appears now on Ramblers when exposed to cold easterly winds, there is no better remedy

than sulphur dredged over the leaves after they have been moistened. This can be washed off a day or so afterwards.

Plums.—These have set well, and if the fruit should swell off properly there will be a bountiful crop. Fortunately, the foliage has during the past few days developed to a remarkable degree, which will afford a great deal of protection should it be needed to the young and tender fruits. A sharp outlook now has to be kept on the young growths, which quickly become crippled should fly once gain a footing. Remedies should be applied directly its presence is detected, as an attack is much more easily dealt with when it is in the initial stage than when the leaves become curled and the insects difficult to dislodge.

Apricots.—In spite of the untoward weather encountered when the trees first came into bloom, a very good set of fruit, which is now fast swelling off, resulted. On some trees a slight thinning in the way of reducing "twins" and "triplets" to one is necessary, and accordingly will be attended to. Stopping and thinning of young growths also need attention, while a sharp look out for maggot must be kept, otherwise much of the foliage is liable to be damaged. After the unprecedented rainfall of March artificial watering will be unnecessary for some time to come. The nets may be rolled up out of the way and temporarily fastened on the top of the coping-boards to be ready for use in case of emergency, as it is not prudent to dispense with them altogether until near the end of the month.

Peaches and Nectarines.—Disbudding is being proceeded with, and, as in the case of Apricots where more than one fruit has set in one place, a reduction to one, and that the most promising, is being effected. A tentative thinning of the fruit where several are present on individual shoots is also having attention, as it is a waste of energy to allow too great a number to develop unnecessarily. The person carrying out these details should have a powder-puff, so that in the event of any fly being discovered they can at once be destroyed. As soon as settled warm weather sets in the trees will be well washed, which will not only cleanse and refresh the foliage, but wash off the remains of the flowers on the fast swelling fruit. The netting can now be fastened out of the way as for Apricots, so that sunlight and air can have free play amongst the foliage, and accelerate growth.

Asparagus.—With the advent of warmer weather Asparagus has become plentiful and of excellent quality. Such being the case, the usual practice of sorting the produce into three sizes is resorted to, the smallest, or "sprue," being used for soups. A dressing of fish guano will now stimulate growth. Enough to just colour the soil is sufficient to give at any one time. Weeds are already appearing, and call for attention in the way of hand-picking, which, under the circumstances, is the only practical way of dealing with them.

Potatoes.—The late sorts are now being planted, horse labour being employed for the preparation of the soil and the opening and closing of the drills. Early and second-early sorts being now well above ground, the soil between the rows has been loosened and moulding carried out.

Hoing.—Onions, Parsnips, Carrots, and other crops have had the soil hoed between the rows for the twofold purpose of expediting growth and killing weeds, which, unfortunately, promise to be unusually abundant.

Late Seakale.—This is now over, and the crowns must be cut off level with the soil to induce the formation of new growths. When fairly started growing, feeding with artificial manure may be commenced. The material recently used for the blanching of the Kale will be formed into long ridges between the rows, where it will be out of the way and ready for use next season. A. W.

MIDLAND COUNTIES.

Wall trees.—The training of the young growths requires almost daily attention during the present and four following months. Peach and Morello Cherry-trees, owing to the multitude of young growths require prompt and frequent attention during the period of growth, the treatment being identical in each case. After a sufficient number of the current year's shoots has been laid in for producing fruit next year all surplus shoots, together with fore-right growths, must be kept pinched (and in some cases rubbed off) to within one joint of their origin. Very strong growths should be cut back to the lowest lateral or removed, in order to direct the flow of sap into the weaker ones. Apricot, Plum, and Pear trees also require the same treatment as regards the training in of young growths at regular intervals over the available wall-space and for the purpose described above. Care should be taken to keep all kinds of fruit-trees free from the attacks of aphid and red spider by a vigorous, timely, and well-directed washing of the trees, using clean water applied to the trees through the garden-engine or syringe, in addition to keeping the soil about the roots uniformly moist. Should this fail, recourse must then be had to insecticides.

The Codlin Moth.—Where this insect pest is prevalent means should be taken to destroy it at this season, the best time for applying an

insecticide being immediately after the petals have fallen and the fruits are set. Paris green distributed by means of a sprayer in the proportion of 2 oz. to 18 gallons of water makes an effectual dressing. As this is a very poisonous substance great care is necessary in its use. The powder does not dissolve in water, but is merely held in suspension, and it is, therefore, necessary to keep it frequently stirred. Where American blight is detected the patches should be dabbed over with a stiff brush dipped in petroleum or methylated spirit, repeating the operation at intervals during the season.

Gooseberries are particularly liable at this season of the year to attacks of various sorts of caterpillars, which denude them of their foliage and render the fruit useless; the Gooseberry caterpillar and the larvæ of the Gooseberry and Currant sawfly being the worst. Their mode of operation, their appearance, and time of attack are quite different, but the results to the bushes are very similar, and if not checked the plants soon present a miserable appearance, the leaves being riddled with holes in all directions. The most effectual remedy is to destroy them in the pupa state while in the soil underneath the bushes by removing the surface soil to a depth of 3 inches and burning it, replacing it with fresh soil and a good dressing of soot and lime. Where bushes are attacked, the most effectual remedy at this season is hand-picking. Where large breadths are affected, the leaves should be dusted when moist with Hellebore powder, soot, lime, or other noxious applications that will make the bushes distasteful to the moths. After applying Hellebore powder great care must be taken not to use any of the green fruits until they have been thoroughly cleansed by rain.

Herbaceous plants.—Varieties of *Pœonia* Moutan in sheltered places will shortly be in flower, but the severe frosts, after they were well in bud, destroyed many shoots, the flower-stems completely shrivelling up. The early herbaceous varieties suffered to a less extent. Late-flowering varieties may be relieved of some of the small flower-buds if large blooms are desired; if not, these buds open later, and so form a slight succession, although the flowers are smaller. A good soaking of liquid manure is of much assistance to established clumps of these *Pœonies*. Delphiniums require staking before they become long enough to fall over and so grow out of shape. Many other subjects in the herbaceous borders now require short stakes and ties. During favourable weather keep all borders well hoed.

Annuals sown early and pricked out into frames and boxes are now being planted in their permanent quarters, choosing showery weather for the purpose if possible. Should the weather be dry at the time of planting, the young plants are damped overhead for a few days, this encouraging a free start. A little extra trouble taken at first is amply repaid by their quick and rapid growth. It is yet too early to plant out many of the more tender plants, such as *Heliotropes*, which are far better left where they can be afforded shelter in case of cold winds or frosty nights. Plants put out too soon often receive a check, from which it takes them a long time to recover. Most of the *Narcissi* and other bulbs have passed out of flower, and the present is a suitable time for marking such as need to be taken up when the foliage is ripe, divided, and replanted in a fresh place. This is necessary in many places in from three to five years. Do not cut off any green leaves, as this impoverishes the bulbs.

Chrysanthemums in pots.—The weather, until now, has scarcely been favourable for placing *Chrysanthemums* in their summer quarters out of doors, but this must be done at the first favourable opportunity or their shoots will become weak. The compost for potting these plants into their flowering pots will now be prepared. This will consist of three parts good fibrous loam in a lumpy state, one part of finely-sifted horse-manure, well-decayed leaf-soil finely sifted, and sufficient coarse sand and finely-broken mortar-rubble to render it porous, adding to every two bushels of the compost one 6-inch potful each of 2-inch bones, a suitable artificial manure, and finely-crushed charcoal. The strength of the plants will determine the size of pots to be used, but generally 8-inch to 9-inch pots are large enough. These must be clean and well drained, and on the top of the crocks a few 2-inch bones are sprinkled. Pot firmly, and, in doing so, place the top of the old ball well below the surface of the new soil.

Globe Artichokes have been examined and the suckers thinned to four or five on each plant, this number being quite sufficient to ensure the best results. The ground between the plants is mulched with a few inches of manure. It is a good plan to mulch the ground between the rows of many garden crops as soon as dry weather sets in, in order to counteract the effects of strong sun on the soil and secure a more equable state of moisture about the roots. Peas and Scarlet Runners benefit greatly by this treatment in dry weather, and even in wet weather, for it is much better for the soil that, while gathering the crops on wet days, there should be a covering of some kind to keep it from injury by continual treading.

French Beans sown on a warm border a few weeks ago are pushing through the soil, and

need protection at night. We continue to make small sowings on good ground every fortnight.

Potatoes.—The earliest plantings being now above ground, the young growths are protected by moulding well up, long litter or other material being applied when necessary.

Spinach.—Frequent sowings are now made of some of the Broad-leaved Long standing varieties, which are a great improvement on the older kinds, sowing at this season on a north border, or the coolest part of the garden on well-manured and deeply-worked soil. A small sowing of New Zealand Spinach should be made on a south border, unless it has been raised in boxes under glass, as previously advised, which is much the better way of treating this valuable vegetable. This variety, being very tender, should not be planted till quite the end of the month on a warm spot. Sprinkle overhead frequently to give it a good start. Use the Dutch hoe freely amongst all growing crops, for the double purpose of keeping the ground clean, and, by a loose surface, lessening the amount of evaporation during hot, dry weather. F. W. GALLOR.

SCOTLAND.

Late planting.—During the week a consignment of Butcher's Broom came to hand and was planted in various positions. The majority of the plants were of the female variety, although to make sure of berries a few pieces of the male variety were introduced. The plants were well furnished with plenty of fibrous roots, and although the season is somewhat advanced for planting, success is anticipated.

Plant-houses.—Owing to the removal out of doors for the purpose of hardening off, the congestion which always is present to some extent in plant-houses during spring has been considerably relieved. One house has been entirely filled with Zonal Pelargoniums and double-flowering Begonias. These plants, not being wanted for some time, will, in the meantime, be denuded of their buds as they appear. This results in a much more vigorous growth than would otherwise be the case, and the season of blooming is prolonged almost until the time when the house is again required for Chrysanthemums. Most of these Pelargoniums and Begonias are in 6-inch and 7-inch pots, but any particularly promising pieces will ultimately be moved into 9-inch pots.

Primulas.—*P. sinensis*, *P. obconica*, and *P. malacoides*—having ceased to be effective have been discarded. Some good plants of *P. obconica* will be saved, planted out in cold-frames over the summer, and repotted during the autumn. Although the practice is not generally recommended, I have found that two-year-old plants of *P. obconica* are always worth having. They flower profusely, and make good specimens in 8-inch pots. *Schizanthus Wisetonensis* has been very useful. Cut in long sprays, the blooms lasted exceptionally well in vases for over a fortnight, and were, for once in a way, free from the objectionable habit of drooping, which, for some reason or other, at times mars this useful and showy variety for cutting. *Hydrangeas*, both as bushes and on single stems, are yet being retarded as far as possible. Owing to circumstances the culture of Carnations under glass has been reduced, only the Malmaison family now being represented. In the course of the week these were staked out and top-dressed. In the stove a sharp drop of the outside temperature has led to rather brisker firing being necessary, but plenty of moisture is permitted in order to reduce the danger of attacks from insect pests. A batch of *Pentas carnea* was moved from 5-inch to 7-inch pots, and *Bryophyllum calycinum* and *B. crenatum* were similarly treated. Cuttings, now rooted, of various things, were potted off from the propagating-pit. These included a considerable number of Lorraine and other winter-flowering Begonias. *Libonia floribunda* is now in 4-inch pots. A quantity of this useful, old, hard-wooded subject has been propagated and will be used freely, not only for winter-blooming in the stove, but for spring work in the greenhouse.

Chrysanthemums.—A beginning has been made with the final potting up of Chrysanthemums. It is, of course, hardly the orthodox time, but in the present conditions it has been decided to dispense with the intermediate shift and to place them in their flowering pots straight away. This will call for careful watering for a time, but, given that, there does not seem to be any reason why they should not succeed. As potting is done, the plants are placed in a sunny, but sheltered, place, where they will remain until growth is somewhat advanced, after which they will be moved to their summer quarters.

Tomatoes.—With the exception of a few plants, the necessary quantity of Tomatoes for pots has been selected. Pots 10 inches in diameter are used, and in these the plants fruit satisfactorily. When the soil is moderately moist at the time of potting it is not considered necessary to water for a few days. All side shoots are regularly suppressed, although I have at times taken up a supplementary shoot from the base of a plant with very good results.

Hardy fruits on walls.—We are passing through rather a critical time in respect of the wall fruit. After a period of fairly good weather the temperature has dropped very

suddenly, and this drop has been accompanied by bitter east winds and by heavy rain, which at the time of writing has fallen almost incessantly for three days. These factors combined render the outlook none too bright. Peas and Plums, although fairly well set, are bound to suffer to some extent, and there is a likelihood of blister upon Peaches and Nectarines. Apples will probably escape should the weather shortly revert to the normal, for the cold snap has delayed the expansion of the blooms. Meantime, in the most exposed situations temporary expedients in the way of providing shelter have been resorted to. Damsons in the open appear to have suffered considerably from the wind and rain. The trees are of great age, very high, and are exposed to the full sweep of the east wind. Many of the blooms are entirely knocked off, and the outlook is far from encouraging at present.

Herbs.—In the beginning of the week fresh beds of Mint, Basil, and Marjoram were made. These are always in request, and new beds from time to time are necessary. All three being of a quick, not to say rampant, growth, soon come into use.

Vegetable garden.—With the breakdown of the weather, work among vegetables was greatly curtailed. Nevertheless, in the early part of the week some little progress was made. Pea-staking was attended to, and a further line of Peas was sown, Telegraph being the variety used. Lettuces were transplanted, others pricked off, and more seed sown.

Grass-cutting for the first time has been done at a later date than usual. In some places the scythe had to be used, but, fortunately, all the Grass had been gone over before the rain had made the ground too soft. W. McGURROG.

Balmac Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Violet flowers failing to develop (Winton).—The most probable cause, if we may judge from the shrivelled up flowers you send us, is lack of moisture. If so, then the natural result will be that the flowers will not and cannot develop properly. If on examination you find that the soil is dry, then the remedy is in your own hands. We should like to see a complete plant.

Growing Watsonias (Inquirer).—Treatment similar to that required for the early-flowering Gladioli suits these. If they are grown in frames a good deal of trouble is saved and the flowers are finer, as the young growths are protected when they most need it. Generally, however, it will be found best to grow the plants in warm situations in open borders of light soil.

Procuring Primula cashmiriana seeds (H. M. Darrah).—It is highly probable that if you write to any of the firms named in your letter they would be able either to supply you at once, or, failing this, to send seeds a little later on when mature. If not, you might write to those nurserymen who specialise in hardy plants, and whose names you will find in our reports of the Royal Horticultural Society's meetings. In addition, your own plant, assuming that it has flowered well, should yield you a nice supply, which, if sown soon after ripening, should furnish a considerable number of young plants in the coming year.

Various queries (M. W.).—(1) Had you left the bulbs where growing and lifted them when the foliage had ripened off, then it is very probable that many of them would have flowered this year. The bulbs were never properly ripened off, hence the failure to bloom. (2) The *Spiræas* have evidently suffered from want of water. To do these well they must be stood in pans of water when growing freely. (3) Dryness at the roots was, no doubt, the cause of the flower-buds falling. The soil on the surface may have looked moist enough, but the ball of soil was, no doubt, dry. The only way to remedy this is to stand the plant in a pail of water and thus soak the ball right through.

Treatment of Gerberas (Mrs. K. Clark).—Even in the most favourable districts the Gerbera must be planted in a sheltered, warm place, such as at the foot of a wall. In very sunny quarters in the southern parts of the country it has passed through several winters unimpaired. In the Cambridge Botanic Gardens it thrives at the foot of a wall, protected during the winter by lights from rains and cold dews, while allowing full ventilation on every side. A well-drained spot and shelter are essential to success. Though it will bloom fairly well in pots, its progress is slow. You must be careful not to overpot or overwater. A good compost for it would be a free loam to which have been added some decayed leaf-mould and plenty of silver sand.

MISCELLANEOUS.

Making liquid-manure (L.).—In the absence of cow-manure an excellent stimulant can be made from soot. Put about a couple of pecks in a canvas bag, tie it up tightly, and fix a brick or stone to it to cause it to sink, and then immerse it in a tub of water containing eight to ten gallons. After a time the bag

should be squeezed to extract the goodness from the soot, and then the water should be allowed to settle before using. It should be given in a diluted state, say two quarts of the liquor to a gallon and a half of clear water. By similar treatment another excellent manure can be made from fresh horse or sheep droppings.

SHORT REPLIES.

Francis Chown.—See reply in coming issue to "F. M. G." re "Vine leaves scalded."—*M. Fimc.*—No; we have never heard of *P. malacoides* being poisonous, as sometimes happens in the case of *P. obconica*.—*Ivywell.*—Any of the Rambler Roses will answer.—*E. C. B.*—Yes; you may put in cuttings of *Heliotrope*, but if you want them for the flower garden this season they will be of no use, and should be grown on freely in pots to bloom through the autumn and winter. The best *Primula* for your purpose is *P. obconica*, seed of which may be sown now. The seedlings, if grown on in a mixture of loam, leaf-mould, and sand, will flower in the autumn and through the winter. They should be potted into 5-inch or 6-inch pots, in which they will flower.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*M. D.*—The white Wood Lily (*Trillium grandiflorum*).—*Robert Greening.*—*Populus canadensis*.—*Evelyn G. Smith.*—*Geranium tuberosum*, a hardy variety from the south of Europe, flowering in May, colour of flowers pink. It was introduced in 1596.—*E. C. B.*—1, *Begonia Dregei*. You may take cuttings and also grow on the old plants; 2, *Nerium Oleander*, evidently wants repotting; 3, *Sempervivum Haworthii* probably; 4, *Gasteria marmorata*; 5, *Coronilla Emerus*; 6, *Specimen insufficient*, must have flowering specimen.—*M. B.*—1, *Saxifraga (Megasea) ligulata*; 2, *Ribes aureum*; 3, The Bird Cherry (*Prunus Padus*); 4, *Prunus sinensis fl.-pl.*—*J. S.*—1, *Narcissus poeticus recurvus*; 2, *Francoa ramosa*; 3, *Pyrus Malus floribunda*; 4, *Amelanchier canadensis*.—*F. L. G.*—1, The Japanese Quince (*Cydonia japonica*); 2, *Muscari conicum*; 3, *Coronilla Emerus*; 4, *Spiræa prunifolia fl.-pl.*—*M. P.*—1, *Kerria japonica fl.-pl.*; 2, *Berberis Darwini*; 3, *Tradescantia virginica*; 4, *Ribes aureum*.—*G. E. P.*—1, *Lithospermum prostratum*; 2, *Pyrus Malus floribunda*; 3, *Pulmonaria officinalis*; 4, *White Wood Lily (Trillium grandiflorum)*.—*A. T. A.*—1, *Corydalis bulbosa*; 2, *Brodiaea uniflora* (syn. *Triteleia uniflora*); 3, *Poppay Anemone (Anemone coronaria) var.*; 4, *Doronicum plantagineum*.—*W. W.*—1, *Saxifraga granulata fl.-pl.*—*J.*—1, *Weigela rosea*; 2, *Daphne Laureola*; 3, *Tulipa sylvestris*; 4, *Ajuga reptans purpurea*.—*E. H.*—1, *Pyrus Malus floribunda*; 2, The Pearl Bush (*Exochorda grandiflora*); 3, *Berberis Darwini*; 4, *Epimedium alpinum*.—*F. G. Harris.*—*Mackaya bella*.

OBITUARY.

PHILIP MOON.

We greatly regret to record the death at the front, through the explosion of a mine, of Philip Moon, son of the late Henry Moon, the best flower painter of our day. Philip Moon inherited the love for natural beauty of his father, and began to collect plants at a very early age. The letter following is from his mother:—

You will, I know, be sorry to hear the news of my son's death at the front on April 28th by mine explosion. His captain writes me:—"Philip was a brave soldier and a good lad—one of the very best—and he had for a long time had our admiration and love. I will always treasure the memory of him. His great love of Nature and his knowledge of flowers were so wonderful to us all." The chaplain has also written me, and I am a proud mother to have a son who, in his short life (nineteen years), has left such a record for good.

A register of girls and women in West Hoathly and Sharpthorne who are willing to work on the land has just been started. Any employer who requires workers is invited to write to Mrs. F. Jenner, North Lane, West Hoathly, or call at her house between 6 p.m. and 8 p.m. on Fridays. No fee is charged for this patriotic organisation; conditions of work and rates of pay to be arranged direct between employers and workers.—*JULIA M. COHEN, SOPHIA POWELL.*

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THEORY v. PRACTICE.

[To the Editor of GARDENING ILLUSTRATED.]

SIR,—I have read with interest the articles in your April numbers of GARDENING ILLUSTRATED on "College Education versus Practical Training in Horticulture." With regard to the appointments of park superintendents and other branches being political, I do not think this condition exists so much in Canada. Most of the positions are filled by young men who have graduated from one of the agricultural colleges, which endeavour, as far as possible, to also give a practical training that will meet the requirements of a new country. I would be loth, however, to advise a practical gardener that he could do well in Canada. I know of several good men, with excellent records in various branches of horticulture, that are working at ordinary manual labour. There are very few establishments where you would meet with the variety of plants or shrubs that one sees in any ordinary English garden. I believe if practical men who had a genuine love of their profession—as most of them have—were appointed they would soon create more interest in the varied branches of gardening, both with the employers and the public. The only branch of the profession that is taken up extensively at present is fruit-growing, which is certainly rather overdone in British Columbia, although most of the failures in this branch can be traced to orchards being managed by inexperienced men who, not being practical, have been unable to adapt themselves to the various climatic and other conditions which exist in this province. I have had a life experience, gained at some of the leading establishments in England and Scotland, but have been obliged to take up another line of business, as I found it impossible to make even a living in horticultural work. The best gardens and parks in the eastern States of America were laid out and managed by Old Country gardeners who had served their apprenticeship in the profession, and who worked as journeymen at various places before taking charge. It is hard to beat a practical British gardener, no matter what adverse conditions exist, or in what part of the globe he may be. If the home settlement scheme of Sir Harry Verney's Committee, which was reported in *The Times* of February 10th, and which proposes a grant of £2,000,000 for this pur-

pose, comes into force, the Board of Agriculture should see that practical horticultural and agricultural instructors and directors are appointed for this work if it is to be a success. H. W. W.
Kettle Valley, British Columbia.

NOTES OF THE WEEK.

Cheiranthus linifolius.—A pretty little Stock with soft mauve flowers and narrow leaves. A distinct and good rock plant, native of Spain and Portugal. From Clarence Elliott, Stevenage.

The Alpine Flax (*Linum alpinum*).—In these days of love for rock gardening this should be often seen. Its dwarfness makes it quite distinct from the herbaceous Flaxes of our gardens. The flowers are delicate azure-blue, the plant spreading, and quite hardy. From Sir F. Crisp.

Narcissus Johnstoni Queen of Spain.—In the Grass this is one of the sweetest things we know, and those who are taking up this phase of gardening should plant it, as bulbs can now be obtained very cheaply. There is a quaintness in the reflexing perianth and nodding flowers that renders this kind distinct from all else.

Pæonia Delavayi.—A graceful, free, and distinct kind, with handsome foliage and dark, rich flowers, tempting one to make a group of it as soon as plentiful. The old tree Pæonies are, owing to grafting and climate, a weariness to the flesh. This promises to be a free and useful kind. From Bees, Liverpool.

Lewisia Howelli.—This, one of the best of the genus, has stood the winter in some south-west of Scotland gardens and is coming into bloom. Mr. James Davidson, Summerville, Maxwelltown, has a specially good plant in full bloom in the rock garden. Its handsome rosette of leaves, even when not in bloom, is pretty.—S. A.

Rhododendron decorum.—This noble Rhododendron is in fine flower now (May 21st) on young seedling bushes. An old bush withstood our winters for many years, and usually flowered in early autumn, after all the other kinds had passed. There seems some variety as to time of flowering in this lovely plant of Western China.—W.

Phyllothamnus (syn. Bryanthus) erectus is again in flower in a peat bed at the base of the rock garden. Its bright pink, Kalmia-like flowers show up well on the dark, rigid foliage. It was obtained by

the late Mr. James Cunningham, of Comely Bank Nurseries, Edinburgh, by crossing *Menziesia cœrulea* and *Rhododendron* (*Rhododendron*) *Chamaecistus*. It grows only a few inches high and is evergreen.—S. ARNOTT.

Myrsine africana.—A myrtle-like little bush, native of many lands, some tropical, and yet hardy in our islands, the fruit purplish. It is an interesting rock garden shrub and is now fruiting freely at Nymans (Sussex).

Lilium myriophyllum.—This is a tall and most graceful Lily, white, with the outside of the flower suffused and striped with dull purple, the centre a yellow basin. Like other Lilies, it will be at its best among shrubs in peaty or leafy soils. From Messrs. Wallace and Co., Colchester.

A brilliant Sun Rose (*Helianthemum Chamaecistus*).—In the belief that I had enjoyed all the beauty of these plants I was shy of adding to them, but now have to record the brightest of all, sent me by Messrs. J. Waterer, Sons, and Crisp, of Bagshot. It is a lovely red with a little bunch of yellow stamens, and is quite hardy and free to bloom grown in a raised border.—W.

Acacia Baileyana.—The cold frosts in spring have been a hard trial for those in this country who like Acacias. I never had the courage to plant any. At Nymans, where they are done so well, and look very pretty in flower and leaf, they suffered a good deal, and the first to come out is that called *Baileyana*, which has the best chance of any against south walls in our country.—W.

Camellia cuspidata.—This is an elegant little evergreen bush, nearly allied to the Tea, and named *Thea cuspidata* by Koehs. The flowers are white and pretty and it is graceful in habit grown in the open air at Nymans. Should the Theas prove as hardy as the *Camellia* they will be a very interesting addition to our gardens. I saw several in Mr. Allard's garden at Angers, but I imagine our people have not got them yet.—W.

Rhododendron Roylei.—It is interesting to note that the frost which nipped so many things in the spring after a number of warm days has not had much effect on the Himalayan Rhododendrons. I was amazed at the beauty of *R. Roylei* the other day at Nymans, where it was covered with flowers and looking as hardy as a native bush. The colour of this Rhododendron is very beautiful and its

habit fine. The soil of the place is not in favour of such plants, but with the aid of leaf-soil and other decay of the woods it evidently had the conditions that suited it.—W.

Phlox Douglasi.—The dwarf mountain Phloxes are usually easily grown, but this very dwarf kind is not so free with me. Its soft pink flowers are charming, and it is well worth a place on the choicest rock garden. From seed, and in warm soil, it may be more free. As I saw this dwarf Phlox on the Rocky Mountains it grew among the débris of the rocks.—W.

The Siberian Pea Tree (*Caragana arborescens*).—The Caraganas are not attractive shrubs, partly due to the dullness of their flowers, but the above is pretty now, its small, yellow, pea-shaped flowers, borne freely from among the fresh, soft, green foliage. It is of pendulous habit of growth, and for this reason is usually grafted 6 feet or so from the ground, on what appear to be *Laburnum* stocks. With me it is slow growing, and therefore can be planted where space is limited, or if obtainable on its own roots it might be planted to fall over a large boulder in the rock garden. There are several other forms, but this is the best known in gardens.—E. M.

The Norway Spruce, an over-planted tree.—Sir Herbert Maxwell condemns this in the *Gardeners' Chronicle*:—

Even in such highly-favoured situations as the valley of the Tay at Dunkeld, where the Common Spruce may be seen at its best, better and cleaner timber might have been obtained if certain other species of Conifer had been planted. Unfortunately, in the haphazard, indiscriminate fashion of mixed planting which has prevailed for nearly a century in the greater part of northern England and Scotland, the Common Spruce has been, and is, an almost invariable ingredient, with such miserable result as may be seen, especially in districts near the sea.

Shortia galacifolia.—For a great many years there has been a very fine specimen of *Shortia galacifolia* growing like a parasite among the roots of a dwarf Conifer, called, I think, *Pinus beuvronensis*. Great numbers of flowers are produced from February to April. This spring I counted over a hundred. I have always wondered that no seedlings have ever appeared. Last year I saw a plant which I thought might be an offset at some distance from the parent, but this was evidently not the case, as it was on the further side of a large mass of natural rock. To-day (May 21st) I was delighted to see two flowers open. Can anyone tell me whether *Shortia* seedlings are uncommon in this country?—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

Crokia Cotoneaster.—Although this New Zealand evergreen shrub was introduced forty years ago it is not very common, possibly by reason of its being tender when grown in the open. In many gardens in the south and west counties it may be expected to thrive in the open, whilst elsewhere it can be grown against a sunny wall on which it grows fast, attaining a height of 10 feet or 12 feet, with a similar spread. During April and May a generous display of star-like golden blossoms is developed. When grown in the open it forms a bush 6 feet or so high with a dense mass of wiry, tangled branchlets, and if in a sunny position blooms freely. Small orange-red fruits are sometimes produced, but rarely in sufficient numbers to be very noticeable. Cuttings of short shoots

root well in a close frame in summer. Plants grown against walls require a little annual pruning after flowering to keep them near the wall, but bushes grown in the open are best left unpruned.—D.

Rhododendron yunnanense.—This is a very beautiful, light-growing species of rather an open and airy habit and good in effect. When it was first sent to me by M. Maurice de Vilmorin it interested me, but not so much as when seen fully grown. It is not easy to judge the value of a garden plant from a little spray in the hand or a bud of any kind. In spite of the nip of frost after the recent rains, which killed so many plants, this has not been touched in the least where it is, and is a mass of beautiful flowers.—W.

A note from Nenagh, Co. Tipperary.—A Holly at Rockford, still in fruit (May 19th), has a very fine appearance, especially when seen from some distance. Although other crops suffer greatly from the attacks of birds, this Holly has escaped. A Chrysanthemum which, in the natural course of events should have bloomed in mid-winter, but which was kept dwarf and prevented from flowering, is now bearing three good blooms in the conservatory. Strawberries, Raspberries, and Black Currants give good promise, but the prospect of the Apple and Pear crop is not so bright. The attention given to the Apple is increasing, but in Ireland we have yet to make great advances in fruit culture if we are to achieve anything like reasonable success. It is useless trying to reclaim old, worn-out trees that have lived through many years without attention. In many places, especially in the south of Ireland, old and useless trees are retained when their places could be profitably filled by young, healthy trees, which, given attention, would soon repay the small cost entailed. In some districts large areas are planted, but in many cases there is evidence of want of skill in the pruning. The trees, to produce the best results, must have skilled treatment of root and branch.—D. HANNIGAN.

The English Bluebell.—A few years ago a friend of mine living in this neighbourhood discovered in one of his woods a buff-coloured variety (*lutea*) of this very well-known and generally abundant flower, *Scilla nutans* or *S. festalis*. This induced me to ransack a large number of woods round here, but the results have not been very remarkable. The small white form, *alba*, is quite common; *alba major* considerably scarcer. One of a pale lilac tint (*ilacina*) is of frequent occurrence, so is a large blue (*Leonidas*), whilst of a small-growing, whitish-rosy form (*albo-rosea*) I have only found two plants, and four only (all in one group) of a tall, dark purple tint (*atropurpurea*). The above varietal names, except *alba*, *alba major*, and *Leonidas*, I have invented simply for the convenience of labelling, and I cannot help thinking that this is the only satisfactory, not to say scientific, way of studying any given species. The works on English Botany, to which I have reference, seem lamentably deficient in this respect, but one gets more help from nurserymen's catalogues. Van Tubergen, for instance, catalogues these additional varieties, most of which I grow, viz., *delicata* (white, shaded blue), *Blush Queen* (fine pale rose), *Robin Hood* (pale rose, red-tipped, large spikes), *rosea* (rose), *rosea major* (very large, rosy), and *rubra* (lilac-red). A group of these, grown in clumps of about a dozen bulbs, is a most entrancing sight and full of the deepest interest.—G. H. RAYNOR, *Hazeleigh Rectory, Essex*.

PLANTS AND FLOWERS.

INDOOR PLANTS.

FUCHSIAS.

THE recent note in these pages on Fuchsias in the flower garden serves to remind one of the many uses to which, from their accommodating nature, they may be put. They may be employed in various ways for the embellishment of the greenhouse or conservatory. They are grown in immense numbers as dwarf bushes in pots from 5 inches in diameter upwards, and if carefully attended to as to watering, with an occasional stimulant, they will bloom over a lengthened period. They may be grown as pyramids, in which form they used to be very popular, especially in the west of England. Now that standards are much appreciated there is nothing better for that mode of culture than Fuchsias of different sorts, as owing to the pendulous nature of their blossoms they are seen to very great advantage when grown in this way. Large specimens, either in pots or tubs, are well suited for balconies or terraces during the summer. Again, in the greenhouse the looser-habited varieties are very showy when trained to the roof, as under favourable conditions they will form a veritable canopy of drooping blossoms. The same feature stands them in good stead when employed for hanging baskets, for which purpose, apart from the garden varieties, one species is particularly suited—*Fuchsia procumbens*—a slender, creeping plant. For window-boxes, too, Fuchsias are well adapted, their graceful habit being then well seen, especially if they are not too much crowded together. When grown in this way it is very essential that the plants are not allowed to suffer from want of water, as from their sometimes elevated positions they are much exposed to drying winds. An occasional stimulant during the season is also of great service in prolonging the display of bloom. The relative merits of single and double flowers in the case of the Fuchsia are sometimes a matter for controversy. I much prefer the varieties with single blossoms, for though the large, double flowers are very striking they have a lumpiness which we do not find among the singles. In any case the varieties with single flowers are best suited for the outdoor garden, as in rough winds the heavy blossoms are far more liable to suffer than the lighter ones.

HARDY FUCHSIAS are, in many cases at least, not appreciated to the extent they might be, for during the latter part of the summer they are delightful. The well-known *F. Riccartoni*, which forms such a striking feature in many places around our coasts, is one of the hardiest and most vigorous, but there are many other valuable kinds. W. T.

NOTES AND REPLIES.

Luculia gratissima.—There is a difference of opinion as to the best way of growing this plant. Some maintain that success will not follow unless it be planted out and trained on a wall, others holding that it will succeed perfectly well as a pot plant. *Luculia gratissima* can be grown either way; the details in either case being but slightly different. When planted out, the larger root-run makes for finer plants, but insects are much more difficult to keep down, owing to the impossibility of using the syringe at the back of the plant where the shoots are secured to the wall. This drawback is not present in the case of plants grown in pots, these being easily kept clean and in good health. A little closer pruning is necessary than is the case with plants on wall or

trellis; and the best time to do this is immediately after flowering is past. Let the roots be fairly dry before pruning takes place, and but little moisture will be needed till the plant is again on the move. A warm, rather moist greenhouse temperature suits it well and the soil should be rather free and not too rich. Good loam, a few pieces of charcoal, with some leaf-mould and plenty of sand, will suffice. *L. gratissima* is, in my experience, one of the most difficult hard-wooded plants to strike.—K. BRIGHT.

Pelargonium ardens.—Some of the true species of *Pelargonium*, and the hybrids once removed therefrom, are remarkably pretty and more interesting than the innumerable garden forms. One such is *P. ardens*, which forms a free-growing, freely-branched plant of a firm, woody

should be fully exposed to the sun. Cuttings are not at all difficult to root, but care must be taken that the soil is not kept too moist.—W. T.

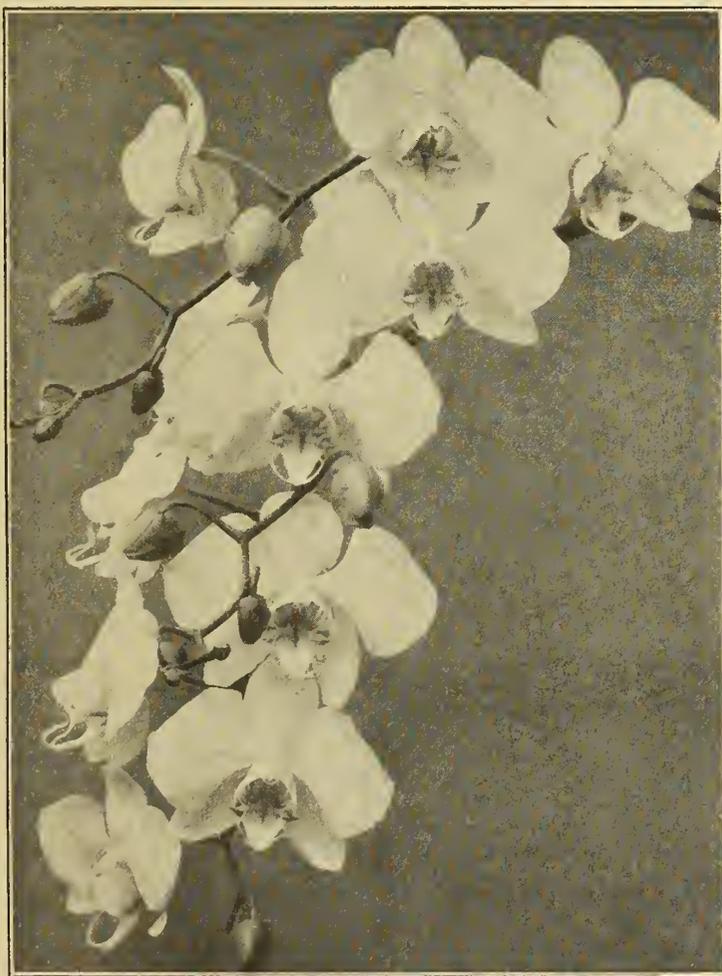
Impatiens Holsti.—Among the various Balsams that have been introduced within recent years this is one of the best for the greenhouse, as most of them require a somewhat warmer structure. This species is of sturdy growth, and the flowers, of a bright vermilion tint, are very freely borne. If the plants are assisted with an occasional stimulant a succession will be kept up for months. Propagation is readily effected by means of cuttings or seeds. Several forms with flowers of different colours have been distributed, but I prefer the typical kind. A more recent species somewhat in the same way is *Impatiens Herzogi*, in which the flowers

gestive of those of a *Bouvardia*, and bright red in colour. A group of well-grown plants forms a very attractive summer feature in the greenhouse. In a sunny structure seeds from which young plants can be raised may be ripened, while cuttings of the shoots or even single leaves will root without difficulty. From their succulent nature care must be taken that they do not get too wet. There are numerous other species, and several hybrids have been raised, but none of them is likely to obtain the popularity of *Kalanchoe flammea*. The tall-growing *K. Dyeri*, with large white blossoms, is valuable from the fact that it flowers in the winter and early spring months.—W. T.

The Pine-apple-scented Sage (*Salvia rutilans*).—Cuttings of *S. rutilans* will now strike readily without bottom-heat; and, when rooted and hardened off, the plants may be put out in a bed until September. If then lifted and potted they make fine specimens for greenhouse decoration during winter, and many who do not care for the stiffer, but more gorgeous, *S. splendens* might appreciate this variety with its delicately-perfumed foliage and its spikes of graceful tubular coral-pink blooms.—KIRK.

Viburnum macrocephalum for the conservatory.—This makes an excellent wall plant in this country, its monster cymes of pure white flowers being very effective in the month of June. I desire, however, to recommend it for conservatory decoration, where it can either be planted out and trained against a wall or it can be grown in standard form in a large pot. Treated thus it will flower during March and April.—ALBION.

Achimenes.—Like many other plants, *Achimenes* appear to have lost much of their former popularity. There is a general idea that unless considerable heat can be afforded, it is idle to attempt their cultivation. This is a mistake, for if they can be given the assistance of a mild bottom-heat the corms will readily start into growth and afterwards succeed under ordinary greenhouse conditions. *Achimenes* are especially adapted for baskets.—KIRK.



Phalaenopsis amabilis.

texture, and flowers throughout the entire summer. The blossoms, borne in fair-sized clusters, are of a rich scarlet colour, with almost black shading in the centre. A species seldom seen is *P. echinatum*, whose stems are very stout and furnished with spine-like stipules. The lower portion of the stem is, as a rule, devoid of leaves, and the roots are of quite a succulent nature. Although not so continuous blooming as the preceding, *P. echinatum* is remarkably pretty when in flower. The blossoms, borne in loose clusters, are of a clear white, with a dark red spot on the upper petals. Some varieties were put into commerce several years ago in which the flowers are pink or purplish, but I prefer the original species. From its half-succulent nature *P. echinatum* needs to be carefully watered during the summer. In the autumn it

are considerably larger and of a kind of orange-salmon colour. To be seen at its best it needs more heat than the preceding. A very old species, but withal a good one, is *I. Sultani*, with rose-coloured blossoms. Of this there are forms which vary in the tints of the flowers. One of the showiest species is *Impatiens Hawkeri*, but it is so liable to the attacks of a kind of mite that it is rarely seen in good condition.—K. R. W.

Kalanchoe flammea.—Few greenhouse plants have made such rapid advance in popular favour as this, introduced nearly twenty years ago. This is not to be wondered at, as it is readily propagated, of simple cultural requirements, and will flower for a long time. It is of a succulent nature. The flattened flower-head is composed of a great number of blossoms, which individually are a good deal sug-

ORCHIDS.
PHALÆNOPSIS AMABILIS.
This is a native of the Philippine Islands, and was first introduced into this country in 1837. The plant, when well grown, produces flowers in great profusion, and which, in a suitable atmosphere, last a long time in good condition. The sepals and petals are pure white, the lip also white, but spotted with purple, and with a yellow stain on each side. The plant grows naturally in an atmosphere that is nearly always at saturation point, and this should be imitated as nearly as possible. The best position for it is on the shady side of an ordinary plant stove, but where a separate house is provided for the cultivation of *Phalaenopsis* there is no difficulty in providing a suitable temperature. The varieties of *Phalaenopsis* usually commence growing in March or April, and a temperature ranging from 70 degs. to 80 degs., according to the weather outside, should be maintained until November, from which time till the growing season again commences the temperature should be between 60 degs. and 70 degs. The plants may be grown in pots, shallow pans, Teak-wood baskets, or cylinders, which should be well drained. The plant should be placed in the centre, spreading the roots out, and working in between them some clean Sphagnum Moss and finely-broken crocks, pressing it moderately firm around the base. Surface the whole with freshly-gathered Sphagnum Moss. The best time to afford fresh material or a greater space for root extension is when new leaves are seen pushing out from the centre of the plant. Water must be carefully afforded at all times. The principal thing to aim at is to keep the surface Moss in a living state all through the growing season. Do not allow water to lodge in the centre of the plant, or the leaves will decay.

TWO FINE ANGRÆCUMS.

WHENEVER seen in flower the Angræcums always create great interest, *A. eburneum* and *A. sesquipedale* being among the finest of the genus. Their large, ivory-white flowers, with the long spur from the base of the labellum, are very attractive, while the plants even when not in bloom are noble subjects for any warm-house. Both are native of Madagascar.

A. EBURNEUM first flowered in the Royal Horticultural Society's Gardens at Chiswick in November, 1831. For some years it was very rare, but now plants are often met with.

A. SESQUIPEDALE was found by the French botanist Du Petit Thouars some 120 years ago, but it was introduced by the Rev. W. Ellis in 1855. He brought home three living plants, and one flowered in the spring of 1857. A hybrid has been raised from the two species quoted, and is known as *A. Veitchi*.

Angræcums for the most part inhabit the hottest regions of the globe, and when grown in this country they must be placed in the warmest house where the atmosphere is kept humid when the plants are in active growth. Ordinary flower-pots are the best receptacles, and these must be filled to one-half of their depth with drainage, over which is laid a thin layer of Moss to secure a free outlet for water. Repotting should be done when the plants have become leggy and new roots are pushing out from the stem. The rooting medium should consist of Osmunda-fibre and Sphagnum Moss in equal parts with a sprinkling of crushed crocks or charcoal added. The last layer should be live heads of Sphagnum Moss, which will grow and keep the roots in a moist and cool condition. Shade will be needed whenever the sun is hot, and the plants must be afforded copious supplies of water throughout the spring and summer months. At other times the soil should be just moist or the leaves will shrivel and fall off. There are upwards of fifty species of Angræcums. The large kinds may be grown in pots and arranged on the stage, but the smaller species may be placed in Teak-wood baskets and suspended from the rafters. *A. citratum* is one of the best. B.

PLATYCLINIS.

At one time these were known as *Dendrochilum*, and in some gardens are still grown as such. The individual flowers are neither large nor showy, but the drooping scapes are always admired. There are few species, and all are native of the Philippines. In

P. COBBIANA the flowers are straw-yellow with an orange-yellow lip, and the scapes are produced in late autumn.

P. FILIFORMIS flowered for the first time in 1841 in Mr. Bateman's collection at Knypersley, Cheshire. The racemes contain upwards of sixty blooms, which are canary-yellow and slightly fragrant.

P. GLUMACEA is probably the best of the genus, the graceful drooping racemes appearing in April. The flowers are yellowish-white and possess a pleasing fragrance somewhat resembling new-mown hay.

CULTURE.—Flowering at different periods of the year, the repotting is carried out at intervals to suit each individual plant. As a general rule they should be given warm-house treatment, although I have seen some fine examples grown among the Cattleyas, especially *P. glumacea*, which will thrive where the temperature is cooler. The repotting is carried out a week or two after the flowers fall, employing a mixture of Osmunda fibre or good peat, Sphagnum Moss, and partly-decayed Oak leaves. The pots

should be filled to one-third of their depth with drainage, over which is laid a portion of Sphagnum to secure a free outlet for water. Throughout the growing period the plants should be placed in a light position, but where they are shaded from the direct rays of the sun, and afforded copious supplies of water. As the pseudo-bulbs mature the supply is gradually diminished, but sufficient must be given to keep the compost just moist and prevent the pseudo-bulbs shrivelling. This is important, because if they are allowed to suffer from dryness to any great extent the growth is not so vigorous the following season.

SADOX.

FERNs.

HARDY FERNS IN THE GREENHOUSE.

In many towns, and often in congested suburban districts, a glass structure (according to the builder a conservatory) is attached to the dwelling-house. Very frequently from its position it gets no sunshine, and in some cases little direct light. Any attempt to grow the general run of greenhouse plants therein will only end in failure. What is more, there is rarely any arrangement for keeping out the frost, so that tender plants will, in the event of cold weather, soon perish. In this case by far the most satisfactory plants to grow are hardy Ferns, most of which will succeed under such conditions, and very effective specimens may be grown. It is sometimes said that they are of but little interest during the winter, but such is by no means the case, as the various forms of the common Polypody, *Scelopendrium vulgare*, and *Polystichum angulare* are very effective when several of the others are dormant. In making a

SELECTION one should, if possible, go to a nursery and choose those that suit his taste. These Ferns vary so much that forms which one person would prefer might be by another passed over. Personally I do not like the extremely congested forms of *Scelopendrium*, or the very de-auperated varieties of other kinds, but by some they are selected on account of their distinct character. The culture of the more accommodating of these hardy Ferns is very simple, thriving as practically all of them do in a mixture of loam, leaf-mould or peat, and sand. Nice specimens may be grown in pots from 5 inches to 7 inches in diameter. Occasionally an extra vigorous specimen may need a larger pot, but in a general way the sizes above mentioned will be ample. Effective drainage is very necessary, for the plants will require plenty of water, especially during the growing season, but at the same time stagnant moisture is very injurious.

REPORTING, if needed, may be done in spring, just before growth recommences. It need not, however, be limited to that period, as in the first half of the summer, when the roots are very active, they soon take possession of the new soil. When in growth the roots should, in potting, be disturbed as little as possible. In potting, some plants need the soil to be pressed down more firmly than others. In the case of Ferns this should be moderately done, as if too firm or too loose it is not favourable to the welfare of the plants. It is also very essential to leave sufficient space for watering. Many of the hardy Ferns can be increased by division, and when it is intended to do this the operation should be carried out in early spring, before the young fronds are pushed forth. If there is a portion of bare stem, as happens in some kinds, it should, in potting after

division, be buried somewhat deeper than it was before.

CULTURE.—In structures such as that above indicated the greater portion of the light comes, as a rule, from one direction, hence the plants should be turned round frequently in order to ensure symmetrically-shaped specimens. In summer a gentle dewing with the syringe once or twice a day will be beneficial. While most of these Ferns are better in pots, the Polypody and its varieties, being of a shallow-rooting nature, may be grown in deep pans, and under these conditions the rhizomes have more room for their development. They may also be grown in suspended baskets, but in this case care must be taken that they do not at any time suffer from want of water. In the case of deciduous kinds the roots must be kept moist during the winter, but, of course, less water will be required than in the growing season. The question of stimulants for Ferns has of late cropped up. I have never experienced any harm from the judicious use of liquid manure, soot-water, or any of the well-known stimulants.—K. R. W.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

NOTES AND REPLIES.

Bulbs in the wall garden.—Some of the early bulbs which have been tried in my wall garden are now becoming established. One particular example which gave me great pleasure was some bulbs of *Chionodoxa Lucilæ* between the stones of a low retaining wall with a considerable "batter." The stones are red sandstone and are now nicely covered with green Moss. The bright glaucous green of the leaves of the Glory of the Snow, and the blue, white-eyed flowers, made a beautiful picture. On the same wall there are Snowdrops and Snowflakes, with, by and bye, some Dog's Tooth Violets. In another wall there are some Snowdrops, but this is not a retaining one, but simply a double one, with earth between, built for a screen and to accommodate rock plants. Here double Snowdrops are especially pretty.—S. ARNOTT.

Fritillaria Meleagris alba.—The Snakes' heads have always had a charm for me, and I have a lot of the white variety planted in different parts of my rock garden. They came into bloom about the end of April and look very graceful growing up through a clump of *Saxifraga bathoniensis*. The plant is found in meadows, and I think it likes the coolness which it finds when growing through a mossy *Saxifraga*. The flowers are not of a pure white, there being a greenish tinge about them, which, however, in no way detracts from their charm. They do not seem at all particular as to soil so long as they are not in too dry a position.—N. L.

Saxifraga Bakeri.—This delightful *Saxifraga* is just starting to bloom (May 17th). Belonging to the Mossy section, it is from 4 inches to 6 inches in height, and the flowers when they open are of the brightest crimson. It is rather similar to *Bathoniensis*, but dwarfer, and, if anything, of more compact habit. Another good point about it is its long flowering season. It usually lasts from May to the end of June. After the flowers have been open a short time the colour is a very pleasing dark-rosey shade.—E. T. ELLIS, *Wetwood, Ecclesall, Sheffield*.

Nemesias in the rock garden.—Some most delightful effects are produced if the seed is sown now in a sunny spot in the rock garden. Last year, when on my holiday, I saw the varieties Orange Prince and Blue Gem (9 inches to 12 inches high) naturalised in this way, and I never saw anything nicer. The seed should be sown thinly and covered only very lightly. All that remains to be done is to keep the plants well watered, thinning out as needed later on.—E. T. ELLIS, *Wetwood, Ecclesall, Sheffield*.

TREES AND SHRUBS.

IVY.

THE illustration shows the effective use of Ivy, where it is not likely to damage neighbouring subjects. Over the open space on the right-hand side of the picture is a strongly-built stone archway connecting different parts of the garden. The arch supports a public footpath, which is hidden from view by an iron fence fixed on the top and clothed with Ivy. The banks on both sides, and for some distance around, are composed of a stony clay soil quite unfit for choicer things, and on these are growing large Hazels and groups of Blackthorn trees 30 feet or more in height, many of which are very picturesque gar-

a year, when it should be cut hard back. April is the best month for this, as the young fresh leaves develop rapidly after this date. There are few more conspicuous features in the winter landscape than a large Ivy-clad tree. It is generally assumed that Ivy is detrimental to the welfare of trees, but on this point authorities differ. I have often noticed that a tree well clothed with Ivy often looks very sickly during periods of drought, the cause of which is undoubtedly the Ivy sapping the moisture. E. M.

TRANSPLANTING WITH BALLS OF SOIL.

LOOKING through some old gardening periodicals recently we came upon an article on transplanting trees with balls

been disturbed, especially of smaller ones, and it is the general experience of planters that the preservation of even a few roots, in this way undisturbed, is almost a guarantee of success. There is the soil covering compactly the roots, no drying out by exposure has occurred, and a solidity of soil surrounding the roots is assured, such as no pounding or ramming of it under other methods of transplanting could bring about. Planting with a ball is almost the equivalent of planting from a pot, not quite the same when some roots are lost in digging to form the ball, but with a certain number of roots safely ensconced in the body of soil taken in the ball the tree is simply root-pruned, and not greatly checked.

Another advantage of the ball to a large



Ivy allowed to grow naturally over an arch.

landed with this finest of all evergreen climbers. The banks and the surrounding ground are one thick rich green carpet. The arch and fence above it are no longer visible except for the passage way, thus emphasising in the best way possible its great value and charm. Very different is the case with Ivy on houses, stables, sheds, etc., for here it is often dangerous, climbing in at the windows if not attended to every few days, choking spoutings, and if left, eventually covering the whole roof.

For clothing ruins, tree-stumps, bowers, fences, and bare dividing walls it is excellent. Ivy, in my opinion, is far more beautiful than hard, stiff, cut lines of Box and Yew. Moreover, it does not offer the same protection to vermin as the latter, and only requires trimming off once

of soil, in which the writer of the article was opposed to the ball when trees were large, and, in fact, contended it was unnecessary at any time. His objections were that in the case of large trees it was the custom to dig a small circle around the tree, chopping off all roots extending beyond it, whereas if no attention was given to the preservation of a ball the roots could be followed to their extremities. Then, with careful pounding of the soil around the roots in planting, it was just as good as a ball would be, while much greater lengths of roots had been secured at the same time.

While it may be accepted without question that the more root the better the prospect of success, yet there is much in favour of a ball of soil. There is then a certain number of roots which have never

tree is its keeping the tree in a firm position when it is planted. Many a large tree, moved without a ball, has its chance of living destroyed by its swaying about in gales, the roots giving to the call of the branches as gales sweep them about, for pound the soil as one will, a large tree will so sway about in gales that the roots must move to some extent, as the leaning trunk often indicates. Even when planting without a ball there is a better way of encasing the roots in solid soil than by pounding, or ramming the soil. A good pouring in of water will do it. Nothing solidifies soil better than watering, and then there is the additional benefit of the moisture to the roots. Give first choice to a ball of soil in transplanting, the next one to a soaking of water, in order to aid success.—*The Florists' Exchange.*

VEGETABLES.

CELERY FOR LATE USE.

I AM afraid at times we coddle Celery too much and sow too early when the produce is required as late as possible. I have had it in use from October, sown early in March in a frame or on a bed of warm leaves. I prefer the leaves to manure, which frequently heats violently and the seedlings are much weakened. Sown thinly in rich soil, with a few inches of rotten manure underneath for the roots, the seedlings can be lifted with good balls, and may be planted out in their permanent quarters in the middle of May. I do not like pricking off. To avoid this there must be no crowding in the seed-bed and no delay in planting out. It is surprising how quickly dwarf, compact seedlings, if well hardened off, take to the soil, and there is much less trouble afterwards in watering. Seedlings planted out in the middle of May for autumn use have quite five months to perfect their growth. Early kinds may with advantage be employed, and as regards size much depends upon the demand and tastes of the household. I now come to the late or April-sown Celery. For this I would select a warm corner fully exposed to the south, and sow as early in April as possible. There should be good rooting material under the top soil, which must be fine and light. Many persons advise a raised bed, a gain, no doubt, at the start, but not so, later, as the moisture drains away and the soil dries so quickly. Thin sowing is imperative as it must be remembered the seedlings in their early stages must have room to develop, as they have to be lifted with a ball and taken direct to their permanent quarters. Dryness at the root or delay in planting out will in a great measure account for hollow stems and poor quality. It may be asked would this mode of culture answer in the north? To a certain degree it would, but much depends upon the grower. In the north it is an easy matter when sowing the seed to cover with frames or mats and assist germination. With cold frames available it would be an easy matter to sow thinly in these and get a splendid plant. My chief objection is employing strong heat, making a weak plant, that takes weeks to recover, if it ever does. Frequently one sees quite large plants, which, when planted out, topple over, being so weak.

Celery grown as advised will not be so large as one often reads of, but sturdy, good, and well flavoured. I fail to see the value of Celery of great size. For keeping it is not advised, and when of compact growth it is hardier. Moulding up must not be done too early or too much soil added at one time, this causing decay of the centres and considerable loss. A great deal depends upon the soil it is grown in. In heavy soils I found it a good plan not to make deep trenches but wider ones, and plant four rows to six rows of plants, the soil previous to planting having had a liberal addition of burnt garden refuse placed in the trench and then well incorporated with the top soil. I had good heads up to April; not large, certainly, but solid and with little waste. In this way I always grow the Celery for cooking. For cooking, a dwarf form was preferred. Colour was of no importance, as after the New Year a pink or red Celery loses much of its colour. As a rule, Red Celeries are much hardier and keep better in severe seasons than the white varieties. W. F.

GARDEN FOOD.

CELERY IN COOKERY.

A RECENT reference to the good form of Celeriac in GARDENING ILLUSTRATED made me think of its importance generally. One of the heaviest labours in the garden, especially in heavy soil, is earthing-up Celery, and it is not by any means certain that it is always for the good of Celery in wet years. One of the improvements of late has been the growing of the Turnip-rooted Celery, which is as good for the cook as the other Celery, and does not want one-sixth of the trouble. Those kinds of Celery, also, which are grown on the Continent as self-blanching should be tried more than they are. They will not give the crisp Celery that we want for our tables, but they will do for the cook for flavouring, and there seems to be a chance of improving some of them. Cooks, as well as gardeners, are apt to neglect the Celeriac even when well done. That is a great mistake, as, on the Continent, it has various good uses. W.

ORANGE SALAD.

IN your issue of March 4th you refer to several forms of Orange salad, but omit one American favourite—Orange and Lettuce. Line the salad-bowl with Lettuce leaves, then heap it with the white-heart leaves mixed with sliced Orange, from which skin and white pith have been removed. Toss a little French dressing over it, or pass the dressing separately if desired. A dusting of paprika is an attractive garnish. This is delicious with cold meats or with roast duck. Grape-fruit is used with Lettuce in the same way, but I prefer the Orange, as the Grape-fruit with French dressing is sometimes too acid.

American housekeepers compound many wonderful salads of fruit, Nuts, and cooked vegetables, some of which, like Banana, laid upon Lettuce leaves, masked in mayonnaise, and then covered with chopped Peanuts or Pecans, sound rather like a dyspeptic's nightmare, but this really tastes as good as it looks, and it makes a very pretty salad. "Ambrosia" is an American dessert that includes Oranges. It consists of shredded Pineapple and shredded Orange arranged in alternate layers, each layer well dusted with powdered sugar and covered with freshly-grated Coconut. Arrange in a glass serving-dish, dusting Coconut over it and chill before serving. This is easily prepared, and served with sponge-cake is very nice for a warm evening, when heavier desserts are undesirable.

EMILY TAPLIN ROYLE.

Maywood, New Jersey.

NOTES AND REPLIES.

Late-keeping Apples.—I see in your issue of GARDENING ILLUSTRATED of 15th April many kinds of late-keeping Apples recommended. I have not had the pleasure of trying them, but no doubt one of the best late kinds, and a very strong grower, is Alfriston, which cannot be gathered till about November, and keeps with me till end of May. The tree I have is very large, and a very good regular bearer. Of course, soil has much to do with it. Mine is a sandy loam. D'Arcy Apple is very good, but does not keep so long, and bears only every other year. I am very anxious we should improve upon having the best kinds in our orchards now we have so much competition. Blenheim Orange is another splendid Apple, but it takes so long coming into bearing unless

grafted on another free-bearing sort. For an early, prolific, regular cropper you cannot beat Golden Spire. I always have to thin the trees very many times during the fruiting season.—C. P., Blandford, Dorset.

Natural seasonings best.—We find the following in the *Guardian* and agree with it. The most mistaken cook is the one who abandons herbs for spices, and these not all wholesome. The reason of the delicate flavour of some French and Italian dishes is the great use there of herbs from a garden plot. It would be a great gain to health if all the pepper and other seasonings used by the town cook were put into the nearest sewer and the stock not renewed.

In view of the fact that vegetables—like everything else—are expensive at the present time, and that you cannot make savoury dishes without the help of *bouquets*, it is wise to use all ground available for growing those things that will help to supply the kitchen, and thus save some expenditure. Those with plenty of space at their disposal may well "take a little strip for the herbiary under the eye of the mistress, and thus recover to our cups and salads some of the comparatively neglected herbs whose place is nowhere to be found now save in the pages of old herbalists."

NATURAL SEASONINGS BEST.—Success in cookery depends to a large extent on the proper use of seasonings and flavourings, and greater attention than is usually thought necessary should be paid to this point, which no cookery-book can teach. Whenever possible, natural seasonings should be chosen in preference to made-up condiments, and fresh or dried herbs are all simple, and do not cost much to grow.

PLEASANT HERBS.—Marjoram, which should find a place in every *bouquet garni*, and in forcemeats of different kinds, is a perennial plant of easy culture. Basil, of pleasant smell and taste, should be sown in a hotbed in April and transplanted in May into light but good soil, putting the plants about 9 inches apart. The flower-stems should be cut when ready and dried for winter use. Chervil, used either dried or fresh, is highly appreciated.

SUBSTITUTE FOR ONIONS.—Chives are best used fresh as flavouring for soups and salads.

Asparagus.—This is one of our best vegetables, but it is often ill treated by the cook, who has often to deal with a poor, ill-grown "grass." Over-cooking and boiling the heads off are the common fault of cooks, but much of the stuff grown is so poor that the cook cannot serve it as it ought to be and is commonly served in other countries. The way of serving it cold, crisp, and dry, as in France, should be followed here. The mistake of all is the close planting, which has gone on for many generations in our country, and can never be done satisfactorily except in very good soils, and even then the "grass" is poor and small. Asparagus is a vigorous plant and wants room to grow in. The right way is the single drills, the plants not closer than 1 yard apart, and the lines not close either. It takes long to get this into the heads of gardeners. Growing Asparagus on heavy clay soil is a hard job in any case, and the difficulty is increased by the stupid way of packing the plants close together. On the other hand, where the soil suits Asparagus, it should be more frequently grown for the market.

OUTDOOR PLANTS.

SPRING FLOWERS IN THE GRASS.

I HEAR much grumbling lately because of loss of flowers, owing to the gardeners being taken away for the war. The loss is quite unnecessary, for if the people who have charge of public parks made good use of the land no weather could spoil the spring display. At a time when places like Hampton Court Gardens look desolate, because of the lack of bedding-out plants, my lawn and woods have never looked better. The cold and wet weather has failed to hurt any of the beautiful hardy things left to grow year after year. Here is a little example of planting, a quarter of a century ago, Daffodils of various sorts and other hardy flowers. They have had no attention since. By a little stream which tumbles into the lake close by I have some hardy bulbs, as also

whether the plants died suddenly or the reverse, or whether the dead ones are all together or occur at more or less irregular intervals. The failure is, however, of so exceptional a nature that we advise you to institute the closest inquiries on the spot. If you are able to obtain any information from so doing, we should be pleased to hear from you in due course.

HARDY FLOWER NOTES.

THE DITTANY OF CRETE (*Origanum Dictamnus*).—"W." (page 227) is quite right. This requires a very warm, light soil, and, I should say, can only be grown with any prospect of indefinite endurance in the warmest districts of this country. I saw it once in a flourishing condition in a Surrey garden, but the soil was more sand than loam, which never becomes water-logged, and in a hot, dry time gets so warm that many things become semi-roasted unless well watered or artificially shaded. Has "W." ever tried it in a mixture of broken brick, mortar rubble, and

the rockwork if I were Mr. Philips, and have all ready for transplanting in September, as he says he can do. This is the best month in the year for planting alpine, as the ground contains much warmth, and we are pretty well sure to get nice rains during the month, which firm the soil, and the plants get firm hold of the ground before winter comes, and are, therefore, less liable to frost-heaving.

WHITE SPANISH SQUILL.—On a piece of ground which is very poor and not favourable for hardy plants there are twenty clumps of this Squill carrying some 200 fine spikes of bloom, and the effect is decidedly good. Those who need an abundance of flowers for cutting should bear this in mind. It can be bought cheaply by the hundred, and will thrive in any poor ground. A little bit of culture, however, improves the quality of the flower-spikes. This may consist of a winter top-dressing of leaf-mould or garden refuse.



Flowers naturalised for a quarter of a century. Moat Cottage, Gravetye Manor.

the Siberian Iris and Pontic Kingcup. Snakes' heads grow in a moist part of the lawn. Globe flowers flourish near. Most of these plants are often not quite so good in the garden as in the Grass, in which they are let alone. Snowdrops, Crocuses, and the Blue Wood Anemone help the picture in their season.

W.

Gentian dying (J. H.).—Why the plants of Gentian have died off in the wholesale manner described is by no means clear, and, further, it is most unusual. Once established, as yours appear to have been, the plants invariably go on for years, usually covering an increasing area and flowering well. In the circumstances we can only suggest a fungoid attack or some local cause of which we have no information. Had you sent us plants when the failing was first observed, we might have been able to throw some light on the matter. It is possible that some virulent poison, as weed-killer, or salt, or even wood-ash fresh from the garden rubbish-fire has been applied to or quite near the plants. This last is very rich in potash and other quickly-soluble salts, and if liberally applied might prove dangerous. You say nothing of the nature of the decay,

sand in a very sun-baked position on a mound or very elevated part of the rockery? It is the inability of the roots to withstand the combined influence of wet and cold that makes its life precarious in English gardens. In any case some protection to the crowns, such as a cone of leaf-mould or ashes, would probably be necessary against extreme cold. In former years cottagers grew this in their windows in this district and called it the Hop-plant, and sometimes the Hop Marjoram, but the Zonal Pelargonium banished it as it did some other things then much grown.

MOVING ROCK PLANTS.—I cannot agree with the advice given on page 233 to move these at the present time, just when they are beginning to do themselves some good. I do not say it cannot be successfully managed, but it is risky, and, should a period of hot, dry weather set in, involves a lot of attention. I should get on with

I see no difference in the purity of this Scilla and the Roman Hyacinth.

PRIMULA DENTICULATA AND P. D. CASHMIRIANA.—Mr. Jenkins hits the nail on the head when he speaks of these as fit companions for our wild species. The shade, the shelter, and the sub-moist atmosphere which prevail in the copse and woodland, even in very hot weather, mean life and happiness to them, whereas the arid atmosphere and exposure in an open garden spell decrepitude and even death. These exotic Primroses are children of the woods, and are lost children when away from their protective and invigorating influence. I have seen the Cashmerian Primrose growing under these conditions evidently as luxuriantly as in its native wilds, and seeding and perpetuating itself as freely as does the Primrose in our woods and copse land. In the open it is generally short-lived, dying off from dry

rot at the crown, but I have grown it with fair success in the Grass.

SAXIFRAGA CRISTATA.—A pretty neat-habited little encrusted species this, but none too vigorous. It is liable to be lifted out of the ground by frost-heaving, and, therefore, should be well looked to. It is a delicate-rooted kind, and the soil for it should contain an extra amount of sand, with plenty of sandstone or something similar. J. CORNHILL.

"IN A COLLEGE GARDEN."

I HAVE been so interested in your criticism of "In a College Garden" that I feel impelled to write to you. Your criticism seems to me so absolutely just. At present there seems a mania with women to want to do what is a physical impossibility—to plough, spread manure, dig, shoot, and drill to defend the country! A more miserable sight than Lady Wolseley's lady gardeners bowed over a spade I cannot imagine. It is true that the peasant women abroad work in the fields, but the fact that they not only do tasks within a woman's strength, but beyond, is surely shown in their look of premature age. Then, also, I am so glad that you insist on the value of long apprenticeship to the work. I am afraid that the war will produce a large crop of thoroughly inefficient lady gardeners and workers on the land, accepted just now as stop-gaps, but all to be got rid of as soon as there is again male labour in the market. I think that gardening within limits is a delightful pursuit and interest for women; that milking, dairy work, light work in the fields are excellent for them, and might supplement men's work, though machinery is taking the place of women, for instance, in the hay field. But why cannot women take up the work of commercial travellers (I know of one who is doing it very successfully), shop work, clerk's work, and return to the domestic interests—kitchen and house? Why should Lady Wolseley make out that all gardeners (male) are stupid and dishonest?

ROSAMOND A. CHRISTIE.

P.S.—I must add a postscript to tell you that I have a delightful outdoor gardener—a rectory-trained man, but your "English Flower Garden" is his gardening Bible, and your paper his delight. His plants thrive amazingly because he takes endless pains, and gets his soil so free and tilled "that one could eat it." We are horribly short handed (I have to undertake the weeding), but despite all, we have carried out a new bit of stone ditching and re-made a badly or non-drained border. Despite the winter, he has brought through alive, and practically unhurt, *Lisianthras*, *Plumbago capensis*, *Abutilons*, and *Tacsonia van Volxemi* on the terrace walls. The really good working gardener is a delightful person, and his ambition for the garden—"the best in the place and for ladies and gentlemen to come from a distance to see"—is most pleasing.

—Many persons interested in horticulture will be glad of the remarks made in reviewing "In a College Garden," by Viscountess Wolseley. Gardening is an excellent occupation for many girls and young women strong enough to endure the hard and dirty work it entails, but if "the woman gardener, like all head gardeners" (*sic*), expects to be "paid in proportion to the amount of brain-fag, deception, and other disagreeables that by honesty and intelligent supervision she rescues her employer from being the victim of," she will often be disappointed. There is, surely, no reason why a girl trained for a year or two at a horticultural

college should be paid as much as a head gardener with years of experience. Viscountess Wolseley must know that in most of the so-called learned professions young men usually spend from three years to six years before earning anything at all, and frequently after a University education. The lady gardener is not the only one of her sex who sometimes imagines she can learn in three months what a man would take three years to learn. The business world to-day is crowded with young women and girls who have no notion of their limitations. Some advertisements of business training colleges actually appeal to "ambitious women and girls." Women are doing such splendid work, especially in nursing, teaching, and in making munitions, that it is a pity that others are too often quite unable to see their own strict limitations. This applies particularly to those who have quite recently turned their hand to agriculture or gardening.—H. S. T.

THE GLORIES OF THE SNOW.

MR. MARKHAM'S excellent notes on the Glories of the Snow should increase the favour shown to them, as they are now cheap. A well-known bulb grower, long departed, told me that he had paid £1 1s. each for three bulbs he selected from a batch of imported *C. Lucillæ* at the time of its introduction to commerce, and packets of seeds were offered by an enterprising midland firm at 2s. 6d. each for the benefit of those who could not afford to buy bulbs. Now the Glory of the Snow is cheap enough for almost everyone who can afford to buy bulbs. I may perhaps be allowed to supplement Mr. Markham's notes.

CHIONODOXA LUCILLÆ.—The bulbs introduced to commerce under this name are not Boissier's original *C. Lucillæ*, but represent Maw's finds when searching for Boissier's *C. Lucillæ*. Boissier's variety, which is now in commerce, is of a much brighter colour, the shade of blue being altogether warmer and more approaching that of *C. Tmolusi*. I grow both Maw's and Boissier's *C. Lucillæ*, and the latter is the superior form, handsome as Maw's plant is in every way. There are now several white varieties of this, and I have some raised here from white seedlings sent me by the late Max Leichtlin. They vary a good deal in size and purity, but all are very pretty. The pink varieties, of which I have selected some good seedlings, are also extremely beautiful.

C. TMOLUSI.—This is the latest of the type of *C. Lucillæ*, and comes from a different district. It is of a brilliant purple-blue with a bold white eye. A really good Glory of the Snow.

C. GIGANTEA.—A white variety of this is a great beauty.

C. SARDENSIS.—When this was sent out it was recommended because the white eye was practically suppressed, but there are really two forms of *C. sardensis*, the one just alluded to and that spoken of by Mr. Markham with the conspicuous white eye. The latter is not so plentiful—at least so far as my information goes.

C. NANA.—This is the rarest and least desirable of the Glories of the Snow, but it is a pretty and interesting little plant. It has small flowers of almost violet-blue with little of the white eye. It comes from Crete and is not, I think, offered at all at present.

CHIONOSCILLAS.—These hybrids between the Glory of the Snow and the *Scilla* are interesting. They have been found in Nature and also occur in gardens. I have a few of these and they are all beautiful. One very pretty one is soft

pink, passing off to almost white. It was raised by the late Mr. James Allen and named by him The Queen.

S. ARNOTT.

ANNUALS.

WHERE the best annuals, such as annual Sunflowers, Cosmos, Malope, Godetia, Gaillardia, Cornflowers, Gypsophila, and Mignonette are required in quantity for cutting, it is always advisable, especially if the provision for artificial watering is neither adequate nor convenient, to sow respectively on sunny and shady borders. Given a rainy summer, the former will be decidedly the better, but in a very dry season a border having a northerly site anywhere round from due east to west is certainly preferable; indeed, in very exposed, sunny situations it is doubtful if three parts of the seed would come unless the drills were soaked previous to sowing. The above-named annuals are so useful, coming in, as they do, at a time when the glory of the earlier herbaceous flowers, as *Pyrethrums*, *Irises*, *Pæonies*, and *Pinks* is nearly gone, that, common flowers as they are, a little extra labour bestowed in the way of culture and after attention is well repaid. Not the least valuable characteristic is their long duration when cut, much more enduring than one would suppose from the thin and, in some cases, almost semi-transparent petals. Very beautiful bouquets and nosegays can be made from these annuals, the delicate panicles of the annual *Gypsophila* playing an important part in the arrangement. The combined wealth and duration of flower furnished are quite enough to make one understand that these annuals will pay for good treatment, or rather that the nature of the display will largely depend on this. The borders for their reception should be dug in winter as deeply as possible, working in plenty of manure. If the ground is rather on the light side it is a good plan to give a slight treading. No mention of annuals to supply cut flowers would be complete that did not include Sweet Peas.

NOTES AND REPLIES.

Tufted Pansies.—Where these are required to give a late summer display the flowers should be picked off as fast as they form, so that the plants may be kept growing vigorously. If one does not care to sacrifice the flowers entirely, they ought not at least to be left on to form seed pods, as so many of the *Violas* do freely. Straggling plants, kept one year should have their shoots pegged down and be well mulched, but such plants never give such good results as young stock, so far as late flowering goes.

The inflated Bladder-pod (*Vesicaria utriculata*).—This is again very attractive on a little eminence in the rock garden, showing to much better advantage there than in the border. The yellow flowers are succeeded by small bladder-like seed-pods. *V. utriculata* seems to prefer a dry soil and a sunny position, and will last for years. Old plants are, however, apt to become scraggy and should be replaced after a few years by young ones.—Ess.

Aubrietia Peter Barr.—It is not possible to appraise justly the merits of the large number of deep purple *Aubrietias* now in commerce. It is, perhaps, sufficient to say that this is worthy of consideration even by those who favour Dr. Mules, Prichard's A 1, and others of the newer deep-purple *Aubrietias*.—S. ARNOTT.

Bicolor Trumpet Daffodil Florence Pearson.—This has been one of the most beautiful of all the bicolors here this season. The flowers, which are of large size, are yet very refined, and the soft colouring is most acceptable. Florence Pearson is one of the good doers and has been greatly admired.—S. Dumfries.

Alyssum saxatile Tom Thumb.—It is unfortunate that this dwarf variety of the Golden Madwort is such a shy bloomer. It is only a few inches high, is of more rigid habit than the others, and never covers itself with the little golden flowers in the fashion of the larger varieties of this Rock Madwort.—S. ARNOTT.

Border Carnations.—If not already done, these should now be neatly staked, and a sprinkling of soot and wood ashes hoed into the borders.

THE CHELSEA SHOW.

MAY 23RD-25TH.

THE May exhibition of the Royal Horticultural Society, which opened on May 23rd and continued the two following days, must be considered a success. A great exhibition in every way, one whose influence is felt even in the remotest corners of horticulture, this annual show—decidedly the most popular held under the auspices of the Society, long since exceeding the bounds of a mere flower festival—is now regarded as of national import. Early in the year the question as to holding this and other shows was seriously considered by the Council, and the decision arrived at to continue them, though on a modified scale, has been amply justified. In these circumstances the show this year is smaller than any of its predecessors in the Royal Hospital grounds at Chelsea, albeit it is a great show, and in view of the increasing tax that such exhibitions must be to horticulturists, big enough for all purposes; for a show can be too big to be enjoyed or appreciated by the public at large. Thus in great measure the show is a representative one; the missing link the fascinating rock gardens, which, since the days of the International Show, have constituted such a feature, and done so much to further the interests of hardy plant gardening generally. For the rest, the marquees teemed with the choicest products of greenhouse and garden. Finer exhibits of greenhouse annuals—*Calceolarias*, *Cinerarias*, and the like—than those from Reading, Raynes Park, and Stourbridge have rarely been staged. Roses from the ablest growers were in great beauty and variety everywhere. Carnations we have seen on a larger scale, though not of finer quality, a remark which applies with equal force to *Begonias*.

Orchids were seen to perfection on a modified scale, and naturally not a few of the choicest. Hardy plants and alpine were in great numbers—enough, indeed, and to spare—many of the choicest things being presented on an imposing scale. An item of importance not to be overlooked in this great—while greatly modified—exhibition is the entire absence of second and third-class material. There is, indeed, no room for such, just as to-day there is little need for it in the garden. Many good novelties received recognition. Following we give some of the chief features of the show, which we hope to continue in a subsequent issue.

HARDY PLANTS.

For many years now we have gone to the spring, or May, exhibition of the Royal Horticultural Society in the hope of seeing something new in hardy plants, and we have never gone in vain. We say this looking back to early Temple show days, when a solitary spike of *Eremurus* brought, if we remember aright, by the late Mr. Gumbleton from Ireland, created something in the nature of a sensation, and from which time to the present hardy plants have continued to grow and increase in popular esteem till now they find favour with all. Nor is the end yet. Year by year brings its quota of novelties. And still they come, increased either numerically or of enhanced importance, affording new opportunities and opening up greater possibilities to the hardy plant gardener than ever before. Novelties from foreign lands have ever fascinated the plant lover, and while the value of these remains to be tested, the insatiable zest of the cultivator urges him on to further trials in the hope of getting something both new and worthy. During recent

years much has come to our gardens from China and Thibet, and to-day the specialist is revelling in the newest additions from both countries. Happily the majority of these newcomers is not only quite hardy; they are singularly well suited to British lowland gardens, hence their increased beauty and ever-increasing interest. Moreover, hardy plants were never so well known and understood as they are to-day, and with the knowledge travellers and collectors impart of their native haunts the cultivator is assisted to give most of them what they require almost at the start.

Of a show of such magnitude as that at Chelsea no review, however apparently complete, could possibly do it justice, hence some details of its more important phases must suffice. To this end we single out the comprehensive collections of

Messrs. Wallace and Co., Colchester, rich as they are in home-raised hybrid Irises as well as the newer introductions from China and elsewhere. Of the Irises, *Shiren*, *Dorak*, and *Dilkash*, hybrids of the Bearded and Cushion forms, defy description. Suffice to say the weird markings of the latter, wedded to the perennial vigour of the former, have given us something new in the garden for which there is ever room. Mrs. Alan Gray is a rosy-flowered hybrid from Queen of May and *Ciengalti*, while *Purple King*, *Kharput*, and *pallida* in force afford endless beauty and variety. The rarely-seen *Iris bracteata*, a Californian species with yellow flowers, gained, as it deserved, an Award of Merit. Such Lilies as *odorum*, *Krameri*, *Batemanie*, and others were strongly represented, though even greater interest, perhaps, centred in the new Chinese *Primulas*—*helodoxa* (yellow), *nutans* (lavender), *conica*, *membranifolia*, and others—some of which we hope to refer to in fuller detail in a subsequent issue.

Messrs. Barr and Sons, Covent Garden, W.C., presented a great bank of hardy flowers, one aglow with the brilliance and splendour of Oriental Poppy and *Paonia*, while rich in the infinite beauty and grace of the Irises. Of these latter, *Walhala*, *Dorothea* (pale blue), and *Kharput* were some of the more conspicuous. *Paonia Ceres*, a single-flowered *officinalis* akin to *P. lobata*, was very beautiful in its salmon-cupped form. It gained an Award of Merit.

Messrs. George Bunyard and Co., Maidstone, showed a great wealth of the bearded Irises as a frontal group to a brilliant background of *Rhododendrons*, the lovely pale-pink *Mrs. Sterling* flanking either end superbly. *Pentstemon Scouleri* we have not seen so fine before, or so liberally displayed. *Allium Ostrowskianum* (rosy-red) was distinct. The Dutch bulbous Irises were very good.

Mr. Amos Perry, Enfield, brought a rich collection of hardy Ferns, a great bank of tree *Paonies*, of which *Elizabeth*, *Imperatrice Josephine*, *Mme. de Vatry*, and *Athlete* were some of the more fascinating, a gorgeous lot of oriental *Poppies*, among which the brilliant crimson black-blotched *King George*, jagged of petal and of great size, commanded attention. It gained an Award of Merit. Perry's White Poppy is remarkable by way of contrast. A new golden-yellow *Arnica* is called *sachalinensis*, and a hybrid *Dianthus* of Mule Pink tendency and single flowers was labelled *Fosteri*. It is dwarf, exceedingly brilliant in colour, and good. Irises were shown in great profusion, our only regret being, owing to the limitations of space, that we cannot give them in detail.

Mr. J. C. Allgrove, Middle Green, Langley, Slough, sent a capital lot of new

hardy plants, a reflex, as it were, of that greater wealth of novelties to which, for so many years, his predecessors (Messrs. Veitch) devoted so much attention. Cramped rather for space by reason of the unsuitable character of narrow tabling, there yet was still to be seen a considerable variety of meritorious subjects. Of these, one of the more important was *Primula tangutica sulphurea*, which, larger in all its parts than the original species, also promises well as a garden plant. *Primula Mrs. Berkeley* was particularly good and striking, while such modern species as *Forresti*, *conspersa* (Award of Merit), *geranioides* (pendent red flowers), *capitata*, *sibirica sinensis*, and *sikkimensis* all claimed attention. A new single *Paonia* with finely-cut leafage was labelled *P. Veitchi*. It is distinct from all.

Messrs. Blackmore and Langdon, Bath, sent a particularly good lot of *Delphiniums*, which, though forced to some extent, were still very finely presented. Rev. E. Lascelles, King Bladud (a deep blue sport from the last), *Lavanda* (a novelty in heliotrope or mauve), and Mrs. A. J. Watson (mauve and blue) were some of outstanding merit. Messrs. Godfrey and Son, Exmouth, staged a particularly good lot of *Papaver orientale bracteatum* varieties, the best being *Sandringham* (reddish-claret) and *Princess Mary* (rosy-mauve).

Messrs. John Waterer, Sons, and Crisp, Bagshot and Twyford, had a big circular group in which the showier *Lupins* were a chief feature, the rose and pink shades of *L. polyphyllus*, the blue and white *Foxi*, and the beautiful rose and white *Moerheimi* being among the best. All were shown liberally and well. *Verbascum Mrs. D. A. Lascelles* and *Iris Mrs. Alan Gray* (of rosy-lilac hue) were very fine.

Messrs. Reamsbottom showed *Anemones* very finely from Ireland, and thus grown, in blue, violet, purple, rose, and other shades, there is nothing finer for the spring and early summer flower garden.

Messrs. T. S. Ware, Feltham, had the too rarely seen *Paonia officinalis rosea plena* in great perfection. It is one of the most desirable, something to be grown by everybody. The most distinct plant in a group from Messrs. Artindale and Son, Sheffield, was the purple-feathered *Meadow Rue*, *Thalictrum aquilegifolium purpureum*.

ROCK GARDENS AND ALPINES.

There were no rock gardens in the open at Chelsea this year, and the fact, doubtless, to some extent accounted for the congestion in the vicinity of the alpine exhibits. This was in no sense surprising, remembering the interest now taken in this section of hardy plants and in view of the frequency of the exhibits, the store of material—choice and rare—and the cultural excellence which characterised so many of the plants shown. In this connection we give the exhibit from

Mr. Clarence Elliott, Stevenage, Herts, pride of place if only for the lavish display of *Pentstemon Davidsoni*. Imagine a 2 inches high miniature alpine sub-shrub, with roundish glaucous leaves, having brilliant carmine nearly 2 inches long tubular flowers jutting out in twos or threes in all directions on 3 inches long horizontally-disposed stems, and readers will have some idea of one of the choicest alpine in the show. Many other plants, *Pentstemon Roezli*, *Aquilegia glandulosa*, *Silene acaulis fl.-pl.*, *Iris cristata*, *Geum Bois-sierii* (pale orange), were in the group, and, cleverly disposed, afforded an idea of the rightful use of such things.

Mr. Reginald Prichard, West Moors, Wimborne, also brought many good things.

In this collection was seen the greatest variety of alpine novelties the exhibition contained. The hybrid *Dianthus Lansdalli* (Sweet William x Chinese Pink) was most brilliant. *Sedum humifusum* is a golden-yellow $\frac{1}{2}$ inch high Stonecrop of rare merit and beauty. It gained an Award of Merit. *Phlox Douglasi*, *Hypericum Kotschyianum* (yellow), *Dianthus alpinus albus*, *D. Prichard's Pink*, *Edraianthus serpyllifolius lilacinus*, *E. Pumilio*, and *Silene Hookeri* were other notable things.

Messrs. Tucker and Sons, Oxford, arranged many of the choicest alpine plants associated with rockwork. Here we remarked the rare and beautiful *Anemone narcissiflora*, *A. alpina*, *Campanula Cenisia*, *C. Allioni*, the dwarf-growing, rosy-flowered *Iberis jucunda*, *Silene alpestris grandiflora plena*, the too-rarely-seen *Anthyllis montana* and *Linum capitatum*. Mr. G. Reuthe, Keston, Kent, had an extensive collection of good and choice things, among them *Oxalis adenophylla*, *Ramondia serbica*, *Primula capitata erosa* (a newcomer of great beauty), and *Erinacea pungens* (sky-blue flowers on a 6 inches high bush).

Messrs. Whitelegg and Page, Chislehurst, went in strongly for free-growing subjects in conjunction with selected weathered Yorkshire limestone. *Ethionema Warley Rose* was a big feature. *Ourisia coccinea* (scarlet tubular flowers) was very fine, and the new *Saxifraga calabrica*, with handsome white plumes, was very good. Messrs. Piper, Bayswater and Barnes, showed many beautiful and showy alpine, including *Phlox canadensis* *Violet Queen*, *Viola gracilis*, *Lithospermum*, and *Ethionema Warley Rose*. Quite rich in novelties was the group from

Messrs. Bees, Limited, Liverpool. Of such, *Roscoea Humeana*, *Malvastrum coccineum*, *Weldenia candicans*, *Primula Smithiana* (yellow), *P. Reidi* (white), *Androsace coccinea* (*Bulleyana*) (Award of Merit) (approximating to *Kalanchoe flammea* in colour), *Clematis chrysocoma* (pinkish-white, in the way of *montana*), and *Rohleria Forresti* (yellow tubular flowers and *Ramondia*-like habit) being some of the more important. *Primula conspersa* (Award of Merit), *P. Menziesiana* (blue), *P. tibetica* (a rosy miniature of *P. farinosa* but 2 inches high), and the rich red *P. Rusbyi* were others of note.

Mr. Maurice Prichard, Christchurch, Hants, had some excellent things, including the white-plumed *Smilacina racemosa*, a shade-loving subject of great charm, *Androsace Watkinsi* (rich red), *Veronica bombycina* (silvery of leaf and pale-blue flowers), *Iris gracilipes* (quite dark form), and some pretty colonies of alpine Primks.

Mr. James Douglas, Edenside, Great Bookham, staged an excellent lot of Auriculas for so late a date, the green-edged *Wm. Smith* (the finest in the group), *Othello* (a very dark variety), and *Dean Hole* being some of the more conspicuous. Choice alpine and allied subjects were particularly well shown by

Messrs. John Waterer, Sons, and Crisp, Bagshot and Twyford. Here, among many, were remarked a pretty colony of the miniature-growing *Viola Lady Crisp*, hardy *Cypripediums* in variety, the blue-flowered alpine *Phlox Douglasi*, *Dianthus neglectus* (*Wargrave* variety) (very showy and good) *Oxalis adenophylla*, *Lewisia Cotyledon*, *L. Howelli*, *L. columbiana*, and *oppositifolia*.

Bakers', Wolverhampton, had *Dianthus Freynei* (one of the miniatures of the race), a mass of bloom, *Edraianthus serpyllifolius major* (rich imperial purple),

Pentstemon glaber roseus (very beautiful), *Haberlea Ferdinandi Coburgi*, *Bletia hyacinthina* and *alba*, and *Cytisus Dallimorei* in capital form.

FRUIT AND VEGETABLES.

These have usually formed a conspicuous feature at the shows held in previous years, both at the Temple and at Chelsea, but this season, owing to circumstances with which the public are, unfortunately, now only too familiar, the usual contributions were not forthcoming, with the result that only two collections of fruit—one of orchard-house trees in pots and one of vegetables—were staged. The premier exhibit of fruit was contributed by

The Hon. J. Ward (C.V.O.), Chiltern, Hungerford (gardener, Mr. C. Beckett). It consisted of an extensive and comprehensive collection of fruit made up of some two dozen Melons of well-known varieties, such as *Ringleader*, *Emerald Gem*, *Sutton's Scarlet*, *King George*, *Superlative*, and a seedling unnamed; numerous bunches of *Black Hamburg* and one of *Foster's Seedling Grapes*; several dishes of *White Marseilles* and *Brown Turkey Figs*, *Hale's Early Peach*, *Cardinal Nectarine*, and very fine *Red* and *White Currants*. The Melons were particularly good examples and exhibited high culture. Several of the bunches of Grapes were, when the earliness of the season at which the show is held is taken into consideration, excellent samples, though rather deficient in colour. The other collection of fruit alluded to was staged by the

Messrs. Laxton Bros., Bedford. This consisted entirely of Strawberries in a gathered state, the central position being occupied by plants in pots well laden with fruit of their promising new introduction named *Laxtonian*. There were also two baskets of the same variety which, with the foregoing, fully demonstrated its value as a good forcing and free-cropping variety. The fruits in appearance and size are similar to that grand old variety *Sir J. Paxton*, as it used to be some five-and-twenty years ago. Other varieties staged were *King George*, which has now an established reputation as a forcing variety, maturing its fruits some ten days in advance of the well-known *Royal Sovereign*, *The Earl*, and *The Duke*, which has evidently much of the blood of *President* and other fine old sorts in it. This gained a silver Knightian medal. The collection of fruit trees in pots, already mentioned, and to which a silver-gilt Knightian medal was awarded, was arranged by

Messrs. T. Rivers and Sons, of Sawbridgeworth, in a tasteful manner, Ferns and foliage plants being used to fill up the intervening spaces between the trees. The centre of the group contained well-laden trees of *Early Rivers Plum*. In front of them, on both faces of the group, which was oblong in form, were freely fruited specimens of *Early Rivers*, *Elton* and *Knight's Black Cherries*, *Duke of York Peach*, and *Cardinal Nectarine*. On the margin of the group were arranged several well-fruited examples of *Oranges* in variety.

Messrs. Sutton, of Reading, had the only exhibit of vegetables to be seen. The disposal of the various dishes, needless to say, was carried out in the usual artistic manner for which the firm is noted, and the general quality of the exhibits throughout was excellent. Some well-cropped plants in pots of *Wax-pod Butter Beans*, and of *Plentiful* and *Masterpiece French Beans*, served to illustrate the value of all three when utilised for this method of culture. Peas in a gathered

state were splendidly represented by the firm's well-known introductions, such as *Early Giant*, *Duchess of York*, *Hundred-fold*, *Improved Pilot*, and others. Of *Potatoes* *Balmoral Castle*, *Stirling Castle*, *Warwick Castle*, *Edinburgh Castle*, and *Dunbarton Castle*, some excellent dishes were noted. Other features comprised very fine *Globe Artichokes*, excellent *Turnips* and *Carrots*, *Winter Beauty Tomatoes*, *King George* and *Pride of the Market Cucumbers*, *Table Dainty* and *White Bush Vegetable Marrows*, *Mushrooms*, *Cos* and *Cabbage Lettuces*, *Radishes*, *Cauliflower* *Magnum Bonum*, *Late Queen Broccoli*, and *Flower of Spring Cabbage*.

Owing to want of space we have been compelled to hold over notes as to *Roses*, *greenhouse plants*, etc., which we hope to deal with in our next issue. A complete list of the certificated plants and medals will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MAY 18TH.—*Quinces*, *Brooms*, *Jew's Mallow*, *Piptanthus nepalensis*, *Laburnums*, *Bush* and climbing *Honeysuckles* (in variety), *Pearl Bush*, *Sweet Bay*, *Lilacs* (in great variety), *Viburnums*, *Spiræas* (in variety), *Hardy Heath*s (in several forms), *Magnolias* (in variety), *Coronilla glauca*, *C. Emerus*, *Perrettias*, *Gorse*, *Vaccinium pennsylvanicum*, *V. Vitis Idæa* and its major variety, *Cydonias* (in many colours), *Cornus florida rubra*, *Weigelas* (in variety), *Sand Myrtle* (*Leio-phyllum burifolium*), *Judas-tree* (*Cercis Siliquastrum*), *Dophnes* (in variety), *Andromedas*, the *Alpine Clematis*, the *Mountain Clematis* (in various colours), *Ribes speciosum*, *Mexican Orange* (*Choisya ternata*), *Native*, *American*, and *Japanese Cherries* (in variety), *Azaleas* (in great variety), *Rhododendrons* (in great variety), *Rocky Mountain Bramble* (*Rubus deliciosus*), *Grevillea rosmarinifolia*, *Staphylea colchica*, *Mountain Ash*, *Broad-leaved Spindle-tree*, *Pyrus Malus* (in great variety), *Euonymus alatus*, *Camellias*, *Amelanchier canadensis*, *Pyrus arbutifolia*, *Lonicera pileata*, *Wistarias*, *Corylopsis* (various), *Potato-tree* (*Solanum crispum* and its *Glasnevin* variety), *Chinese Chestnut* (*Xanthoceras sorbifolia*), *Deutzias*, *Akebias*, *Kalmia glauca*, *Periwinkles*, *Partridge Berry* (*Gaultheria Shallon*), *Anemone Rose* (*R. sinica Anemone*), *Siberian Crabs*, *Chestnuts*, *Berberis* (in great variety), *Laurustinus* (various), *pink* and *white May*, *Cistus salvifolius*, *Pæonies*, *Barrenwort* (*Epi-medium*) (in variety), *Scilla campanulata* and its *pink* form, *Honesty* (white, rose, and purple), *Coronilla minima*, *Cornus canadensis*, *Star of Bethlehem* (*Ornithogalum*) (in variety), *Anchusos* (in variety), *Solomon's Seal*, *Saxifragas* (*Mossy* and *encrusted* forms), *Megaxsas*, *Forget-me-nots*, *Primulas* (in variety), *Erinus* (white, rose, and purple), *Cheiranthus linifolius*, *Sun Roses* (*Helianthemum*) (in variety), *Gentiana verna*, *G. acaulis*, *Helichrysum trinerve*, *Ranunculus speciosus fl.-pl.*, *Alpine Phlox* (in great variety), *Wahlenbergia serpyllifolia*, *Houstonia cærulea*, *Alpine Achilleas*, *Lithospermums* (in variety), *Oxalis enneaphyllo*, *O. tropæoloides*, *Cistus alyssoides verus*, *Candytuft*, *Saponaria ocymoides*, *Alpine Veronicas* (in variety), *Monroe's Mallow*, *Pentstemon Scouleri*, *Ethionema cordifolium*, *A. persicum*, *Gazania splendens*, *Gypsophila prostrata alba*, *Linums*, *Dryas octopetala*, *Columbines*, *Kenilworth Ivy* (white and purple), *Linaria aquiritiloba*, *Tulips* (in variety), *Camassias*, *Wood Lilies* (*Trillium*) (pink and white), *Lily of the Valley*, *Bleeding Heart* (*Dicentra spectabilis*), *Wallflowers* (various colours), *Lupinus nothaensis*, *Armeria Lauchiana rubra*, *Viola cornuta* (in variety), *Antennaria tomentosa rubra*, *Dianthus deltoides ruber*, *Iris germanica* (in variety), *Potentillas*, *Grape Hyacinths*, *Meconopsis sinuata latifolia*, *Lady's Slipper* (*Cypripedium Calceolus*), *Tufted Pansies* (in great variety), *Kingcups* (*Caltha*) (in variety), *Water Hawthorn*, *Fumitory*, *Asperula*, *London Pride*, *Geranium lancastriense*, *Windflowers* (in variety), *Hyacinthus amethystinus*, *Mazus rugosus*, *Geums* (in variety), *Iceland Poppies*, *Lychnis diurna*, *Foam-flower* (*Tiarella cordifolia*), *Summer Snowflake*, *Rheum palmotum*, *Globe-flowers* (*Trollius*) (in variety), *Asphodelus luteus*, *Stylophorum diphyllum*.

WORK OF THE WEEK.—A further planting of *Sweet Violets* has been made on a cool border, the varieties used being *Princess of Wales* and *Italia*. In wet weather soil has been sifted, this coming in useful for surfacing beds where seedlings and various other small plants from cuttings are to be put out and grown on for a time. The alpine borders have been overhauled and the soil broken up among the plants wherever possible. Such things as *Nierembergia rivularis* and similar subjects which form a carpet in themselves have had fine soil shaken in among them. Gaps—where

the plants have been taken away for other purposes, such as edgings to beds, etc.—have been filled up with the following plants: Lithospermums, Pentstemon Scouleri (rooted cuttings and seedlings), Pentstemon isophyllus varus, Shamrock Pea, Monroe's Mallow, Pratia Arenaria, Felicia abyssinica, Veronica Bidwilli, V. Lyalli, Linaria alpina, Erinus (bright rose coloured), Erigonum umbellatum, a few plants of *Ethionema cordifolium*, and *Cistus alyssoides* varus. A double line of Dahlias in several varieties has also been planted out from boxes. The removal of dead flowers from Narcissi and other bulbs growing in the borders requires frequent attention. A few years ago the Blue Thistle (*Mulgedium alpinum*) was planted among some Azaleas here. This has now become a perfect pest, rambling about under the surface, and coming up everywhere, despite all our efforts to get rid of it. I hope this will be a warning to others—who may not know it—to keep it outside the garden. In the wild garden or in any out-of-the-way corner it will hold its own with tall Grasses or any other native plants—indeed, this is the place where it gives of its best, the blue flowers being very pretty. A flight of steps with Hairbells between the stones and a deep wall on either side, containing the little Sandwort (*Arenaria balearica*), Mossy Saxifrage, etc., has been cleaned over, and the plants freshened up. The same applies to rows of the Native Gromwell (*Lithospermum purpureo-ceruleum*), which furnishes the ledges on either side. A large bed has been planted with *Fuchsia corymbiflora* and its white variety. As these were in large pots, the soil was well rammed round the balls of roots to prevent undue dryness before they got established. Another bed has been planted with a number of mixed kinds of *Fuchsias*. E. M.

Sussex.

SOUTHERN COUNTIES.

Bouvardias.—Bushes of the variety *Humboldtii grandiflora*, the young growths of which have been stopped, must now be hardened off, as they will be planted out in their summer quarters the first week in June. They will occupy a narrow border in front of a Peach-house, an admirable position for them, and where they flower in great profusion during August and September. A little fresh loam and spent Mushroom-dung applied to the border every other season serve the requirements of the roots and encourage free growth.

Specimen plants.—Examples in large pots and tubs of *Fuchsias*, *Zonal* and *Ivy-leaved Pelargoniums*, etc., must now be gradually hardened so that they can be placed in position. This hardening requires care, as the foliage, being so tender, quickly burns if exposed too suddenly to the rays of the sun. To get over the difficulty many of the plants are placed, when first taken out, on the north side of a wall. Here the foliage soon becomes firm and hard, and in the course of a week or ten days the leaves can stand the sun with impunity. Other plants which cannot be so treated are shaded with muslin used for the exclusion of wasps and flies from vineries.

Flower beds.—With the exception of some few filled with *Panicles*, which are yet making a fine display, the beds must now be dismantled and made ready for their summer occupants. Plants of a perennial nature, such as *Aubrietias*, *Arabis*, *Yellow Alyssum*, and so on, should be lifted, divided, and planted in lines in a part of the garden contiguous to the water supply, as until new roots are emitted, and the plants become established, they must be kept well watered. The double white *Arabis* is a showy subject for spring bedding, and the several varieties of *Aubrietias*, whose flowers range in colour from a rose shade to deep purple, are always admired. Bulbs such as early-flowering or Dutch *Tulips* and *Hyacinths* should be lifted and laid in shallow trenches in a border to ripen off. These bulbs, when cleaned and stored away, are useful in autumn for planting in the wild garden and for similar purposes, but are of no further use for making a display in the flower garden. May-flowering *Tulips*, on the contrary, prove of great service for many seasons in succession if taken care of.

Annuals.—On the whole, these have come up well, and much thinning needs to be done. Failing to do this in a proper manner is generally the cause of these showy subjects lasting but a short time in bloom. When left too thick they become drawn and starve one another. Whatever the various subjects grown may be, sufficient space should be allowed the plants in each instance that they may develop properly, when the return in the shape of flowers will be tenfold that obtained from perhaps half-a-dozen plants occupying the same space. Some few annuale transplants successfully, but, as a rule, they do not, and are not worth the trouble. The best way is to resow or to fill the vacancy with some other appropriate subject when a partial or total failure occurs, half-hardy annuals, such as *Dianthus*, *Phlox Drummondii*, etc., coming in handy for this purpose.

Maincrop Carrots.—These, owing to the depredations of the Carrot-fly, are a partial failure, and a fresh sowing has had to be made on another plot which was surface-dressed beforehand with soot and lime mixed together. The bare places in the drills which occur in the first-named instance will be planted with *Cauliflowers*.

Parsnips.—Good results have accrued from the second sowing, and thinning will take place in a few days.

Turnips.—The plants from the last sowing are now ready for thinning. The raising of Turnips has so far been done under great disadvantages this season. In the first place, small birds are so very numerous that unless good nets are used, and made thoroughly secure round the outside of the plots, they get in and demolish the plants as fast as they appear above ground. Then, as soon as the surface of the soil is dry, hots of the flea-beetle appear, devouring the leaves of the plants and quickly ruining them. A daily dusting of the plants with soot and lime while dry weather lasts renders the leaves unpalatable and gives the plants a chance to grow away from them. Manure-water sprinkled over them also deters the insects and stimulates growth. Fortunately, recent heavy rains have rid the plants for a time, at any rate, of this pest. Advantage will now be taken of the soil being in a moist condition to get a good large breadth sown. As the seed germinates quickly it is hoped the plants will be able to make good headway before the surface again becomes parched and the jumpers reappear. A little guano sown in the drills does good, as it greatly accelerates the growth.

Early Celery.—This is now ready for planting. The variety is *Superb White* which is found to be the most suitable for early supply. The soil over-lying the manure in the trench is in a nice friable condition, and there will be no difficulty in obtaining a sufficiency of fine "crumb" with which to fill in round the balls when planting is done. The plants are in just the right condition for setting out, neither too large nor too small, and as each can be lifted with a good ball they should, after being watered, hardly feel the change. For some little time the roots will find all the stimulus they require beneath them in the trench. The plants are set out four in a row in the width of the trench, each row being 1 foot apart.

Spinach.—Warmer weather and an abundant rainfall have so stimulated the growth of the early sowings that were it not for its being in daily demand a wastage through its running to seed would surely occur. As it is cleared off the ground is planted with *Lettuces*. Successional rows of true *Spinach* have again been sown, and a good breadth of *Spinach Beet* got in at the same time as this does not, like the former, bolt almost as soon as it is ready for use. New Zealand *Spinach*, which was sown in pots will be got out directly all danger of frost is past.

Scarlet Runners.—A good look out for slugs, which, as a result of so much wet weather, are very numerous and destructive, must be kept until the plants have made sufficient growth to be out of harm's way. A mixture of soot and lime strewn on either side of the rows in and down the centre of the drills in the trenches proves as good a deterrent as anything. By this it will be gathered the seed is sown two rows in a trench, and where staking is done the stakes cross each other near to the tips. This method is found to answer best, as the stakes, when laced together at the top in the manner stated and with their butts let well into the ground, offer greater resistance to westerly gales in autumn than they would if grown in single rows.

French Beans.—These have germinated well, and the plants are, so far, growing freely. A further and larger sowing will now be made, the varieties chosen being *Magnum Boum* and *Selected Canadian Wonder*. The drills for the former will stand 2 feet apart, and for the latter—on account of its being of such a robust habit—2½ feet apart.

Vegetable Marrows.—The maincrop plants will now be planted out on disused hotbeds or any suitable place that can be found for them. No protection for these is required, as frost of any account is seldom experienced after this date. A few plants set out in frames occupied by *Violets* will yield an early supply of fruits.

Tomatoes.—As the position where these are grown outdoors is sheltered on three sides and open to the south on the other, they will now be planted in raised narrow borders, strips of turf being placed above the level on their outer edges to prevent water running to waste. Stakes, each about 5 feet in length, are used to train the plants to, and these are tied at the tips to a wall. This is done to avoid driving a number of nails into the face of the wall. Should the weather turn cold, mats will be hung in front of the plants at night.

A. W.

MIDLAND COUNTIES.

The latest *Vines* are now in flower, and as soon as the berries are set the growths must be regulated, the laterals stopped, and shoots tied down to the wires. Much care is necessary in tying down, especially with such varieties as *Black Alicante* and *Appley Towers*, for at this stage the shoots are easily broken off. They should be trained in the right direction and gradually pulled down at intervals of a few days, until ultimately they can be tied in their proper positions on the trellis. Remove all surplus bunches as soon as it can be seen which are needed for furnishing the crop. Late *Vines* must not be overcropped, this being one of the chief causes of shanking and a hindrance to perfect ripening. The thinning of the berries must not be delayed when

once they are large enough. Free-setting kinds swell very quickly at this time of year, and the berries are, therefore, liable to get damaged through overcrowding. Late *Grapes* should be more severely thinned than early ones, for the berries need more room to mature without nudly pressing each other, a condition which is against their good keeping. At the same time they should not be over-thinned, especially at the top of the bunch.

Tomatoes in pots should be stopped when they have set five or six trusses of fruit, as they are not able to perfect such a heavy crop as plants growing in beds. Remove all side shoots, and where the foliage is obscuring the light and air from the fruit the leaves should be partly cut away, but not too severely, or this will cause a check to the swelling fruit. A batch of plants will be raised the first week in June for supplying fruit in late autumn. These plants, when established, will be placed in a sheltered position out-of-doors, and not be brought in again until autumn frosts are apparent. By that time each plant should have set several trusses of fruits, and these will carry on the supply till the end of the year.

Plant-houses.—Owing to shortage of labour and the importance of giving fruit and vegetables first place, the work in this department has had to be considerably reduced. In most cases only sufficient of the more important plants to retain stock is being grown. A small batch of *Begonia Gloire de Lorraine* will shortly be ready for potting into the flowering pots, which will be selected according to the strength of each plant. A suitable compost consists of good fibrous loam, peat, and leaf-mould, using these materials in equal quantities, adding a little spent Mushroom bed manure rubbed through a sieve, also a moderate quantity of crushed charcoal and silver sand. The soil should not be made too firm, as this variety of *Begonia* appears to like rather a loose rooting medium. After potting, the chief points to observe are care in watering, moderate heat, and atmospheric moisture.

Perpetual-flowering Carnations are all in their flowering pots, and are stood on a bed of ashes in cold frames. The only attention they now need is ample ventilation, careful watering, and an occasional look over for stopping the shoots. The extent to which stopping is carried depends on the variety. Some sorts should not be stopped after the first week in June, whilst others may be stopped up to the second week in July.

Bedding plants.—The hardier kinds having been got out, the planting of other less hardy subjects, if the weather is mild, will be pushed on. These include *Heliotropes*, *Begonias*, *Cannas*, and sub-tropical plants, which may safely occupy their outdoor positions by the end of the second week in June. Many standard plants, especially any which will be required again next season, succeed best when plunged in their pots. All plants should be made firm at the roots. Any that require staking should have stakes put to them at the time of planting. The plants should be given a good soaking of clear water on the same day as they are inserted, and afterwards frequent sprayings with a syringe or rose-can in hot weather will keep them fresh during the time they are becoming re-established.

Climbers grow rapidly at this season and require frequent attention in the way of regulating the young growths. Do not train climbers in a stiff or formal way, or their greatest charm is lost. The object in thinning out unnecessary shoots is to enable those left to develop in the highest degree, and, provided they are supported sufficiently to withstand winds, the more loosely they are allowed to grow the more natural will be their effect when in bloom.

Asparagus beds in full bearing will benefit by applications of weak liquid-manure, and during showery weather light dressings of guano. The beds must be kept free from weeds by hand-weeding. Young plantations should not be cut over too hard, and from this date it may be advisable to leave all new growth to mature if the Grass is at all weak.

Peas.—The last sowing of Peas will be made at the end of the first week in June, and these will furnish a supply of pods until frost sets in. *Autocrat* is the favourite variety here for this purpose, as it resists mildew. If the ground is dry at the time the trenches are made a good watering should be afforded on the night previous to sowing the Peas. This is an important detail, as the moisture hastens the germination of the seeds. The ground between the rows of mid-season and late Peas is mulched with rough manure so soon as the sticks are placed in position.

Cabbage and Cauliflower plants raised on a warm border from March sowings are now ready for planting, and, if possible, this will be done in showery weather. These will form a succession to those wintered in frames. Should dry weather set in after planting, copious waterings will be necessary. The earliest planted *Cauliflowers* will be greatly benefited by weak applications of liquid-manure.

Turnips are now sown every three weeks, *Manchester Market* and *Orange Jelly* being suitable varieties for June sowing.

Carrots.—A small sowing of stump-rooted varieties is made every three weeks, as young, tender roots are much appreciated.

Seakale.—Young plantations have advanced far enough to require attention. The plants are carefully examined, and the shoots reduced to one on each plant, taking care to leave the strongest. Little further attention will be necessary unless the season is very dry, when the beds require a liberal watering from time to time to encourage the growth, and as the season advances a sprinkling of nitrate of soda will assist the development of the crowns.

Vegetable Marrows.—All the later plants will now be placed in their permanent quarters, giving them some protection for a short time during cold nights. When these are grown on the flat, large holes should be taken out and a good barrowload of manure placed in each. All unsightly rubbish and leaf heaps may be planted with these.

F. GALLOP.

SCOTLAND.

Odd work.—A prolonged spell of wet weather having intervened, some time was devoted to what may be termed odd work. There is always at this time of the year an accumulation of dirty pots, and these have been thoroughly scrubbed and graded. Crocks of different sizes have been put in readiness for further use, and a quantity of rough siftings and of Moss has been gathered together for drainage purposes. The stock of labels was overhauled, and some little repairs necessary in the case of nets were attended to. Mats, which will not now be needed until the autumn, were dried, folded, and stored. A quantity of loam and leaf-mould was sifted and put in a convenient place. Only sufficient batches for present needs ought to go into the potting-shed now, for the soil soon becomes too dry to be usable.

Leaf-mould heap.—The leaves gathered during the autumn and winter of last year were during the week turned over. When leaf-heaps are turned it is sometimes found that those in the centre are quite dry; but this season the excessive rains of winter and spring have thoroughly moistened the heap. If time permits, the heap will receive a final turn over later on. A little soot and lime were sprinkled over the layers in order to destroy as much insect life as possible.

Manure-heap.—There is a great and increasing scarcity of yard and stable manure. During the week a day was devoted to carting Seaweed from the beach near by, and this was incorporated with the orthodox manure as the latter was turned over. The mixture makes a highly useful compost, and when the digging season once more comes round the heap cuts down well, and the mixture is short and easily dug in. The varieties of Seaweed available are *Fucus serrata* and *F. digitata*, both of considerable value, more especially when used in the way indicated.

Vermin.—Some traces of rats having been noticed, a campaign against them is being carried out. I think the use of traps is better than poisoning, for rats are very easily scared, and when a few have been trapped I notice that the survivors give the environs of the garden a wide berth for a time.

Among the vegetables.—Although the weather has been wet, yet some progress was made in the vegetable garden. More lines of Peas were staked, and a further sowing was made. The variety used on this occasion was again the Gladstone Pea, a sort which does very well. I think there must be different stocks of this fine Pea, for I notice that, while the shape and habit are identical, the pods from some sowings are larger and better filled than those from seeds procured from a different source. More Spinach (*Victoria Round*) was sown. It is necessary at present to coat the seeds of Spinach with red lead previous to sowing, for pheasants have developed quite a relish for them. At the same time a sowing of Spinach Beet was made. This is useful in the event of a warm summer, when round Spinach quickly goes to seed. A further sowing in August will suffice for this variety. A sowing of Broad Beans was made, the early-maturing types, of which *Agnadnice* may be taken as a type, being used. More Turnips were sown, and a final sowing of Carrots was made. The hoe was run through Potatoes on a warm border. These have come along rather quickly, and so far have escaped damage from frost. Presently the soil will be loosened and the Potatoes moulded up. Sited by the damp conditions, further supplies of Cauliflowers were got out, as were Hearting Kale and a few lines of Savoys for early use.

Asparagus is now fairly plentiful and of good quality. It is always as well to keep the beds cut closely while the season lasts. To prevent exhaustion of the soil, the hoe must be kept regularly at work, so that weeds may never be allowed to make headway. If it can be spared, a sprinkling of any good chemical fertiliser may be given with advantage when there are signs of rain.

Rhubarb.—Now that Rhubarb is being largely used, it will appreciate a mulch of any spare manure, this keeping the roots cool and prolonging the season. The present is a good time to select clumps for next season's forcing. Such pieces ought to be encouraged to make all possible growth and should not be picked from.

Gooseberries have set freely. A look round in the course of the week shows that they will be perhaps a trifle later than usual. They are

generally picked about Whitsuntide, and as that, too, is later this year, it is possible that green Gooseberries will, as usual, be available. So far, no signs of caterpillar are visible.

Morello Cherries on a north wall are now in fine bloom. They have not had very favourable weather, high winds and continued wet having been the rule lately. Nevertheless, no special anxiety is felt on behalf of these Cherries, which invariably give good returns. Both young trees and those of some age are equally promising.

Apples.—On walls and in well exposed situations the display of bloom is now general, and in less favoured parts in the open the flowering time will not be much longer delayed. A collection of young trees on a dwarfing stock is especially promising, while upon walls, Margil, Ribston Pippin, King of the Pippins, and Kerry Pippin appear to have set well.

Under glass.—The continued wet has caused a renewal of firing in greenhouses. Such re-potting as is needful is being attended to from time to time as becomes necessary. Among other things sown in the course of the week for autumn was a packet of Balsams. These have not been grown for a considerable number of years, but they are always interesting. *Celosia plmosa* and *C. p. aurea* were also sown. A good and bushy strain has been built up by annual selection for a number of years, and these showy plants are always admired. Stove heat will, while the present conditions last, be kept in the neighbourhood of 65 degs at night. In the case of greenhouses, only sufficient heat to expel damp is allowed, for at this time any excess of fire heat merely results in outbreaks of insect pests.

Melons in pits.—Lack of sun is hindering progress, although the plants continue to make a certain amount of growth. Pinching in the case of newly-pnt-out plants is done when three perfect leaves have been formed. This produces sufficient shoots to furnish the light. Very careful watering is necessary in the case of Melons in pits, as such plants are much more liable to be attacked by canker than those grown in the Melon-house proper. Let the water be luke-warm both for syringing and for watering. Similar cultural details are applicable to Cucumbers grown in pits.

W. MCGURROG.

Balmac Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Ostrowskia magna (*Inquirer*).—Any hardy plant nurseryman can procure this for you. Your best plan will be to raise it from seed, which will germinate freely in a cold-frame. The plant likes a deep, sandy loam, as the Carrot-like roots, when of full size, go down to a considerable depth, and require careful handling as they are very brittle. It is in many places a very disappointing plant.

Outdoor Cannas (*E. D. H.*).—Seeing your soil is heavy, we should advise you to take out a hole about 2 feet wide and 15 inches deep, into this placing some light soil composed of leaf-mould and sandy loam, with some rotten manure in which to plant the Cannas. After they have begun to grow you should mulch them well with rotten manure and give copious supplies of water if the weather is dry.

Hyacinths after flowering (*Twywell*).—You have done quite right in laying your Hyacinth bulbs after flowering into the soil, but they will be of but little use for blooming in pots if you purpose using them in this way. The best way is after the foliage has thoroughly ripened to clean them and store them until planting time comes round, planting them in any vacant spaces at the edges of the shrubbery. The flowers may come in useful for cutting.

Maggots in Rose-buds (*Rose*).—The maggots which eat your Rose-buds must be destroyed before they reach the flower-bud. This can only be done by constant hand-picking. The maggot is easily found, for wherever there is a leaf a portion of which is rolled up, there will the maggot be found. Pressure between the finger and thumb will kill it. Make a point of examining the leaves of your Roses every other day, and you will prevent any serious injury to the flower-buds.

Rose Fortune's Yellow (*Cornwall*).—You are quite right about the pruning of this Rose. It should be cut back hard after flowering. Cut the lateral growths well back to the main stems. Keep the plant well syringed and the house fairly warm. By so doing you should have a good growth by the autumn. Any small, weak shoots that appear should be thinned out during summer. After growth is completed in autumn the small lateral shoots that may appear late on the current season's growths should be cut back and weak points removed from all leading growths.

TREES AND SHRUBS.

Yew hedges bare at the bottom (*Twywell*).—You may cut down your Yew hedges fairly hard, but at the same time the pruning must not be of too drastic a nature. The best time to do this is as soon as the harsh winds of early spring are over. A very important matter in connection with old hedges, such as yours is, is that the ground in all probability

is in a very impoverished state and a stimulant would be of great service. It is also likely to be very dry. If so, you might, when pruning is done, loosen the surface of the ground and give a thorough soaking of water. Then give a top-dressing of loam and manure, watering frequently during the summer if the weather is dry. If the weather is dry after pruning, a syringing overhead on bright, warm days will be beneficial, as moisture applied in this way acts as a stimulant to the production of shoots from comparatively old wood.

VEGETABLES.

Beetles injuring Broad Beans (*A. V. Brickenden*).—Your Beans have been injured by a beetle known as *Sitona lineatus*. They are often very troublesome, especially where the soil is rough and affords a hiding-place for them in dull weather and at night. It is always well to firm the soil round the plants, so as to remove these hiding holes as far as possible. Spraying the plants with paraffin emulsion will keep the beetles away from the plants to a considerable extent, and this will be the best measure you can adopt.

MISCELLANEOUS.

Hedgehogs in gardens (*Wallflower*).—In its wild state the hedgehog feeds upon worms, slugs, snails, and insects, while in a state of confinement it will consume bread-and-milk, and if allowed the run of a garden will find the greater part of its living. It is very fond of cockroaches, and will soon clear a kitchen of these pests. You should provide some soft straw or hay for your hedgehog to take refuge in during the daytime. You will find it will feed more freely during the night. The hedgehog hibernates during the winter, and when kept in a state of captivity should be placed, in cold weather, where frost cannot reach it. A small box or hamper filled with soft hay is about the best receptacle. On its awakening from time to time from its winter's sleep a little food should be offered it.

SHORT REPLIES.

Mrs. A. Longfield.—No; the only way is to fork in some of one of the several soil fumigants now to be had.—*H. T. Shawcross*.—If you could loosen the surface of the walk, then the weed-killer could find its way through and not run to waste. 2, Yes. 3, We should feel inclined to let them grow naturally, and thus present a fine mass of colour. 4, If you want to see the beauty of the Scotch Fir, then by all means have the trees thinned out as you suggest.—*Doctor*.—Not black-spot; the trouble is probably due to the cold weather we had when the plants were starting into growth, and they will very likely grow out of it. If not, please send further specimens of leaves.—*Grape Vine*.—We fear you will have but little chance of success if you attempt to move such an old Vine. Far better destroy it and start with a fresh, young Vine, seeing to it that the border is carefully prepared for the same.—*E. Field*.—Now is the best time to do what you wish, but you will have to be very careful with the watering and shading until the plants are growing away freely.—*E. S. Bolton*.—We do not think there is any cause for alarm, as, with the warmer weather, the leaves will come all right. If not, please send further specimens, and we will do our best to help you.—*B. K. G.*—It is useless to advise without seeing the fly which you say is destroying your fruit. Please send a few specimens, and then we may be able to help you.—*A Regular Subscriber*.—For such a shaded position the only plants likely to do any good are hardy ferns. Flowering shrubs would be of no use, as owing to the wood not having a chance of ripening, there would be no bloom.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*H. G. Thompson*.—The Bird Cherry (*Prunus Padus*).—*Northam*.—*Mimulus luteus variegatus*, so far as may be judged from the specimens you send, and which have been very much knocked about.

Sale of plants, bulbs, books, etc., in aid of the British Red Cross Society.

The sale of plants, bulbs, horticultural books, paintings, prints, etc., which is being organised by the Royal Horticultural Society in aid of the funds of the British Red Cross Society and the Order of St. John, and is to be held in the Society's hall on Wednesday and Thursday, June 28th and 29th, promises to be a great success, and there is a steady flow of offers of objects for the sale. The catalogue will be issued on June 17th and will contain a list of all the gifts received under the names of those who have given them. All entries must be received by May 27th. The title cover will be designed by Mr. Byam Shaw, the *Punch* artist. It has been decided that the donors of Orchids and other objects of exceptional value may place a reserve price upon them should they wish to do so.—W. WILKS, Secretary.

GARDENING ILLUSTRATED.

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Founded by W. Robinson, Author of "The English Flower Garden."

JUNE 10, 1916.

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TREES AND STORMS. *

In your issue of May 13 there is a note on the above by "W." I always read anything so initialled, and know that I am bold to make any criticism.

I live on the borders of Herefordshire and Worcestershire. This winter we have had three terrible gales, the last the worst, nothing ever being remembered like it by our oldest men. We appear to have been in the main track of the hurricane, which was apparently accompanied by whirlwinds, as whole belts of Fir-trees have had their tops screwed off 30 feet from the ground. I can point to very sheltered and screened valleys where great Oaks are torn up by the roots—not simply broken—to well-sheltered woods where Larches and Oaks are lying in a tangled heap like an upset box of matches. I have seen amongst them uprooted Holly and Yew trees. Of what use are wind-screens and sheltering-belts then? But it is "W.'s" last sentence that I take most exception to. He says, "It is sheer folly to plant the Field Elm or any other Elm anywhere almost." I ask what would the counties of Herefordshire and Worcestershire be without their glorious Elm-trees? I am aware many, very many, have suffered recently, but they are good timber, although windfalls. Yet there remain still standing and uninjured hundreds of thousands of magnificent specimens, beautiful, superbly beautiful, even though they are "dotted" and "spotted" in many a lovely golden buttercupped meadow or "rowed" in many a straggling hedgerow. If the gale had laid low the last I would plant again in feverish haste, for I would be a criminal to prevent a future generation seeing and worshipping one of the greatest beauties Nature produces. Even in winter they are more beautiful than the Yew, Holly, or Evergreen Oak, which are almost valueless for timber and too slow to rejoice our grandchildren.

ERNEST BALLARD.

Old Court, Colwall.

NOTES OF THE WEEK.

The Black Cottonwood (*Populus trichocarpa*).—In the interesting notes about the Poplars (May 20, p. 251) I find the finest of the kinds, *Populus trichocarpa*, which I have been planting lately, is omitted. It is a much finer tree than the Balsam Poplar and the others you name.—W.

Lysimachia Henryi flowered really well here last year from July to late in the autumn. This was protected with a sheet of glass, but is quite dead. It must be a very tender plant.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

Lupinus nootkaensis.—There is often little difference between the Lupinus in gardens, and one may often see the old *L. polyphyllum* bearing several Latin names. This, from seed from British Columbia, is a graceful flower, soft-grained blue, rather dwarf, and fragrant. A good border plant.

Primula helodoxa.—My brother arrived yesterday with this, the most wonderful out-of-doors Primrose, growing in whorls of three. A glorious bright yellow. The flower-stems measure 39 inches. The two leaves, I see, are 17 inches. Messrs. Wallace, of Colchester, grow it, but at the Chelsea Show I hear they had it no taller than ordinary Maidenhair Fern.—C. R.

Cat's-foot (*Antennaria dioica*).—This now forms a very pretty little silvery edging with me, and covers the beds at this season with its rosy flowers. It is quite a pretty and distinct thing, and is a native of the poor heaths and sandy patches from Cornwall and Devon in the west and Suffolk in the east to Shetland. It is well to use native plants when they are good and useful, as they often are.—W.

A blue Everlasting Pea (*Lathyrus pubescens*).—This comes to us from Mrs. Rogers, at Burncoose. It is one of the things many cannot grow. It does fairly well on a wall among shrubs, and is well worth growing where climate allows. The flowers are charming in the house owing to their distinct colour and effect, and keep well. This, a native of Chili, may be worth growing indoors where it will not thrive out-of-doors.—

Fuchsias in Scotland.—There is already quite a noticeable quantity of bloom on a large plant upon a south wall. The date (May 14th) is rather earlier than usual. We have had no frosts heavy enough to do damage to Fuchsias in growth as yet. These and Deutzias, however, can never be considered out of danger till quite the end of May; indeed, in 1913 both were cut over by frost on the morning of the 2nd June.—W. McG., *Balmac, Kirkcudbright*.

Anchusas.—A pleasant change from the prevailing yellow of spring is now found in the Alkanets, just (May 16) coming into bloom. The variety known as Opal is, perhaps, the best, closely followed by

the Dropmore variety. The type, *A. italica*, if coarser, is, nevertheless, not at all had, and blooms very freely. All three, however, in a good border, are rather rampant (especially the last named), and might be used in a more fitting way in the wild garden or for naturalising in Grass.—KIRK.

Felicia abyssinica is a really good plant. In the autumn of 1914 a plant which appeared to be dead was given me. Soon after Christmas I pulled it up and forgot all about it till March, when, being evidently alive, it was replanted among large stones, deeply buried, on a slope facing west. A few flowers opened in September. At the end of November, being told it was liable to damp off during the winter, I covered it with a sheet of glass. This was removed at the end of March. The plant had increased by layering itself wherever it touched the soil, and is now quite 2 feet across, with any quantity of beautiful flowers.—E. C. BUXTON, *Coed Derw, Bettws-y-Coed*.

Bush Honeysuckle (*Diervilla præcox* var. *Floral*).—This is a lovely variety of the Japanese Bush Honeysuckle. It makes a shapely and graceful shrub, and at the present time (May 20th) is wreathed with bloom. The large flowers, freely produced, are of a deep rich pink with a carmine throat. Apart from their delightful colour the flowers are rendered exceedingly attractive by their protruding white stamens, which stand well out of the wide, open throat. We have it growing on a sunny and rather poor bank, interspersed with young plants of the white Broom, also in bloom. The combination is all that could be desired.—E. M.

The Blue Poppy (*Meconopsis sinuata*).—I am glad to read that this beautiful Poppy flourishes at Gravetye. I find that the easiest way to deal with it is to sow the seed (which it produces in abundance) in autumn in the place where it is required. Of course, it can be raised in boxes and the seedlings pricked out, but that is troublesome work, and seedlings which have never been disturbed are always best. Treated in this way we have it here in the chinks of a retaining wall facing north-west. There is another species now flowering in the Edinburgh Botanic Gardens whereof the lustrous sky-blue quite eclipses the delicate tint of *M. sinuata*. This is a variety of *M. simplicifolia*, a Poppy which, hitherto, has given me only rich purple flowers shot with blue.

The value of *M. simplicifolia* is greatly enhanced by the fact that it is a true perennial in a genus mostly biennial.—HERBERT MAXWELL, *Monreith*.

The Japanese Quinces.—These are flowering with great freedom this year, and are much admired. The clusters of bright flowers are welcome, and, though seldom seen grown in this way, they form lovely hedges when trained against trellises or on wires stretched between posts. *Pyrus (Cydonia) japonica* has given many varieties, among the prettiest I have being *nivalis*, with snow-white flowers, *cardinalis* (intense crimson), *rosea* (rose), and *princeps* (scarlet). They generally fruit well with me.—S. ARNOTT, *Dumfries*.

Lilium myriophyllum.—You have a note in your issue of June 3 on this Lily. It is a mistake to use this name any longer in connection with *Lilium regale*, or Wilson's Lily, which is the species to which your note refers. The true *L. myriophyllum*, so far as we know, is not in cultivation. We write not so much to correct the name as the cultural note you add to it. *L. regale* is not a Lily for "peaty or leafy soils," it is a lime-loving Lily, and does best in a fairly stiff loam with plenty of sun. In the right place it is a splendid hardy perennial, but in leafy and peaty soils it dies out.—R. WALLACE & Co.

Achillea ptarmica The Pearl and A. Perry's White.—I can see no difference in these two varieties here. I have difficulty in keeping these for more than one flowering season, and am inclined to think that they flower themselves to death. They seem quite hardy, as small new plants planted in autumn live and increase through the winter, and in summer flower profusely, but die off during the next winter. I see in Nicholson's "Dictionary of Gardening" it is advised to cut down the stems immediately the flowers commence to go over, and I intend trying this. Have any of your readers had a similar difficulty and found a remedy?—H. F. S., *Huddersfield*.

Iberis Little Gem.—Mr. Herbert Maxwell is right in saying Mr. Arnott is too kind to plants of no great beauty. I tried the above-named in a good place, and after fair trial threw it away. It did not show any of the beauty or vigour of other hardy evergreen Candytufts. It is the greatest mistake to take nursery catalogue descriptions seriously. Try the plant in a nursery bed before putting it in any place where a good effect is looked for. The surest way to lessen the value of hardy plants is the presence of poor plants, mere novelties, and plants of botanical interest. Botany and gardening are two different branches of knowledge, and myriads of plants of interest in botany are without value of any kind for the garden.—J. S.

The Rocky Mountain Bramble (*Rubus deliciosus*).—This is now in bloom. The large, single, pure white flowers, each 3 inches across, resemble single roses, and are profusely borne on long, arching sprays, which are delightful for cutting, every little side shoot carrying one single flower. In point of flower beauty this is the most effective of all the *Rubus* group. Although discovered as long ago as 1820, it is still rarely seen in gardens. Unlike most others of this genus, it is quite unarmed. In a Sussex garden I saw this shrub the other day trained to a wall, its slender branches spangled with flowers, which, at a short distance, looked like large single Roses. With me it is quite hardy in the open, where it makes a loose, though shapely, shrub from 4 feet to 5 feet

high and through. An occasional thinning out of the old branches is all the pruning it requires. It is one of our finest flowering shrubs, and a group at the height of its beauty is a feature in the garden at this season of the year.—E. MARKHAM.

The Falkland Island Wood Sorrel (*Oxalis enneaphylla*) in Scotland.—In a half-shaded but elevated part of the rock garden this is delightful this year. It likes a free root-run in light soil, loam, leaf-soil, or peat, and a little sand suiting it well. I believe it grows in full sun in its native country, but climatic conditions are different, and with us it appears to prefer at least partial shade. With me it is shaded from the morning sun, and is grown on a little flat in a small depression well up on the rock garden. The flowers, which are of a kind of satin white, are exquisite nestling on the surface of the foliage. It is perfectly hardy here.—S. ARNOTT, *Dumfries*.

Lupins.—This year the first spikes of *Lupinus polyphyllus* (blue and white) were in bloom on May 21st—about a week sooner than last year. In my exposed garden the first spikes are always small, but about June I get the best ones. The smaller plants in the borders last June carried eight to ten spikes, but one huge clump, three or four years old, had as many as fifty spikes out at once. I usually calculate that I have *Lupinus* in flower from now to mid-July by cutting the blooming spikes when they are at their best. Then I get no more for about three or four weeks, when a second crop begins, which lasts till the end of September. The spikes are, of course, smaller, but well worth having. No second crop is obtained if the spikes given in June are left on and seed saved.—E. T. ELLIS, *Wetwood, Ecclesall, Sheffield*.

Rhododendron Pink Pearl.—I notice in your issue of May 6th a note from Sir Herbert Maxwell with reference to the parentage of Pink Pearl. I should have thought that Sir Herbert Maxwell would have been perfectly well satisfied with the explanation that I gave to him through the medium of the *Field* newspaper, on the occasion to which he refers. I should like to repeat that the original seedling plant of *Rhododendron Pink Pearl* was raised in these nurseries, one of the parents being one of the *R. Manglesi* hybrids, which has been known for many years as George Hardy. It is of considerable interest to know that Messrs. Peter Lawson and Son used *Rhododendron Griffithianum* for the purpose of hybridising, but I should think it is quite evident from the number of hybrids emanating from many sources all over the country that a considerable number of other people have also used this species and its progeny for the same purpose. It would be interesting to know whether there is any original history in Scotland of *Rhododendron Alice*. Perhaps Sir Herbert Maxwell can give us some information with regard to this beautiful hybrid?—F. GOMER WATERER, *The Nurseries, Bagshot*.

The Mexican Orange-flower (*Choisya ternata*).—A good deal can be said in favour of this shrub, for it is an excellent evergreen, and bears fragrant white blossoms freely. Being a native of Mexico it is naturally tender and is unsuitable for the colder parts of the country, but it gives excellent results about London, while there are many places in the Midlands where it does well. At its best it attains a height of from 8 feet to 10 feet, with a similar diameter, but plants of half these dimensions are very effective. The flowers are borne in large heads near

the points of the shoots, the majority opening in May, although blooms can be found at various times during the summer. Cuttings of short shoots root quickly if inserted in sandy soil in a close frame in summer, and soon form good plants. Arranged in groups it is very effective, whilst it can be used for informal hedges and for planting in tubs for terrace or corridor decoration. In some gardens it is planted against walls and proves a good shrub for the purpose. Cut branches are useful for house decoration, particularly when good-sized shoots are selected, as the flowers have a pleasant orange-blossom-like perfume.—W. K.

FRUIT.

FRUIT-TREES IN BLOOM.

I READ with pleasure the very interesting article which appeared in your issue of May 27, page 257, as few objects are more beautiful during the spring and early summer months than our common cultivated fruit-trees. There is no reason why the fruit garden should not constitute a necessary portion of the "pleasure-grounds" of every country mansion. What can be more beautiful than the Apple, the Pear, the Plum, and the Cherry-trees when in full flower? In fact, they are exceedingly interesting objects at all seasons of the year. It rarely happens that they are placed in positions where their beauty can be appreciated and enjoyed. They are too frequently to be found in the quarters of the vegetable garden, where they are entirely out of place (unless it be in the form of espaliers or cordons); or they may possibly be found in a somewhat neglected and out-of-the-way locality known as "the orchard." But as an advance or an improvement upon this state of things, might not these useful and ornamental fruit-trees be cultivated with more pleasure and, at least, equal profit in the pleasure-grounds? Clumps or groups of varied forms and dimensions could be formed of pyramidal or otherwise trained Apple, Pear, Plum, and Cherry-trees, etc., which might be margined by low single cordons of their respective kinds, while single standard trees of various sorts might in suitable situations be allowed to assume their natural habit and dimensions, the whole area to be traversed by winding and comfortable walks, to afford every facility for the examination and enjoyment of the beauty of the various fruits in all stages of their development. Altogether, I am inclined to think that by adopting some system of grouping and by adhering to an arrangement which would associate the fruit garden with the pleasure-ground in such a manner as to constitute, as it were, a necessary and important portion of the same, and to some extent effect a combination of the useful with the ornamental, we could hardly fail to give additional interest to the surroundings of country mansions or smaller residences at all seasons of the year. A. G.

NOTES AND REPLIES.

The Pearmain Apples.—Perhaps Mr. Will Taylor can give us some information as to the origin of Carter's Pearmain, as it seems to be comparatively unknown and not to be found in fruit lists unless under a different name. I have always been interested in the Pearmain family, possibly because among the recollections of boyhood days are fine fruits gathered from old trees in a southern orchard. That old English Apple known as Winter Pearmain, Winter Quoining, Duck's Bill,

and Sussex Apple in different districts was one of the favourites, and at its best quite an excellent Apple. Another popular fruit was Autumn Pearmain, not so good in quality as the preceding. The two most popular Pearmain's of the present day are possibly Worcester and Adam's, but they have not much to recommend them, the former being notable for its earliness, whilst Adam's is a greatly over-rated fruit, not in the same class as Claygate, Mannington's, and, presumably from the description, Carter's.—E. B. S., *Hardwick*.

Mulching.—Attention must be given to this during the next few weeks in order that evaporation may be reduced and watering lessened. This is particularly needed in regard to trees growing against walls. In mulching, the first thing to be done is to remove all weeds, afterwards lightly pricking up the surface-soil with a garden fork. Any newly-planted trees or those that have failed to set crops this season should only be mulched with light, strawy materials, rich manure tending to gross, unfruitful wood. Trees bearing good crops of fruit will be greatly benefited by a liberal dressing of partially-decayed stable-manure, giving a good

TREES AND SHRUBS.

HYDRANGEA PANICULATA.

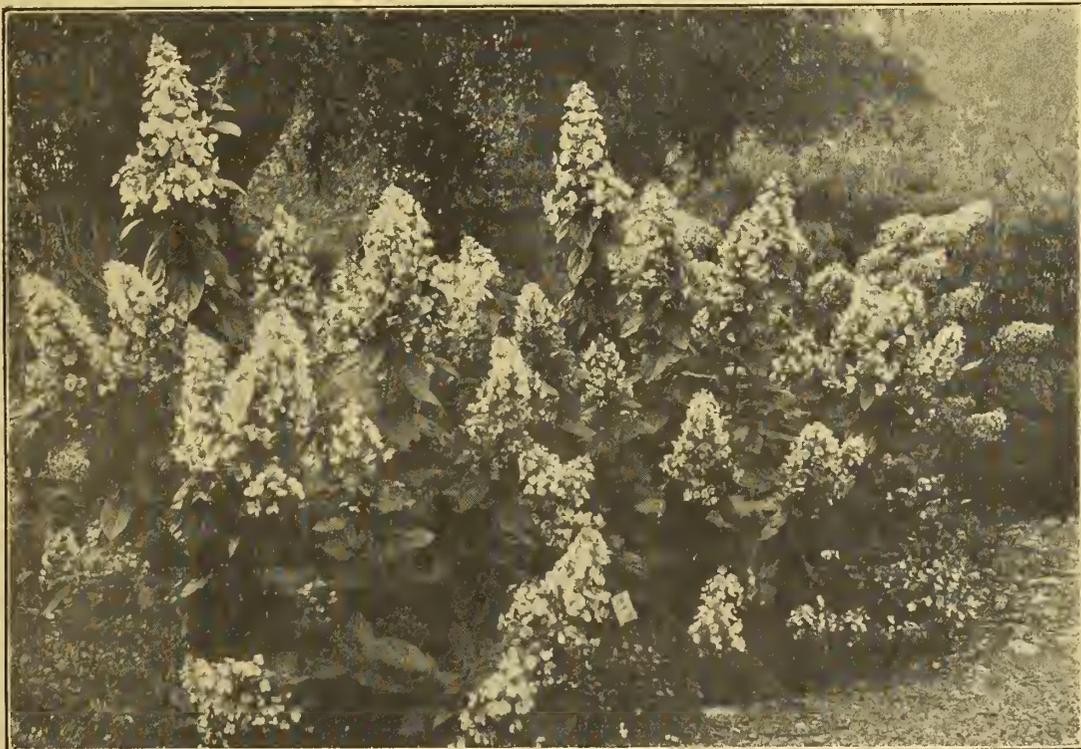
This is better known in gardens by the variety grandiflora than by the type. It is of Japanese origin, and forms a bush up to 6 feet or 8 feet in height. The leaves are large, and the growth strong, and the flowers in upright terminal panicles, each 6 inches to 9 inches long, and 6 inches through. The blossoms are white, and borne from early August until October. A considerable number of both sterile and fertile blossoms composes each inflorescence. A good idea of its decorative value may be gleaned from the accompanying illustration. The variety *H. p. grandiflora* is distinguished from the type by reason of the inflorescences being made up of sterile flowers only. When growing in rich soil, the panicles of bloom may be anything up to 18 inches long and 9 inches in diameter. It is grown largely for forcing. Both the type and variety may be

also made use of the Cedar for washing-troughs in the laundry, made twelve years ago.

THE BLUE WILLOW.

(*SALIX CERULEA.*)

THERE is some doubt as to which is the best Willow for bats, for of the several kinds that grow into tree size in this country one is well in advance of the others for the manufacture of bats. It is fairly common in Essex, Norfolk, Hertfordshire, and other eastern counties, growing about the margins of streams and in hedgerows, and differs from other Willows by its erect branches, which bring about an almost pyramidal habit, and by its moderately smooth or only slightly-fissured bark. There are other minor differences, but the habit is the most conspicuous feature. Moreover, all the trees in cultivation are females, which suggest that all may have been raised from cuttings of one original tree. It was at



Group of *Hydrangea paniculata* in the garden at Hillbrook Place.

soaking with clear water directly after the mulch has been applied. Future waterings to fruitful trees may consist of clear water and liquid-manure from the farmyard applied alternately. If the weather during the summer is hot and dry it may be necessary to mulch a second time.—G.

Infested Vine (*L. Hants*).—The Vine-leaf sent seems to be badly infested with thrips, a very minute insect that establishes itself in great numbers on the undersides of the leaves, and subsists on the sappy matter of the leaves, fairly sucking them dry. These pests are generally found on Vines where the atmosphere is very dry. You may do some good by syringing the leaves freely with a solution of Sunlight-soap or of Gishurst compound and flowers of sulphur well stirred in, but the house must have the floor damped, and a close, moist air be generated for a few days and nights to endeavour to check the ravages of this troublesome little insect. Use the syringe freely night and morning.

Strawberries.—Those who are fortunate enough to have a late batch of plants in pots in houses or frames may find them valuable, as indications point to a late season in respect of the outside Strawberries. If not already attended to, young beds intended to fruit during the present year ought to be hoed over, and, after being dressed with soot to destroy slugs, mulched. If possible, the litter ought to be rather long, so that by the time the fruit is ripening the rains may have washed the shorter and manurial parts well in, leaving the straw clean for the fruits.

cut well back to within a few buds of the old wood in February. A good dressing of manure in May does good, while, if the young shoots are thinned out when 6 inches long, finer flower-heads result. The type may also be grown without pruning, but the flower-heads are smaller.

Use for Cedar wood.—Those who have fallen Cedars of Lebanon may find some useful suggestions in the following note from Mr. H. C. Baker in the *Gardeners' Chronicle*:—"For many years I have experimented with home-grown timber. From experience I find that the wood of the Cedar of Lebanon is very valuable for general estate purposes, such as rafters, purlins, stud work, wall plates, and tie beams. It is very durable and not liable to warp. I have also used it for floorboards, mangers, and partitions in cow-stalls and stables; also for joinery work. I have two vinery doors which were made 22 years ago, one of Cedar, the other of Corsican Pine, which to-day are absolutely sound, showing no sign of decay. I have

one time thought to be a variety of *Salix alba*. The leaves of the two trees are certainly much alike, but differences in other ways, particularly in habit and vigour, give credence to the theory put forward by Professor A. Henry that it is a hybrid between *S. alba* and *S. fragilis*. Although the tree is most common in the eastern counties, there is no reason why it should not be grown elsewhere, for it grows quite well in other parts of the country, and it is probable that the timber would preserve its valuable qualities wherever grown provided growth is rapid. Some difference of opinion exists as to the

KIND OF CUTTING, many people recommending that straight branches each 6 feet to 15 feet long, and even 20 feet have been tried, should be used and inserted 2 feet to 3 feet deep in the position the trees are to occupy. This custom has doubtless arisen from the fact that people wishing to secure trees with the minimum of trouble inserted large cuttings in order that the young shoots should be out of the way of cattle. Ordinary cuttings 1 foot

long planted in a nursery answer quite well. In the first year shoots 4 feet or more long are formed. If strong these can be allowed to grow, but if weak they should be cut back to within a bud or two of the base and a strong shoot encouraged the following year. Such young trees must then be taken to permanent places, for they do not transplant very well if left too long in nursery quarters. Trees raised from small cuttings usually produce more perfect timber than those grown from large cuttings, for in the latter case defects often occur in the centre of the trunk. Moreover, large cuttings at the outset are expensive, for they represent several years' growth from pollarded trees, whereas small cuttings can be made from shoots one year old, and several cuttings can be made from one shoot.

One point to be observed in the culture of this Willow is the preservation of a clean trunk for a height of 15 feet or 18 feet. In order to effect this, side shoots must be removed carefully whilst quite small. Here the value of the large cutting is seen, for the removal of side shoots does not cause it to become top-heavy, whilst the too rapid removal of side shoots from young plants grown from small cuttings may cause the trees to draw up so rapidly that they cannot maintain an erect position without the aid of stakes. Good can sometimes be done, however, by shortening the leader and allowing a new one to take its place. There are other hybrid Willows of the same parentage, notably *S. viridis*, which is very similar in many respects to *S. cœrulea*, but is of looser habit, with more pendent secondary branchlets. Its wood is not so valuable as that of *S. cœrulea*. When selecting cuttings it is therefore very necessary that the purchaser should convince himself that they are from trees possessing the stiff, erect, narrow-headed habit combined with a fairly smooth bark, which is characteristic of the true Blue Willow. The value of the wood of this tree for several years past has been in advance of that of any other British tree, and it is likely that a good price will be maintained for some years to come. Even a few trees planted upon a small estate and left to grow on quietly will, with ordinary good fortune, prove valuable in twenty years' time. D.

CATTLE AND YEW.

THE information given in notes under "Law and Custom" is always of a helpful and practical nature and in terms easily understood, but yet occasionally illustrating the difficulty in coming to a conclusion in matters of dispute. In the vexing question, for instance, of cattle and Yew, if the trees were planted close to the boundary-line between two properties is it essential that the owner of the trees should keep them trimmed out of the reach of cattle on adjoining premises, and does the reaching over constitute trespass if the animal itself is not outside its owner's property? The object of this note, however, is hardly a query in the matter of law, but rather to suggest that the result of the eating of Yew by cattle is of so variable a nature that it is extremely difficult to tell when and how it is injurious. Is it at some particular stage in the growth of the tree or are there times when the animal is specially affected by it? I have known cattle eat it often with impunity, and so far as sheep are concerned, I remember a big, old Yew some 20 feet in circumference, with a thickly-feathered stem, in a little village churchyard into which the animals were occasionally turned. They ate all the young growths as high as they could reach, and I never heard of any ill-effects from

the same. On the other hand, we often hear of both horses and cattle dying (as certified by veterinary surgeons) from the effects of Yew-poisoning, which makes the whole matter, as above noted, very difficult of solution and well worth consideration when one remembers the many private places throughout the land in which the Yew is found in some shape or form, and often in close proximity to park and meadow land in which cattle are grazing.

Hardwick.

E. B. S.

BERRY-BEARING AUCUBAS.

HARDY berry-bearing shrubs, especially those whose fruit when ripe is of a bright colour, are always esteemed, and deservedly so, for they enliven our gardens through the dull season of the year when there is little that is attractive. When the pollen-bearing variety of *Aucuba japonica* was first introduced, it was justly looked upon as a great acquisition, as by its agency not only would the old well-known spotted leaved berry-bearing form become clothed with bright red berries, but green varieties as well. Yet this appears not to have been realised. Strange as it may seem, there are very many gardens, both large and small, in which the pollen-bearing variety has not been planted, or if so, in such limited numbers as not to render fruitful the quantities of fruit-bearing plants which exist. The influence which the presence of the pollen plant exerts is always most apparent on the plants growing nearest it, the fruit of which is more plentiful than that on more distant plants, showing that where large quantities dispersed over considerable distances of ground exist it is necessary to plant the pollen-producing kind in proportionately greater numbers than in most places has hitherto been done. So far as effectiveness is concerned, the green-leaved forms are much more striking than those that are variegated, the contrast between the brightly-coloured fruit and the green foliage being more conspicuous. Some of the seedlings raised have immense leaves, and a few of these may be desirable by way of variety, but those with smaller medium-sized foliage, when combined with the fruit, produce a more pleasing effect. *Aucubas* in their fruit-bearing appear to be less influenced by difference in seasons than many plants, and to derive from the presence of the vast quantities of the common berry-bearing kind the full measure of its decorative value there should everywhere be enough pollen-bearing plants introduced.

NOTES AND REPLIES.

Two beautiful Heaths after snow-storms.—The two most precious Heaths so far as I have tried them are the Southern Heath (*Erica australis*) and the Portuguese Heath (*E. lusitanica*). They have for several years withstood the winter climate of Sussex and the recent snowstorms, and in some ways are the more beautiful for having been tossed about. *E. australis* is perhaps the most beautiful of all the spring-flowering Heaths, and is so good that I like to have it in two or three forms and of different ages.—W.

Fendlera rupicola.—Among the uncommon shrubs now in bloom is this *Fendlera*, a native of Arizona, Texas, and New Mexico. It was introduced nearly forty years ago, but, as it needs a hot, sunny climate, it is seldom met with in a satisfactory condition. To be seen at its best here it needs a wall where it gets the full sun, as under such conditions the wood is thoroughly ripened and a display of flowers ensured. This *Fendlera* is a near ally of the Mock Orange. The branches are slender and of a somewhat straggling habit. The flowers, borne on short twigs springing from the wood of the previous year, are white and each about an inch across. Here it flowers, as a rule, towards the end of May and in June.—K. R. W.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

EVERLASTING PEAS.

THE term "everlasting" could never have been more appropriately bestowed, for the life of the old Everlasting Pea seems to be indefinite. The ability of this hardy plant to retain a vigorous life under circumstances which would cripple most other things is remarkable, and therefore it might, I think, be made free use of in places where, as is frequently the case, unfavourable positions for plant growth occur. I have seen this Pea growing with the utmost freedom and blooming abundantly every year where the soil round the roots was almost as hard as a brick from constant treading. I have had it doing well where its roots mingled with those of the Ivy, which very few things can endure. Such a plant, old inhabitant of our gardens though it may be, can never be ignored. By the way, can any of your readers say if this Pea is growing wild in any part of the British Isles? In Loudon's "Hortus Britannicus" it is placed among native plants. Loudon has two Everlasting Peas—*L. sylvestris*, an inhabitant of moist woods in Britain, and *L. latifolius*, a native of England. In former days I had a good deal to do with our native Flora, and came into contact with botanists with a thorough knowledge of our native plants, but I never heard one say that he had found, or even heard of, this species growing wild. The white variety is well known as one of our finest hardy plants, simply invaluable for furnishing an abundance of the purest white flowers at the lowest possible cost. This Pea was at one time to a very large extent lost to flower-growers. I suppose that many plants were destroyed in the alterations made in gardens when bedding out and sub-tropical gardening became a craze.

It must have been when GARDENING ILLUSTRATED was some two or three years old that a friend discovered an old specimen of it in the garden of one of our village inns. When the innkeeper left he secured the root and gave it a good place in his garden, where it made a fine show and ripened a big crop of seeds. These seeds were sown, and about a thousand seedlings raised, of which about three-fourths were true, and these the following year were distributed over the British Isles. I raised many hundreds in later years, and there was always about the same proportion of plants which reverted to the type. At one time I had nearly a thousand of the pink form, and, which showed considerable variety of colour, some being much brighter than the type, and others in varying shades of pink. I have always been sorry that I did not select from them and propagate them from cuttings. I was going to destroy them, as they were taking up so much space, but there came a sudden and remarkable boom in this Pea, and in less than two months they passed from my hands into gardens in all parts of the land, and I suppose that they are still in existence. I can believe that ninety-five per cent. of those Peas, both pink and white, are yielding pleasure to their owners. Of how many hardy flowers could so much be said?

One thing that I hoped for, and, in a measure, expected, never came to pass. I thought that among the quantity of seedlings—some thousands from the white variety—a delicate flesh-coloured one might have appeared, which would have formed the starting point for a series of variously-tinted varieties, but nothing of the kind came to light. There were quite

pale pink flowers, but the border-line between pink and white was never bridged. That this will come one day I am convinced, as there comes a time when by reason of some subtle influence one particular plant breaks away from the fixed character, which has endured through countless generations, and then comes almost infinite variety. Only those who have passed half a century in gardening can fully realise what a simple break, a slight deviation from the type has effected. The new white variety, White Pearl, has flowers considerably larger than those of the old form, but whether this increase in size renders it more effective I have not

a person of that name. It is pretty and very distinct, but weather-sick. It is best at home rambling over low-growing shrubs, when the flowers are partly screened from hot sun and heavy rainfall. Grandiflorus would be a good thing if it flowered more freely, and Sibthorpi cannot be termed a first-class hardy plant unless it grows much more freely with others than it does with me, and the colour of the flowers is not so good as that of the common kind. These are all the Everlasting Peas I have grown, and I see no others offered in trade lists. What about such kinds as pisiformis and mutabilis, introduced respectively in 1729 and 1825 from Siberia, californicus

DAFFODIL FAIRY.

This is an instance of a curiously inappropriate name. It is really one of the largest Daffodils ever raised, but though a giant, it is wonderfully refined and perfect in shape. The huge recurved trumpet is a pleasing shade of deep yellow, the perianth slightly lighter in tone. It is a first-class variety for the border, being a vigorous grower and flowering very early; also highly suitable for pot culture. It ought to be more popular, seeing the price brings it within the reach of all.

J. R.

AMONG THE HARDY FLOWERS.

SPRING PHLOXES.—These are doing well with me this year, but I find that they flower better when high up than in low-lying parts of the garden. In the latter they appear to suffer more in winter, and are often browned by frost and cold winds when those in the higher parts are unharmed. This is a point worth considering, as these Spring Phloxes are so lovely in every way that all who love the early flowers enjoy them. I am referring here to those of the subulata or setacea section, such as atropurpurea, The Bride, Vivid, and others of the same class. By the way, I have occasionally seen it said that Vivid is not so hardy as some of the others. My own experience confirms this.

OXALIS ENNEAPHYLLA.—It is little wonder that people go into ecstasies on seeing Oxalis enneaphylla in bloom for the first time. I have it now finely in flower. The other day a friend to whom I had written extolling Oxalis enneaphylla sent me a quotation from a book on rock plants, which contains this reference to the Oxalis. I think it is worth repeating. It says that it is "a garland of pearl-white Couvolvulus flowers nestling among crinkly, glaucous-grey leaves." I like the description, but the flowers are not quite so big as the quotation would convey. They are of a lovely satin-white, and the leaves are beautiful in themselves. I was told that this Oxalis preferred a cool spot, and I gave it this, planting in light loam and leaf-soil, with happy results. I was lucky enough to see the rose-coloured variety of O. enneaphylla in bloom, and I like it much. There is room for both.

THE PEARL BERRY.—My plant of Pearl Berry has been killed. It is not surprising that it has succumbed, as it is not to be looked upon as absolutely hardy. It is well that it has such an attractive and admirably descriptive popular English name, and that we are not compelled to use the formidable one of Margyricarpus setosus.

THE WELSH POPPY.—There is an old saying that "one year's seeding makes seven years' weeding." This is surely true of the single Welsh Poppy, Meconopsis cambrica. I must disagree with a writer who tells us that this plant is "a dreadful weed, but you may grub it up fairly easily." With the first part of the verdict I agree so far, but I demur to the statement that you can grub it up fairly easily. It may be true enough with young plants in an open border, but when they are a year or two old it is difficult to remove every bit of the root, and, when any piece is left, the Poppy is almost as troublesome as any Dandelion. Some of the perennial Poppies are just as bad. They seed so freely and are so difficult to eradicate that they are perfect old men of the sea to one who is fond of flowers and who finds that the care of some treasures is much increased by the difficulties of keeping down



Narcissus Fairy.

been able to prove. This variation seems, however, to point to an inclination to break away from the form which has existed unchanged for a good many years.

The list of Everlasting Peas is not a long one, and as far as I am aware no new species has been introduced in recent years. We have the species which is now grown under the name of Drummondii, but how it came by this name I cannot understand, as seventy years ago it existed in English gardens under the name of rotundifolius, and is thus listed by Loudon. There can have been no good authority for the change of name. I can only think that at one time it almost dropped out of cultivation and was brought into notice again by

in 1826, polymorphus in 1824 from Missouri, venosus and decaphyllus in 1829 from North America. All these were evidently in cultivation in 1850, when the "Hortus Britannicus" was published. Where are they now? They may be in cultivation, here and there there may be old specimens in some of those old-fashioned gardens which have never been modernised, but although I have been a diligent reader of gardening papers for a period of forty years I cannot call to mind that I have ever seen any mention made of them. Coming from Siberia and North America they must have constitutions strong enough to resist the vicissitudes of our English winters.

J. CORNHILL.

Meconopsis cambrica, *Papaver pilosum*, and one or two others. The Oriental Poppy is less obtrusive.

AN AMATEUR OF HARDY FLOWERS.

THE DOUBLE-FLOWERED NARCISSUS POETICUS.

WHAT is the secret of the successful flowering of this? I have planted what appeared to be firm, well-ripened bulbs in different situations, and often failed with them, but this season a dozen rather small bulbs turned out of a pot in which they had been standing from late May until September, and, just put into ordinary soil, are each showing a fine flower, which makes one think that the answer to the above question may be found in extra-ripened bulbs. If this is so it may be well to take the trouble to acquire them, the flowers being so acceptable alike for their beauty, scent, and lateness; also their great endurance outside in a slightly shaded position and in a cut state. I thought of leaving a portion of the small colony in the ground and lifting and storing away the remainder until next planting time to note how they behave another season under the different treatment.

It is a little strange that the double form should be difficult when the better known single type is so easily grown; indeed, of all the *Narcissus* family there is nothing that adapts itself better to naturalisation, and certainly nothing that gives in the course of years such a wealth of flower from the single bulb. It should be planted rather deeply in light soil. The question of the naturalisation of *Daffodils* is very interesting, and one never likely to be quite satisfactorily mastered; that is, it is a matter about which we are always learning, and likely to have to learn, in connection with the many varieties annually raised. Some of these may in time occupy as prominent a place outside as the old favourites, while others are only likely to prove satisfactory with annual lifting and replanting. E. B. S.

Hardwick.

NOTES AND REPLIES.

Monardas.—The crimson whorls of *M. didyma* are for a time attractive, and the odour of the plant is agreeable to many. But when all is said and done, I think *Monardas* are better fitted for the edges of shrubberies and similar places than for the border. A form not worth room, in my estimation, is the white variety *M. didyma alba*, which I heard highly praised the other day. Other sorts, such as *M. elegans* and *M. Russelliana*, are merely variations of *M. didyma*—no better and no worse. One thing is certain, if *Monardas* are to be seen to advantage they must be planted in clumps of considerable size, and they take up more space in this way than the most of us feel disposed to allow to them.—KIRK.

Anemone coronaria (Poppy Anemone).—A large bed of this has made a brilliant display for some weeks past. The plants are easily raised from seed sown as soon as ripe. Make the seed bed of a fairly porous soil in an open part of the garden. The surface before sowing should be made firm and level; if dry, moisten the soil before the seed is sown. It is a good plan to scratch the surface of the bed with a worn down garden broom immediately before sowing, which should be done broadcast, the seed being then covered with a thin sprinkling of sandy soil. After this, make the bed smooth and shade it from the sun until the seedlings begin to appear, when the shading must be removed. The bed must never be allowed to get dry until the young plants have finished their growth or they will wither prematurely.—F. W. G.

Hardy-plant borders.—These are now highly interesting. *Doronicum Harpur Crewe* is always striking at this season, and clumps of *Dielytra spectabilis* are very free. Occasionally, this fine plant is marred by untoward frosts, but, so far, it has escaped during the

present season. *Aquilegias* of the old garden type are in fine flower, and *Epimediums* are not unattractive. *Pæonies* are on the point of expanding their buds, and *Irises* of sorts continue to be effective. *Pyrethrums*, both single and double, will not be much longer delayed, and *Lilies of the Valley* are in full bloom in the more favoured situations. Bulbous plants add to the attractions of the hardy plant borders, the later *Narcissi*, although rather knocked about by recent storms, being noteworthy. *Anemones*, both *A. stellata* and *A. coronaria*, yet remain in good order, and in the latter case will be prolonged until nearly midsummer. While considerable quantities of bloom may yet be seen on *A. stellata*, the display may be regarded as practically over for the season.

GARDEN FOOD.

FRUIT SALADS.

WHEN the weather is hot there is nothing so wholesome as fruit, either in its raw or cooked state. I prefer fruit to be perfectly ripe, and then to be eaten plain or made into a salad. In fact, when fruit is plentiful I generally serve fruit as a salad instead of a sweet. It is quickly prepared and needs no cooking, and if eaten with crisp biscuits is in itself, I think, sufficient for a mid-day meal. A mixed fruit salad is always nice, and the different fruits as they come into season can be blended, and form a delightful whole. Some prefer a mayonnaise dressing, but I think the mixture of fruit juices, with sugar and lemon-juice, makes the nicest method of making fruit salads. They should always be prepared at least an hour before being served, as this allows the juice to run from the fruit and blend before it is eaten. A delicious mixture is to take two Oranges, two Bananas, $\frac{1}{2}$ lb. red, cooking Cherries. (The Kentish Cherry is extremely nice in a salad, but it must be quite ripe and fresh.) Cut all the fruit into slices, after peeling and stoning; arrange in layers in a deep salad-bowl, sprinkling a little Lemon-juice over each layer, and a moderate quantity of castor sugar. Take $\frac{1}{2}$ lb. nice large Strawberries and remove the stalks, cutting each berry into quarters. Dip into the sugar and arrange prettily on the top of the contents of the salad-bowl. Sprinkle a little Lemon-juice over the whole and set aside in a cool place for two hours.

RASPBERRIES, with the addition of Cherries, make a nice salad, and as a contrast two Apples can be chopped and added to the mixture. The Cherries should be stoned and halved. Sprinkle a moderate allowance of sugar over the fruit before stirring it together, and the juice of a Lemon can be added to give the necessary tartness. If, however, the Cherries are sour, this can be omitted. In no case should ordinary vinegar be used when making a fruit salad, as this destroys the flavour. Some housewives like the addition of a tablespoonful of port wine, but the flavour of the ripe fruit, with the addition of a little sugar and fruit juices, is all that is required to make a perfect summer dish.

Chopped Mint is useful to vary the flavour of Orange and Banana salad. Cut the pulp of six Oranges into dice, sprinkle with two tablespoonfuls of castor sugar and the juice of half a Lemon. Chop some Mint finely and strew a tablespoonful on top of the salad just before sending to table. Apples can be used in this salad.

RED AND WHITE CURRANTS, Cherries, and Oranges make another nice combination. Grapes, both purple and white, mixed with an equal quantity of chopped Pineapple and Cherries and sprinkled with sugar, with or without Lemon-juice, are very good. The quantities of each individual fruit can be varied at will, some people

preferring a greater proportion of one particular kind to having an even mixture. The juice of any acid fruit will do just as well as Lemon-juice, Cherry-juice being extremely good. H. T. C.

TWO TOMATO SALADS.

SELECT large, round Tomatoes with very fleshy centres. Do not peel them, but cut off the tops, leaving about two-thirds of the fruit intact. Scoop out the seeds, and then cut the outer part of the fruit into two rows of petals. It requires a little practice to do this perfectly, but the effect is extremely pretty when carefully done. Take the centre of the Tomatoes and mix with the least suspicion of Onion-juice (it must be more a suggestion of Onion than the flavour), the same quantity of chopped heart of Lettuce, salt and pepper to taste, and mix. Fill the Tomato roses half full of this mixture, mask with a good, stiff mayonnaise, and arrange some tiny shreds of Celery to look like the tops of stamens. Toss some shredded Lettuce in a little mayonnaise and place lightly on a dish. Arrange the Tomato roses on this and serve at once.

Select a perfectly-shaped Cabbage Lettuce with a firm, white heart. Take five of the most perfect cup-shaped leaves and place on a bed of shredded Lettuce arranged on a glass dish. Cut the tops off five Tomatoes and scoop out the seeds. Place the Tomato cups in the centre of the Lettuce leaves and fill with a mixture of cold boiled green Peas and cubes of cold New Potatoes. Mask with a good mayonnaise. Garnish the shredded Lettuce and slices of Tomato and tiny balls of cream cheese, with little piles of thick mayonnaise at intervals. Serve at once.

H. T. C.

NOTES AND REPLIES.

Apple Beauty of Kent.—In a recent note by Mr. Taylor, of Hampton, reference was made to this Apple. I was glad to see it mentioned, for it is unquestionably a good keeping sort and at any period an excellent cooker, while it is also valuable for eating after, say, February. Previous to that month the fruits seem too sharp in flavour and firm in the flesh to be enjoyed as a dessert variety—at least, to my thinking. It is acknowledged by the Royal Horticultural Society in their list of varieties. It is, here in Highgate, a good doer and bearer. I send a specimen showing the condition the second week in May.—C. TURNER.

[A very good sample of this *Apple*. The variety, however, is at its best during November, and with careful storing may be had in good condition up till March. When kept so late as May the flesh becomes mealy and wanting in juiciness and flavour, as in the case of the specimen to hand.—Ed.]

Haricot Beans à la Lyonnaise.—Soak a pint of Haricot or Butter Beans for at least twelve hours, then look them over and remove any that are imperfect. Put the Beans into a saucepan of cold salted water, bring the latter gradually to boiling point, and then let it simmer gently for three hours. At the end of that time ascertain if the Beans are tender, and accordingly pour off the water. When they are ready cut two Onions into very thin slices and fry them in butter until they are a golden brown; then add half a pint of good brown sauce and the cooked Beans. Cover them with a greased paper and let them simmer in the sauce for about fifteen minutes. Just before serving scatter a heaped teaspoonful of chopped Parsley over the Beans.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

**THE GROMWELLS
(LITHOSPERMUM).**

LITHOSPERMUM PROSTRATUM is now at its best, falling over the edges of low retaining-walls and on the flat in well-drained soil forming masses of vivid Gentian blue. Planted in free soils it grows rapidly and soon covers its allotted space. If planted where it escapes the mid-day sun, especially on hot soils, growth is more free. Heavy soils should have peat and sand well incorporated with them, and where lime is present a mixture of good loam, peat, and sand should be provided and the natural soil removed. A great favourite wherever grown is the variety

L. P. HEAVENLY BLUE (see illustration), in which the flowers are lighter in colour than in the type, while the growth is also more compact.

coloured of all the Gromwells, and should find a place in every garden. With the craze for newly-imported plants we are inclined to pass by some of our beautiful native plants. This, the only one useful for cutting, will succeed in soils of a lime or chalk nature, for in such it is found, though rarely, wild in the south of England.

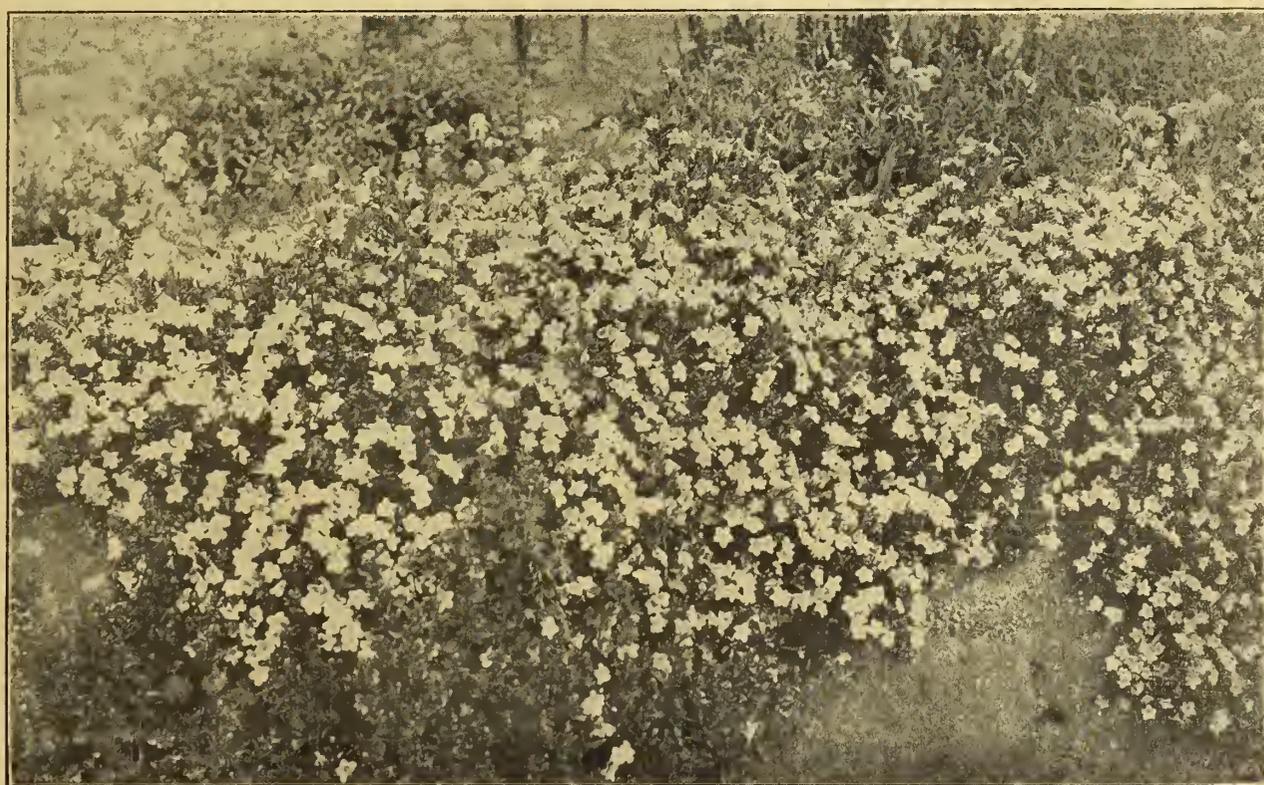
All of these strike fairly easily from cuttings inserted during late summer in a close frame, although they take a little longer than most things. E. M.

INDOOR PLANTS.

PASSIFLORAS.

WHILE there are very many subjects suitable as climbing plants for the greenhouse it is questionable whether any family is more generally useful than the Passion Flowers. One variety or another may be found suitable either for the greenhouse

with its carmine blossoms, then these drop, a period of growth ensues, and this is followed by a renewed display. This continues throughout the season and adds much to the interest of the variety. P. princeps is an excellent sort with vivid scarlet flowers of medium size. P. alata I do not much care for on account of the greenish tint which mars the rays of the large, crimson, slightly fragrant blooms. P. amabilis is very free, the flowers bright scarlet with a white corona. P. fulgens is also a scarlet-flowered sort, the blooms freely produced and of medium size. P. Buonapartea, with its red, white, and blue flowers, is a fine variety, but it appears to require grafting upon a more vigorous sort to succeed. Of all the Passifloras none, to my mind, is so handsome as P. quadrangularis. Its blooms are beautiful, but almost indescribable, being delicately fringed and fragrant, and combining the colours of white, red, and violet. If these are artificially fertilised the seed-pods, in



Part of a group of Lithospermum prostratum Heavenly Blue.

L. PETREUM is a small sub-shrubby plant well suited for the rock garden. The flowers, which appear in June, are of a beautiful deep blue colour, and are freely produced at the ends of the young lavender-like growths in round, drooping clusters. It is sometimes known as Moltkia petraea.

L. ROSMARINIFOLIUM is a charming shrubby species which flowers earlier and is of a lovely pale blue. In habit it resembles a small Rosemary, hence its name, and is more tender than the foregoing kinds, therefore it should be planted in gritty soil on a warm and protected part of the rock garden. Native of Greece and Italy.

L. PURPUREO-CÆRULEUM, a native kind, bearing flower-spikes each about a foot in height from the centre of the plant, each carrying three dozen or more deep blue-purple flowers. Prostrate, barren growths, each about 2 feet in length, are produced from the base of the plant. These strike root at the tips and flower the following year. This is, perhaps, the most deeply-

from which the frost is barely kept, the warm greenhouse, the intermediate house, or the stove. The blooms of all are equally charming in their way, and, in the majority of instances, their culture calls for no special skill. In all cases, if potted—or, what is better, planted out—in good, sound loam with plenty of leaf-mould and a sufficiency of sand, luxuriant growth and plenty of bloom soon follow. For quite cool houses nothing equals P. cœrulea, practically hardy out of doors in some favoured parts. Another good greenhouse sort is P. c. racemosa, with abundant reddish-purple blooms. A moderately free grower is P. Belloti, of hybrid origin, which produces its pink and white flowers all through the summer and autumn months.

Of those Passion Flowers which require the heat of the stove, one of the very prettiest, as well as one of the most free-blooming, sorts is P. kermesina, which has rather a noteworthy way of flowering. For a week or so the plant will be covered

a temperature of 80 degs. to 85 degs. during the day and not less than 70 degs. at night, soon swell and attain to a weight of 2 lb. or over. These are edible, and although to many they are insipid, yet by others they are appreciated. These fruits are known as Granadillas. If it is intended to fruit P. quadrangularis, all the shoots that are required must be permitted to grow throughout the season without stopping. W. McG.

NOTES AND REPLIES.

Sowing Palm seeds.—A recent note in GARDENING ILLUSTRATED stated that this is a very suitable time for sowing Palm seeds. This is quite correct so far as it goes. A most important consideration, however, is to remember that seeds of some Palms do not retain their germinating power for any great length of time, so that my advice would be to sow the seed whenever it can be obtained, whatever the season of the year. For the stronger-growing Palms, such as Kentias,

Latania borbonica, *Chamærops*, etc., I prefer a soil largely composed of loam lightened by a little well-decayed leaf-mould and sand. Some advise the sowing of the seed singly in small pots, which is all very well when but a few are to be dealt with, but in the case of larger quantities they are best sown in pans or shallow boxes. The seedlings must be potted off singly as soon as the first leaf develops, otherwise the roots are apt to become entangled, and, if damaged in any way, the young plants sustain a decided check. Potting, too, must be carefully done. Palms of a more delicate nature, such as *Cocos Wedelliana*, *Geonoma gracilis*, and some species of *Thrinax*, are benefited by a mixture of peat in the soil in which the seeds are sown, and also in potting them later on.—W. T.

Rex Begonia.—Plants from leaf-cuttings, not quite three months old, and now in 3-inch pots, are making excellent stuff, some of them carrying as many as fourteen well-developed leaves. These make useful plants for vases, and stand a good deal of knocking about, while, should a few plants be lost, their value is not great, and they can be easily replaced. I prefer plants from leaf-cuttings to those obtained by division, and if they are given stove heat for a time progress is rapid. Like old-fashioned plants generally, the *Rex Begonias* are under a cloud at present, but they have their uses. Large and handsome pieces can be grown in 6-inch or 7-inch pots, although I prefer smaller specimens.—W. McG.

VEGETABLES.

CURLED KALES.

I do not think we have any better vegetable during the late winter than the true Scotch Curled Kales, these, when properly cooked, being vastly superior to some of the Russian sorts. A great deal depends upon the cooking. In March, when well cooked, Kale is more like Spinach in June, owing to its tender nature and good flavour. The Kales in some seasons are better than in others, and this year the cold snap we had in February and the early part of March had made this vegetable of greater value, and also, in my opinion, much improved in flavour. Frost, if not too severe or long lasting, gives this hardy vegetable a mild flavour. Owing to its hardy nature the plant does not suffer much if well grown. I have seen Kales totally destroyed. For instance, in the severe winter of 1895, I had every plant killed in February and early March. Since that date I have never relied upon the tall Kales, as though quite equal in quality to the dwarfier section, I find they are more readily affected by frost—I mean the stem portion not protected by leaves. In the winter named the stems were so badly injured by frost that the heads toppled over and the crop was ruined. Of the dwarf section there is no lack of excellent varieties. It is difficult to beat a good strain of the old Scotch Dwarf Curled and the excellent Extra Curled Scotch, which, though of stronger growth, makes a grand head, the leaves being finely curled and freely produced. At the same time it is one of the hardiest of all. For latest supplies I have found the Dwarf Late Curled all one may desire. It is quite good well into April and will be found of great value for latest supplies. The three varieties named will be found ample.

It is a mistake to sow too early, but much depends upon the locality. For instance, I have sown in the south when April was well advanced, but in the north I would sow two or three weeks earlier. Give plenty of room in the seed-bed and do not allow the seedlings to get weak or too large. I always put out quite small plants and get excellent results if the work can be done in showery weather. If land is not available far better transplant in rows

6 inches apart, and later on lift into their growing quarters, than allow the seedlings to suffer. If an earlier supply is desired, say before the new year, I would advise two sowings, one early in March and the other at the time advised above. The quality of the earlier lot will not be equal to that of the later one. These hardy Kales are not fastidious as regards soil or situation, and do remarkably well on a stiff loam if well worked. In all cases they should get an open quarter, and at least 2 feet between the plants, or even more if land is available, with the same distance available between the rows.

Of late years there has been a most useful addition to this class of vegetables—a Drumhead Kale. This is excellent for early winter, and what makes it more valuable, it is a free grower in poor soils. If the broad leaves of this Kale are stripped the green portion when cooked is equal to Spinach, while the midrib makes a splendid vegetable cooked like Asparagus. This remark applies with equal force to the Scotch Kales. At this date a nice dish can be had by stripping the green portion of the leaf from the midrib. This, cooked in a shallow pan, and in not too much water, but kept on the boil, makes a delicious vegetable. M. F.

GARDEN LABOUR DIFFICULTIES.

Owing to scarcity of labour many will have to vary their system of vegetable culture. I should hesitate to advise anyone to neglect the preparation of the land, but much depends upon the work done in the past. If well done previously, it is surprising what may now be done with quite ordinary culture. In many gardens, especially near towns, manure will be a costly item, and in many cases must be done without, and in some gardens with advantage. In such cases deep culture will be more beneficial, and it is easy to feed growing crops with artificial manures later on. In many gardens at times there is a surplus of soft green crops that are past their best, and which will be of great benefit if dug in. Quite recently I saw a small private grower worrying because he could not get Parsnips sown owing to the unfavourable weather. The best Parsnips I ever had were sown about the first week in April, and were large enough for anyone who studied quality. We have in these war times to do the best we can. Take the Pea crop, for instance. In many gardens stakes will be difficult to get, and this want can readily be met by growing dwarfier varieties. I have often grown 3 feet high varieties, and these, if they have their points removed when about 2 feet high, will branch freely and give fine crops with very little support. For this work the strong, double-podded sorts are best, and there is a wide selection, some of our best quality Peas being in this section. The same remark applies to Runner Beans. This year Bean-sticks will be very scarce, and may quite easily be done without by stopping the plants when from 12 inches to 18 inches high. If this is done, excellent crops may be had without stakes, and the pods will be large enough for all purposes. It may be asked, why not grow dwarfs, and avoid the labour of stopping. Grow dwarfs for an early crop, but as the dwarf sorts age so quickly and lose flavour the Runners are more profitable. In the case of Celery, one can lessen labour by sowing late on a warm border and planting direct into the growing quarters. In this way there are a considerable saving in labour and much better results than by sowing seed in strong heat and pricking out the plants into boxes before finally planting out. C. R.

ROYAL HORTICULTURAL CHELSEA SHOW.

MAY 23RD, 24TH, AND 25TH.

CARNATIONS.

THESE have been more extensively staged at former shows than was the case this year. In the main the types of the Perpetual-flowering race were those on view, Mr. Douglas alone showing border varieties. His most remarkable variety was Sweet Anne Page, a fancy with creamy-yellow ground heavily striped with lilac. It gained an Award of Merit. Elizabeth Shiffner (apricot), Bookham White, Bookham Clove, Deloraine (scarlet), and the fine, white ground, fancy Mrs. A. Brotherston were others of note. Mr. A. F. Dutton, Iver, Bucks, showed these flowers in baskets and other receptacles, the new cerise-coloured Louvain being excellent.

Messrs. W. Wells, Limited, Merstham, had a particularly good lot in which Pink Perfection, Aviator (scarlet), and Lord Kitchener (pink) were noted among many others. In the small group from Misses Price and Fyfe, Birch Grove, East Grinstead, the two more distinct were the mauve and rose fancy Kenneth and the cherry-red Malcolm.

Messrs. Allwood Brothers, Haywards Heath, staged many fine varieties. Those justly popular sorts Mary Allwood and Wivelsfield White constituted a splendid background over which suspended baskets of May Day were very fine. Two of the newer pink-flowered novelties, Nora West and Bedford Belle, were in this group, as also Bishton Wonder, a strangely-coloured fancy sort.

Mr. H. Burnett, Guernsey, had a fine group of flowers of high quality. Mrs. W. B. Clode is ever popular, while such as Mrs. C. F. Raphael, R. F. Felton, White Chief, Mandarin, White Wonder, Marmion, and others were also good. A notable novelty was the rich cerise-coloured Nikko, a full and shapely sort with pronounced fragrance.

Messrs. Stuart Low and Co. contributed a considerable variety of Carnations, including the Malmaison variety Princess of Wales and Mrs. Myles Kennedy, of deeper colour. Messrs. William Cutbush and Sons, Highgate, N., showed an extensive assortment amid Palms and Ferns, arranging the whole on the ground. The fine scarlet King Arthur and Highgate were two of the more notable sorts.

ROSES.

Roses have ever been an outstanding feature at this exhibition, and this year, despite the exceptional circumstances and thanks to the enterprise and zeal of the Rose growers, they were not one whit inferior to those of normal times. Conspicuous above all else, as much by the towering pillars as by the unique display of brilliant scarlet flowers, was the glorious group of Scarlet Climber shown by

Messrs. W. Paul and Son, Waltham Cross. Of undoubted vigour, fine stature, and remarkable for its large flowers and rich display, it is truly a great Rose. Elsewhere the firm had a group of the best, backed by Wichuraiana and other Roses.

Messrs. Alex. Dickson and Sons, Newtownards, showed their new variety Molly Bligh, which gained an Award of Merit. Midway in colour between Mme. Abel Chatenay and Mrs. Laing, it partakes not a little of the former in style, with somewhat of the fulness and strong reflexing tendency of La France, and withal a rich and glorious perfume—hence worth growing. Messrs. Wm. Cutbush and Sons' con-

tribution to this section comprised *Polyantha* and nearly allied sorts.

Messrs. Hobbies, Limited, Dereham, had a group of exceptional richness and variety; Jessie, Annie Müller, Elen Poulsen, and Excelsa, the last a wonderful mass of colour, contributing their quota, with others, to an imposing display.

Messrs. Piper and Mr. J. C. Allgrove exhibited the single-flowered Chinese *Rosa Hugonis*, a delightful species with creamy-yellow flowers rather larger than those of the Austrian Brier. It is very free and the colour-shade new and distinct.

Mr. Charles Turner, Slough, had a nice group in which standards of more than one section were a feature, all admirably grown and flowered withal. Teas and Hybrid Teas were very beautiful, Mme. Jules Gravereau x Snow Queen, and J. B. Clark being noted among others.

Mr. Elisha J. Hicks, Twyford, displaying the varieties in goodly groups, demonstrated their garden worth. This is what we want. The brilliant single crimson Princess Mary, unequalled in colour and rich in fragrance, the new H.T. Mr. C. E. Shea, and Mrs. George Norwood (pink and very fragrant) were some of his good things. *Rosa Moyesi* was very beautiful.

Messrs. Paul and Son, The Old Nurseries, Cheshunt, showed a considerable number of good things, though, as we thought, a little too thickly set. Rayon d'Or, Magnolia, Mme. E. Herriot, Souv. de G. Prat, and Mme. C. Chambard were some notable sorts. The lovely single Paul's Lemon Pillar was charming.

Messrs. Frank Cant and Co., Braiswick Nurseries, Colchester, had a group rich in variety and withal admirably arranged. Rosalie Walker was particularly good among dark sorts; it is also fragrant. Zulu, also dark, is a new bedder. Beulah has pink, Pæony-like, rather loosely-formed flowers, yet delightfully fragrant.

Messrs. G. and W. H. Burch, Peterborough, had a remarkable lot of cut flowers fronting a generous, well-flowered background of *Wichuraiana*. Here, too, overcrowding was indulged in, though blooms of the highest excellence were staged. Mabel Drew, Mrs. Foley Hobbs, W. Shean, Alice Lindsell, Old Gold, Mrs. George Shawyer, J. B. Clark, and Florence Pemberton were all of exhibition quality.

Messrs. B. R. Cant and Sons, Old Rose Gardens, Colchester, showed in their usually good style fine blooms of a high standard of excellence. The more popular sorts were here in abundance, a fine centre being formed of the new white single Silver Moon. As a set-off to this was the brilliant Augustus Hartman, other notables being George Dickson, Mme. E. Herriot, Lady Hillingdon, Autumn Tints, and Hon. Mrs. Grosvenor.

Other Rose exhibitors included Messrs. Stuart Low and Co., Enfield, T. Rochford and Sons, Mr. G. Prince, Oxford, and Messrs. R. J. Barnes and Sons, Malvern.

SWEET PEAS.

These were not exhibited so freely as usual. One of the finer exhibits, the only gold medal exhibit of the occasion, was that from Messrs. Dobbie and Co., Edinburgh. Dora was the outstanding novelty, and, obtaining an award last year in the National Sweet Pea trials, confirmed it on the present occasion by gaining an Award of Merit. It is presumably a bicolor of those delightful tints of pink and cream that are so popular. Dobbie's Orange (rich and pronounced in colour), Dobbie's Frilled Pink and Dobbie's Scarlet, Tea Rose (a lovely cream), Anzac (a novelty in bluish-mauve and light maroon), and Jean Ireland were other excellent sorts.

Messrs. Alex Dickson and Sons, Newtownards, had many notable sorts in a most attractive exhibit. We thought The President (rich scarlet) the most notable sort, and certainly nothing in the Sweet Pea line was so brilliant. Orchid (mauve), King White, Fiery Cross, and Hawmark Cream are some others that appealed. A particularly attractive exhibit was that from Mr. J. Stevenson, Wimborne, who exhibited several novelties of his own raising. Stevenson's White, Warrior (maroon), Honour Bright, Victory (salmon-red), and Golden Glory (orange-scarlet) were among leading sorts. Messrs. Bide and Sons, Farnham, Messrs. Piper and Sons, Bayswater, and Robert Sydenham, Limited, Birmingham, also exhibited these flowers.

STOVE AND GREENHOUSE PLANTS.

Some magnificent groups of tender annuals and other greenhouse flowers were to be seen in this section. Two of the most notable were arranged at opposite ends of one of the great tents, and never have these popular, easily-grown subjects been more prodigally displayed. In the groups from

Messrs. Sutton and Sons, Reading, the main features appeared in great semi-circular banks formed chiefly of their superb strains of *Calceolaria*, *Gloxinia*, *Star Cinerarias*, *Phlox Drummondii*, and *Schizanthus*, among which latter *S. retusus Rosy Gem*, a good colour advance, claimed attention. *Nicotianas* in variety, peering out in groups from the main blocks of colour, broke up the formality of the whole, while *Primula obconica* gave a feast of colour in white, blue, mauve, rose, carmine, pink, and other shades difficult to describe. The fragrant blue-flowered *Exacum affine* came in for a fair share of attention. A Gold medal was deservedly awarded. Equally well merited was the Gold medal awarded to

Messrs. Carter and Co., Raynes Park, S.W., whose sumptuous colour groups for the most part appeared in bedded form as grown in the garden. For example, there were great oblong beds of pure white and earmine coloured Stocks, White Pearl and Crimson King respectively, circular beds of single and double Begonias, of diverse-coloured Petunias in perfection, and others all springing from a lawn of the finest Grasses. Beyond and behind were banks of Victoria Prize *Calceolaria*, of "Star" and large-flowered *Cinerarias*, superbly grown Clarkias, and *Schizanthus*. A background of noble and graceful Palms made the picture complete. Its conception and execution were alike admirable.

Messrs. Webb and Sons, Stourbridge, also showed well of the same classes of plants, *Calceolarias*, *Schizanthus*, Begonias, *Cineraria stellata*, and others of the large-flowered class appearing in semi-circular, conical-shaped banks from a groundwork of Ferns and Grass. *Amaryllis*, too, of an excellent strain, played an important part.

The Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett), contributed a most interesting assortment of sweet-scented Pelargoniums in well-grown examples, both standard and bush grown being staged. Particularly interesting was the collection of insectivorous and allied plants from

Mr. A. P. Bruce, Chorlton-cum-Hardy, Manchester. We have seen them from the same source more finely coloured and developed than on the present occasion, though they are always attractive and represent high-class cultivation. Sir Frank Crisp, Farnham, *flava magnifica*, and Brucei were some good kinds in the first-named group, though many good specimens

of *S. purpurea* were remarked. Of the Sundews (*Drosera*), *D. muscipula erecta* was quite distinct.

Messrs. H. Cannell and Sons, Eynsford, Kent, had an exceptionally good exhibit of show and fancy Pelargoniums associated with *Calceolaria Clibrani* and other things. Messrs. Peed and Sons, West Norwood, showed a fine lot of *Caladiums*. Silver Queen, Triomphe de Comte, Alexander III., and the Mikado were some of the more conspicuous. *Hippeastrums* were admirably shown by Messrs. R. P. Ker and Son, Liverpool. Mr. Alfred Dawkins, King's Road, Chelsea, showed an excellent strain of *Schizanthus*, compact-habited plants rich in variety and large-flowered. Mr. L. R. Russell, Richmond, was the only exhibitor of choice specimen stove plants, the group rich in *Alocasias*, *Caladiums*, *Dracenas*, and other plants. A notable lot of *Nertera depressa* was remarked. Messrs. Blackmore and Langdon, Bath, had some very fine Begonias associated with a ground group of *Delphiniums*. Messrs. T. S. Ware, Feltham, staged their Begonias on a table, where they were seen to better advantage.

Messrs. H. B. May and Sons, Edmon-ton, were responsible for a group of *Hydrangeas*, *Marguerites*, *Pelargoniums*, *Heliotropes*, and other useful subjects, showing elsewhere a goodly collection of Ferns rich in the newer forms of *Nephrolepis*, and attractive by reason of the several kinds of *Platyterium*. Messrs. Thomas Rochford and Sons showed a group of the newer *Astilbes*, of which Princess Mary (Award of Merit), Peach Blossom, and America were the best.

FLOWERING TREES AND SHRUBS.

The number of hardy ornamental trees was not on so vast a scale at this meeting as usual. Lilaes and *Rhododendrons* have never been finer, and the groups of these, in conjunction with the Azaleas, provided a feast of flower-beauty at once worthy of British horticulture and the unique exhibition in which they played so good a part.

Messrs. Waterer, Sons, and Crisp, Bagshot, had a grand display of *Rhododendrons*, relying on a few sorts and employing these with a free hand. Their new Bagshot Ruby, which gained an Award of Merit, was, without doubt, the most brilliant variety in the show, both bush plants and standards demonstrating its value. Pink Pearl and Mrs. C. E. Stirling, giving a glorious truss of exquisite pink-blush flowers, were in great force and much admired. *Cynthia* (bright rosy-red) was also excellent.

Messrs. George Bunyard and Co., Maidstone, formed a background to an Iris group with *Rhododendrons* Alice, Pink Pearl, and *Cynthia*, Mrs. C. E. Stirling flanking either end. Here, too, were many Azaleas, mollis and sinensis, affording rich colour variety.

Messrs. R. and G. Cuthbert, Southgate, N., brought a magnificent lot of Azaleas, representative of *occidentalis*, *rustica*, mollis, and others. Of this last there was a superb display, though the exquisite tints pervading the group merited equal praise. Messrs. James Carter and Co., Raynes Park, associated Ghent and other Azaleas with *Rhododendron* Pink Pearl and others, Messrs. Piper using *Azalca amœna* with a free hand with Maples. Of Lilaes nothing finer, probably, has ever been staged than the superb collection brought by

Mr. R. C. Notcutt from Woodbridge, the wondrous flowering of the standard-grown examples impelling admiration. The double white varieties Jeanne d'Arc and

Miss Willmott were grand, yet equally good in their way the dark-coloured varieties as Reamur, Souvenir de L. Spath, Congo, and Charles Joly. Of lighter hue is President Grevy. Both Mr. Chas. Turner, Slough, and Messrs. Paul and Son, Cheshunt, showed excellent collections of the best of these indispensable flowering shrubs.

Mr. G. Reuthe, Keston, in addition to a great variety of Himalayan Rhododendrons, had a fine lot of the brilliant "Fire Bush" (*Embothrium coccineum*), only hardly in the more favoured parts of these islands. In the group from

Messrs. J. Cheal and Sons, Crawley, *Cytisus Dallimorei* was very beautiful, and not less so the charming *Leptospermum Nicholi*. In addition there were *Viburnums* and many well-flowered Ghent Azaleas.

Messrs. Fromow and Sons, Chiswick, displayed Japanese Maples in almost endless variation and diversity of form and colouring. Maples, too, predominated in a group from Mr. L. R. Russell, together with such things as *Ledum*, the ornamental Chinese Vines, *Ceanothus Veitchianus*, *Cytisus Dallimorei*, and the unique *Rosa Moyesi*.

Messrs. George Jackman and Son, Woking, staged a circular group of Clematis, the outstanding variety being *Crimson King*, which gained an Award of Merit. While "erimson" is, to some extent, a misnomer, the colour is, notwithstanding, of a rich vinous red shade, quite unique in its set. Mrs. George Jackman, Lady Northcliffe (pale mauve-blue), Nellie Moser, and Ville de Lyon were others of note.

ORCHIDS.

The Orchid groups arranged on two opposite sides of one of the great tents, if not of the same magnitude as in other years, were highly representative. The most noticeable gaps were due to the absence on war service of Lt.-Col. Sir George Holford and the death of Mr. Gurney Fowler, both staunch supporters in the amateur section.

Sir Jeremiah Colman, Bart., Gatton Park (gardener, Mr. Collier), was the only amateur exhibitor of an extensive collection; one, however, rich and replete of brilliantly-flowered *Odontiodas* and finely-blotched *Odontoglossums*. The former included the lovely *O. Colmani* (of rich yellow and red colour), *O. Bradshawæ* (Gatton variety), and *Lælio-Cattleya Golden Glory*. A special interest attached to the group, since most of the good things were raised by the exhibitor.

Messrs. Armstrong and Brown, Tunbridge Wells, had a group notable for the rich array of novelties, the comparatively small number of plants, and a style of arrangement which, while novel and displaying the plants to the best advantage, was simple in the extreme. Every plant stood out from a bed of Ferns, the background or screen, to a height of several feet, draped with the choicest examples. Rich in the fine blotched *Odontoglossums*, of which *O. crispum Lusitania* was one of the best, it was equally so in *Odontiodas*, *O. Seymouræ* and *O. Anzac* being remarked. The green and black *Cologyne pandurata*, *Miltonia J. G. Fowler*, *M. Frank Reader* (of rosy colouring with butterfly-like, maroon-coloured blotch) were some of the more important.

Messrs. Sander and Sons, St. Albans, had some lovely *Miltonias*, of which *M. Charlesworthi*, *M. Hyeana* variety *Sunrise*, and *M. vexillaria* *seintillans* were all remarkably fine. *Dendrobium Sanderae* (very rare white-flowered kind), *Odonto-*

glossum crispum-Harryanum, and *Cattleya Mossiæ Reineckiana*, and *Princess Olga* of Russia were others of conspicuous beauty. Prominent in the splendid group from

Messrs. J. and A. MacBean, Cooksbridge, was the new *Odontoglossum crispum Aldworthi*, of rich red colouring. It gained an Award of Merit and the Davidson eup for the best variety of *O. crispum*. The rare white-flowered *Dendrobium Sanderae*, the yellow *Oncidium MacBeanianum*, with *Cymbidiums* and the scarlet *Odontioda Vuylstekeæ* (MacBean's variety) were other notables.

Messrs. J. Cypher and Sons, Cheltenham, showed well of such good things as *Lælio-Cattleya Hyeana splendens*, *L.-C. Baden-Powell*, and *Lælia purpurata*. *Dendrobium Wardianum* was profusely flowered, while *Miltonias*, in variety, *Renanthera Inmschootiana*, and *Cattleya Mossiæ* and *C. Mendelli* were all good. Good things in

Messrs. Stuart Low and Co.'s group were *Lælio-Cattleya luminosa* variety *aurea*, *Odontioda Gladys*, *Cattleya Mossiæ grandis*, the white *Phalænopsis Rimestadiana*, and the scarlet *Renanthera Inmschootiana*.

Messrs. Charlesworth and Co., Haywards Heath, in a group of exceptional excellence had three of the new *Oreheids* gaining awards, these being *Brasso-Lælio-Cattleya Joan* var. *Verdun* (first-class certificate), best described as an all-yellow *Cattleya*, *Odontioda Florence* (rose and white), and *O. Drewi cuprea*, which, while unique in form and distinct from all other *Odontiodas*, is equally so in the tawny orange colour of its flowers. Sent by

Miss Louisa Fowler from the rich collection of the late Mr. J. Gurney Fowler, were a few choice things, notably *Odontoglossum ardentissimum Memoria J. Gurney Fowler* (white, with nearly heart-shaped maroon blotch), *O. Princess Mary*, *O. illustre Europa*, and the lovely *O. crispum Solum*, among others.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM MAY 25TH.—*Berberis* (in great variety), *Lilacs*, *Rock and Sun Roses* (in great variety), *Bush and Climbing Honeyuckles*, *May* (single and double), *American Thorns* (in variety), *Labrunums*, *Sweet Bay*, *Magnolias* (in variety), *Dierollas* (in various colours), shrubby *Spiræas*, *Pernettyas*, *Coronilla Emerus*, *C. glauca*, *Snowdrop-tree* (*Halesia tetraptera*), *hardy Heaths* (in variety), *Cornus florida*, *Cydonicus* (in various colours), *Pyrus Malus* (various), *Menziesias* (in variety), *Calycanthus macrophyllus*, *Grevillea rosmarinifolia*, *Staphylea colchica*, *Pearl-bush* (*Erochorda*) (various), *Rock Spray* (*Cotoneaster*) (several), *Notospartium Carmichaelia*, *Daphnes* (in variety), *Azaleas* (in great variety), *Rhododendrons* (in great variety), *Japanese Cherries* (various), *Rosa* (many species), *Ribes speciosum*, *Judas-tree* (*Cercis Siliquastrum*), *Photinia villosa*, *Rocky Mountain Bramble* (*Rubus deliciosus*), *Potato-tree* (*Solanum crispum*) and its *Glasnevin* variety, *Fendlera rupicola*, *Lonicera pileata*, *Deutzias* (*Lemoine's* hybrids in various colours), *Rubus flagelliformis*, *Andromedas* (various), *Kalmias* (in variety), *Pyracantha*, *Lelandi*, *Cytisus monspesulanus*, *Cornus alba*, *Patridge Berry* (*Gaultheria*), *Red Chestnut* *Rubus nutkanus*, *Herbaceous and Tree Prunics* (various), *Anchusas* (in variety), *Antennaria tomentosa*, *A. dioica*, *rosæ*, *Wood Lilies* (*Trillium*), *Iceland and Oriental Poppies*, *Lupins* (in variety), *Mule Pinks*, *Maiden Pinks*, *Alliums* (various), *Columbines*, *Camassias* (in various shades), *Primulas*, *Polyanthuses*, *Erinus alpinus* (in white, rose, and purple), *Alpine Phlox* (in variety), *Scilla italica*, *Cheiranthus linifolius*, *C. alpinus*, *Scilla muralis*, *C. glomerata dahurica*, *Wahlenbergia serpyllifolia*, *Houstonia corulea*, *Ranunculus speciosus fl.-pl.*, *Achillea serbica*, *A. rupestris*, *A. Woodall's variety*, *Thymes* (various), *Candytuft*, *Monroe's Mallow*, *Pentstemon Scouleri*, *Ethionema* (in variety), *A. grandiflorum*, *Linaria pallida*, *Linum alpinum*, *Helianthemum alpestre*, *Isolirion tataricum*, *Oxalis* (in variety), *Globe flowers* (various), *Kinacups* (various), *Poet's Narcissus* (single and double), *Geums* (in several varieties), *Silene sylvestris*, *Violas* (in variety), *Potentilla argrophylla*, *Reseda*

glauca, *Eremurus himalaicus*, *E. robustus*, *Meconopsis cambrica*, *M. sinuata latifolia*, *Heucheras*, *Virginian Cowslip* (*Mertensia virginica*), *Asphodelus luteus*, *German Iris* (in several varieties), *Tufted Pansies* (in great variety), *Tree Lupins*, *Cornus canadensis*, *Scilla hispanica*, *Transvaal Daisy* (*Gerbera*), *Canary Creeper*, *Gazania splendens*, *Anemone sylvestris*, *A. palmata*, *Libertia formosa*, *Rodgersia palmata*, *Rheum palmatum*, *Ranunculus Lingua*, *Day Lilies*, *Sedum spathulifolium*, *Everlasting Peas*.

WORK OF THE WEEK.—Summer-leaving Ferns are now growing freely. Decaying fronds, etc., have been removed to show the delicate and rapidly-developing new fronds to the best advantage. A few Hart's-tongue and Maiden-hair *Spleenwort* Ferns have been planted at the base of a shady wall, where established plants were seen to be happy. Hardy *Chrysanthemums* have been cleaned and the surface-soil freshened up among the plants. Herbaceous *Phloxes* have been treated similarly. German *Irises* are now flowering freely below tall deciduous trees and shrubs. *Wood Lilies* (*Trilliums*) are extremely beautiful this year. In half-shade these lovely flowers are seen to great advantage. Plants raised from seed have been pricked out into nursery beds, which have been given a good layer of fine light soil, as this enables the seedlings to quickly establish themselves. *Polyanthuses*, *Carnations*, *Campanulas*, *Aconitum vulgibile*, etc., have been so treated, and a few plants, struck from cuttings inserted last autumn, of *Desfontainia spinosa* have now been put out on a warm border. A plant of *Lonicera Alberti* has been added to the shrubbery. Several vases in the flower garden have been made up with *Cannas*, the little *Sand Verbena* (*Abronia umbellata*), and *Shamrock Pea* being planted near the edge to drape them. Other large vases containing *Lilies*, *Sedums*, *Hydrangeas*, *Sweet Verbena*, etc., have been taken to their summer positions, and various others will be added as they become sufficiently hardened. The hoe is kept going whenever possible on fine days. Dead flowers are kept removed. Such things as *Rhododendrons* may have their seed-vessels taken off in order to throw vigour into the plants. A few more seeds, such as *Mignonette*, *Phacelia*, *Cosmos*, and other dwarf annuals have been sown.

Clematises are making rapid strides, and a little training is necessary where they are growing on fences, pergolas, and tripods, as, if tying in is neglected, the young growths become entangled to such an extent that it is almost impossible to separate them. Further progress has been made with the mixed border, and *Larkspurs*, which are breaking very strong this year, have been supported with *Hazel boughs*. A large bed has been planted with *Fuchsias* in various sizes. Another bed has been planted with *Cannas King Humbert* and *Alphonse Bouvier*. E. M.

Sussex.

SOUTHERN COUNTIES.

Second-early *Peach-house*.—The trying ordeal of stoning having been safely passed, and the number of the fruits having been reduced to safe limits on each tree, the fruits must now be exposed as far as it is possible to do so to the full influence of sunlight. Tying down having been somewhat neglected of late, this has now had attention. In the performance of this, any shoot likely to unduly shade a fruit is tied on one side. Lateral growths are pinched back and the points taken out of all shoots which have reached to and have grown somewhat beyond the limits of the trellis. A good soaking of water applied after giving a final dressing of fruit-manure puts matters right in this direction as far as the roots are concerned—at any rate, for a time. Vigilance must not be relaxed, and further supplies of water be supplied directly it is found necessary. Although a further dressing of artificial manure is not admissible, the application of liquid manure is by no means precluded, and may be employed up to the time the fruits begin to change colour. Syringing for some time to come must be assiduously attended to. This should not be carried out in a perfunctory manner or by just merely damping the foliage, but every leaf should be thoroughly wetted, and then neither aphid nor red-spider will give any trouble.

Melons.—The fruits being now about to change colour, further supplies of stimulants must be withheld, applying clear water only, the supply being so regulated that the roots receive just enough to prevent the leaves flagging. This, combined with a free circulation of warm, dry air, obtained by a judicious use of both top and front ventilators, will ensure good finish and flavour of high quality. When the stalks begin to crack at their base and the Melons to emit a powerful aroma, the fruits are then in fit condition for cutting and taking to the fruit-room, where in the course of a few days they finish properly, and are then in a satisfactory condition for sending to table.

Successional crops.—Plants on which the fruits are swelling now need to be well fed at the roots and to have all lateral growths—provided the premier leaves are intact—pinched out as fast as they appear, which concentrates the energies of the plants on the production of fruit alone. Careful and regular syringing with tepid water keeps the foliage in a clean and healthy condition,

while frequent damping of the paths and bed surfaces maintains the requisite degree of humidity while the ventilators are open for the due admission of air.

Fruit swelling off on later plants must be assisted with ample supplies of tepid water to the roots, and in affording stimulants by these means twice or thrice a week. Further additions of loam fortified with bone-meal are also necessary, this being placed on the margins of the mounds and made quite firm. The fruits, as soon as they are of any size, must be given the support of nets, which, if properly adjusted, allow for full and proper development without the fruits coming into contact with the trellis. If any part of the trellis is bare, a few laterals may be trained out and then stopped to cover the same, otherwise close pinching or repression of such growths is the best means of ensuring fine, handsome fruits.

Protection.—Both coping-boards and nets may now be finally removed from fruit walls, as neither will be further required this season. This should be followed by a light loosening of the surface of the alley, which becomes very firm as a result of passing so frequently up and down it when attending to the trees. Mulching this season will have to be omitted, but a sprinkling of artificial manure given previous to the loosening of the soil does not take long to apply, and proves beneficial.

Raspberries.—These are already sending up an abundance of young growths, which if left will soon convert the plantation into a veritable thicket if not thinned out, and that without delay. This thinning is done so that, beyond making an allowance for accidents and so on, no more young canes than are required for the future furnishing of the trellis are retained. The surplus is hoed off at ground level and raked off. This proves beneficial not only as regards the new and growing canes, but it also ensures a full share of light and air being experienced by the fruiting canes as well as enhancing both the quantity and quality of the produce.

Forced Strawberries.—Plants forced in the early months of the year can be planted without further delay. A good soaking of water should be given previous to and after planting. These plants will give a full and profitable crop another season, and should the autumn prove fine and warm a sprinkling of fruit may be looked for then in addition.

Planting out.—This, having been curtailed as much as possible, is being pushed on, and will be brought to a conclusion as speedily as possible. All subjects are carefully watered prior to planting, and another good watering given on its completion. Got out on these lines, the plants, however hot and dry the weather may prove afterwards, are safe at least a week or ten days before water is again required. Where the material is at command, and time and labour will allow, the present season will offer a good opportunity for demonstrating the value of a surface mulch of spent Mushroom dung, leaf-mould, or anything that will arrest a too-rapid evaporation of moisture. A. W.

MIDLAND COUNTIES.

Melons.—The earliest house of Melons having been cleared of fruit, another batch of young plants is ready for replanting it. A part of the old soil is removed from the bed and fresh loam added and made up as described in previous notes. The house has been thoroughly cleaned down. The plants require a little shade in the middle of the day until well established. In houses where the fruits are colouring, the supply of water at the roots is reduced, but not sufficiently to cause the plants to flag. Plants now swelling their fruits are afforded liberal supplies of liquid-manure, but feeding is discontinued directly the fruits show signs of colouring. During hot, sunny weather Melons need extra attention in regard to watering and feeding. If they once suffer from drought a check is caused and the fruits are apt to split. The atmospheric temperature at night should range from 70 degs. to 75 degs., and the house should be closed early in the afternoon in order to utilise the sun heat, so that the temperature may rise to 95 degs. The plants should be examined once or twice a week, and any lateral growths removed before it is necessary to cut a large quantity away at one time, this invariably causing a check to the plants. Pinch the laterals generally to one leaf beyond the fruit, but where there is sufficient room on the trellis the laterals may be allowed a little more extension than those on the lower part of the plant. This will encourage a flow of sap to the fruits and tend to increase root-action.

Cherries have set remarkably well and the crop will be abundant provided the fruits are not unduly thinned during the stoning period, this not infrequently happening from want of water at the roots. Now that the fruit is set the shoots may be safely thinned; at the same time provision must be made for next year's crop by leaving a sufficient supply of the best-placed shoots for the purpose, or, if the spur system of training is adopted, stop the most suitable growths beyond the third or fourth leaf. Keep a diligeat watch for black aphid, and once it is observed either thoroughly syringe the trees with Quassia extract or dip the affected shoots.

Plums are a much lighter crop, and the fruits will not require any thinning. Dis-

budding of all trees should be brought to a close, and from this time onwards attention must be given at intervals to summer-pruning.

Pears on walls are the first to claim attention. The breastwood should be shortened and sufficient young wood trained in to furnish the space. Cordon Pears also require close stopping to keep them in a fruitful condition. Pyramids and bushes may be pinched and thinned to a reasonable degree, and the work must be regulated by the space available for them. The shape of bush and pyramid trees is a matter of great importance. The side shoots of pyramids should be pinched early to about five leaves, and the subsequent shoots pinched once or twice, according to the season, to within two leaves of the first pinching. Leading shoots are thus encouraged to grow strong, and by this method the whole tree becomes fertile. Standard trees, when once established need no restriction of the shoots, and they soon become fruitful.

Celery.—The planting of Celery is continued as the plants become ready, choosing showery weather if possible. If these conditions are not available, only a few plants are lifted as required, giving them a good soaking with water immediately after they are planted. Damp the foliage each evening and sprinkle it freely with soot, which is an excellent preventive of the Celery-fly.

Autumn vegetables will now be planted in quantity as opportunity occurs. Autumn Cauliflowers are most useful, but need liberal treatment, such as a good root-run and an ample supply of moisture in dry weather. Few plants pay better for deep cultivation, and to secure a full season's growth the plants should be got out as soon as possible. Much the same advice applies to the early autumn Broccolis, such as Self-protecting, Michaelmas White, and Walcheren. In our case these will be planted on ground where winter Spinach has been dug in. The latest planting of Brussels Sprouts will be made at once. Leeks are also ready to be put into their permanent quarters. For September and October supplies a small sowing of the Rosette Colewort will be made now, sowing thinly to secure good plants. Another sowing will be made about the end of the month, and the last the second week in July.

Parsley will be sown again for use in autumn and early winter. For mid-winter supplies it will suffice to make a sowing in a couple of months. Encourage a free growth in the plants from the early sowing by loosening the surface-soil frequently. Occasional dustings of soot not only stimulate growth, but also prevent slugs eating the plants, and impart that dark green colour so much admired in this herb.

Onions.—Beds of transplanted Onions intended for producing large bulbs will, in the absence of rains, need damping each evening, soaking the plants at the roots occasionally with clear water to induce a free growth. When moisture is applied to the soil during hot weather the surface of the ground becomes caked, therefore use the Dutch hoe frequently between the rows. Any failures in the rows should be made good without delay, and a sharp look out kept for the Onion mildew. If any signs are detected dust the plants freely with black sulphur. When the plants are growing freely it will be a great benefit to mulch the rows with horse-droppings, such as are used for Mushroom beds. Autumn-sown Onions that were planted out early in the spring are bulbing freely, and are afforded plenty of stimulants. F. W. GALLOP.

SCOTLAND.

Hardy annuals.—Encouraged by the dripping weather, annuals of all kinds have made satisfactory progress, and some further thinning was done during the week. As is always the case when the soil continues damp for some time, slugs are more than usually numerous, so that in thinning some allowance is made for possible damage by these minute pests. To check their activities as far as possible, free dustings of soot are employed. These to be effective must be renewed at short intervals until the soil again dries up.

Beds of Tulips.—During the week beds of Tulips, chiefly grown for cutting, were cleaned and hoed over. These are chiefly May-flowering varieties. One of the most popular is Clara Butt, which is not only useful for cutting, but is decidedly showy when grown thickly in a bed. *T. retroflexa* is very graceful, but hardly so valuable for cutting, its somewhat slim stems occasionally bending over. *T. Gesneriana*, with its vivid crimson blooms, each with a blue-black base, is very stately and handsome. *T. fulgens*, a good ruby-red Tulip, shows up well under artificial light, and in conjunction with Lilies of the Valley, makes an effective table decoration. The showy and curious Parrot Tulips are, perhaps, hardly so popular as the varieties above mentioned, but when used in wide glass bowls with a mixture of Solomon's Seal they attract attention in rooms. If possible, during the present season the bulbs will be permitted to occupy the beds for a longer time after flowering than is usually allowed. There is a likelihood that the importation of bulbs may be curtailed, if not altogether prohibited, so that more than usual dependence must be placed on bulbs which have already done service. If fairly well ripened off before being lifted, and trans-

ferred to a shady spot to mature their growth, there seems to be no reason why such bulbs need be much inferior during next spring. Probably the blooms will not be so large, but they will be sufficiently so for ordinary purposes. In addition, the prohibition of importation may induce many to give a trial to home-grown Tulip bulbs—unless, indeed, the prohibition extends to Ireland, from which country I have had Tulips equal, if not superior, to the best importations from the Netherlands.

Irises in frames.—These, planted out in beds in cold-frames, as has previously been indicated, are grown in considerable quantities for cutting. Growth now has necessitated the removal of the sashes, and from time to time liquid manure is given to assist the plants. The Spanish Irises come in at a useful time when grown in this way, and succeed the latest Tulips. When their season is over the English Irises are beginning to be available, followed by those of both varieties in the borders. It will thus be seen that the season of these useful Irises is prolonged over a considerable period. If cut when the first bloom of the spike is developing, the flowers pack well, endure a long railway journey well, and last well. Sufficient quantities of their own foliage are sent to mix with the blooms.

Dahlias.—A finish was made in the course of the week with the planting of Dahlias. These plants were those raised from a limited (during this year) number of favourite varieties for massing. Among those varieties is the old Glare of the Garden, always largely used. Its small, vivid-scarlet blooms, and its moderate habit of growth make Glare of the Garden useful for beds or for colonies in borders. A very few of the Cactus type were similarly used, preference being given to those which carry their blooms erect, instead of, as is the case with some excellent Cactus Dahlias, having drooping heads. The majority of Dahlias, however, were planted some time ago in a dormant state, and are now showing signs of growth.

Ferns under glass are making considerable progress. Shade is now essential, and as the pots are rapidly being filled with roots, copious supplies of water are necessary. These are at present very effective, the varying shades of green among the young fronds being noteworthy. Pterises may shortly go to cold-frames for the summer. If possible, a frame with a northerly exposure should be utilised for the summer quarters of these accommodating Ferns.

Cosmos.—A good quantity of Cosmos was got out under excellent conditions during the week. The white variety is, perhaps, hardly so effective as those of a purple or pink shade; nevertheless, in some parts of the garden they are freely used. The blooms are not without value for cutting, and require no other green than their own light and graceful foliage.

Hardy fruit.—A little tentative thinning has been done on Peach and Nectarine trees, which have set very freely. This work will be continued at intervals until all the trees have been gone over; but, as there is always some risk of fruit dropping at stoning-time, the final thinning will be delayed until that critical period is over. In the case of Nectarines there is some trouble at times from leaf-curl or blister. It is now generally conceded that this proceeds from sudden changes of temperature, and that being so it is not to be expected that any particular wash will prove quite effective. Dusting with flowers of sulphur at times is not without value, and, differing from some other growers, I prefer to dispense with syringing the trees with specifics of any kind until the weather becomes more genial. A tree syringed in the late afternoon cannot possibly have dry foliage before nightfall, and wet leaves are, I feel certain, an incentive to blister. With milder weather this soon passes away, and any blistered leaves should be regularly removed and burned. Peaches in these gardens are not affected by blister. Pears are setting freely, and the crop will, from present appearances, be of quite average size. Marie Louise, Souvenir de Congres, and Winter Nelis on a wall with a south-easterly exposure are at present in bloom, and promise well. Plums, including Braly's Gage, Oullin's Golden Gage, Pond's Seedling, Kirke's, Reine Claude de Bavay, Jefferson, Golden Transparent Gage, and Washington, on a west wall, give indications of a heavy crop. Those on a south wall are further advanced, and, as was the case last year, trees of the old Green Gage will yield excellent returns. It is a pity that the small size of this Gage has made it unpopular among present-day planters, for, beyond doubt, it is of far superior flavour to most of the newer and larger-fruited Gages.

Plant-houses.—Watering is rather a prolonged business now when the weather is bright, and it will be found that many plants need looking over both morning and night. It will be noticed, too, that plants dry up much more quickly in some houses than in others. At the same time, close observers will agree that the best-grown plants are not necessarily those which furnish the best display of bloom. Shading is now necessary. Damp down the floors occasionally on sunny days, and a chink of ventilation may be safely left at the apex of the houses over night. Liquid manure may now be used freely, giving a change of stimulant from time to time. In the stove let the fire go out in the morning, and kindle it late in the afternoon. It is better for the plants than keeping them, as it were, between two fires—hot pipes below and sun

heat above. Syringe freely morning and night. Eucharis Lilies may now be potted on; and if any old plants require to be broken up, now is the time to do it. Night temperature, with but little fire heat, may be easily maintained from 65 degs. to 70 degs., according to the heat required by the class of plants grown. W. McGuffog.

Balmoe Gardens, Kirkcudbright.

OBITUARY.

MR. GEO. WYTHES.

WE regret to announce the death, at the age of sixty-five, of Mr. Geo. Wythes, who passed away on May 25th at Folkestone, where he was living in retirement. He was born at Worcester in 1851. At a very early age he was left an orphan, the youngest of ten sons, and was obliged to go out into the world to earn his living at the age of twelve. Not being very robust, he chose the open-air life of the gardener, a start being made at Whitborne Hall, Hereford, where at that time there was a fine collection of trees and shrubs. After moving about to various gardens in the quest for knowledge, he went to Dickson's Nurseries, Chester, where he was offered, and accepted, the situation of general foreman of the Alexandra Public Park, Manchester. After leaving Manchester, he was appointed head gardener at Thirlestone Hall, near Cheltenham, where he specialised in the culture of vegetables. Here he discovered the Cheltenham Green Top Beet, which at that time was being grown in a local nursery. Recognising the distinctness of this Beet, he procured some seed, and by continual and careful selection obtained a certificate for it from the Fruit Committee of the Royal Horticultural Society. At Thirlestone, specimen stove and greenhouse plants and Orchids were largely grown. In the culture of these, Mr. Wythes was very successful, and many were the prizes he won for them in the neighbourhood. On leaving Thirlestone, he took charge of the gardens at Teddesley Park, belonging to Lord Hatherton. In 1887, on the death of Mr. Woodbridge, at Syon House, he was appointed his successor. Here he remained until, owing to ill health, he was obliged to retire in 1906. During the time he was at Syon House he was a frequent exhibitor of fruit and vegetables at the shows held in London. Here, too, he raised some good Potatoes, including Syon House Prolific and others. He also turned his attention to French Beans, Progress being one of the best varieties he raised. Of Melons, too, he also gave us some good sorts. He was among the first, if not the first, to advocate the culture of Strawberries as annuals, and the result of this mode of cultivation was seen in the handsome fruits he grew. Mr. Wythes was a member for many years of the Fruit Committee of the Royal Horticultural Society. He also took a great interest in the Gardeners' Royal Benevolent Institution, of the committee of which he had for many years been a very active member.

He was one of the body of leading gardeners to whom the Victoria Medal of Honour in Horticulture was granted at its institution.

"**Daffodil Year Book.**"—In view of the very great increase in the expense of paper and printing, and of the labour difficulties attending it, the Council of the Royal Horticultural Society have resolved to suspend the publication of this year's "Daffodil Year Book." In coming to this resolution they are not wholly uninfluenced by the fact that the "Year Book" has never paid even half its cost, and last year, 1915, the sales of it only amounted to one-ninth of its cost.—W. WILKS, Secretary.

CORRESPONDENCE.

Questions.—Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.

Naming plants.—All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.

Naming fruit.—Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.

PLANTS AND FLOWERS.

Epiphyllum truncatum (S.)—This can be propagated very readily from cuttings. Handsome plants may be produced by grafting on the Pereskia—a plant with a woody stem. The operation of grafting is very simple. Cut a diagonal notch in the stem of the stock, place in it the point of the Epiphyllum growth, broken off at a joint; it must then be fixed in its place with a small wooden peg.

Plants for dry ledge (Cornwall).—The following should do well in the position you refer to.—Zauschneria californica, Snapdragons, Campanula muralis, Sedum Sieboldi, Thymus lanuginosus, Alyssum saxatile, Dianthus deltoides, Linaria Cymbalaria, Helichrysum bellidioides, Saponaria ocyroides, Arenaria montana. Any of the Sedums or Sempervivums should be happy in such a position.

Vallota purpurea not flowering (R. M. C.)—This plant is easily flowered if the following points are attended to:—In the first place, it should be remembered that it is an evergreen bulb, requiring only just enough water in winter to keep the foliage green, and then, again, like all other hibernous-rooted plants, the pots should be full of roots at flowering time. When starting into growth, place them in a light position, watering carefully during the spring, increasing the amount of water as the season progresses, giving plenty of air all through the summer, and but little shade. It may be that in your case the roots are unhealthy, and we would advise you to examine them. If they are so, shake away the old soil, and repot into a pot just large enough to contain the roots.

Lily of the Valley not flowering (Canterbury)—As your bed is evidently an old one, the roots have doubtless become crowded, and an impoverished condition generally has resulted. Select a fresh position, where fresh soil would be at hand. If this cannot be done, give an entire change of soil, taking out fully 15 inches of the old, and replacing by a like quantity from another part of the garden. Dig in plenty of old manure and leaf-soil, if possible. Some care will be required in digging out the old bed. Your best plan will be to cut the roots out in tufts 6 inches or 9 inches square, unless you can fork under them and lift them out bodily. Assuming you lift the beds in tufts, the latter should be again divided into pieces 3 inches square or thereabouts, preserving the runners as much as possible. The rows should be at least 9 inches asunder, and the tufts about 6 inches. It will be best to prepare the entire bed before replanting. In setting out the individual plants, keep the crowns well below the surface, and, above all, plant firmly. The autumn is the best time to remake the bed.

Treatment of plants after flowering (Amateur)—As a rule, our plants are very badly treated immediately they have given their chief show of beauty. This is a sad mistake, for none of our plants can give a satisfactory display the following season if neglected as soon as they have gone out of flower. To place a Camellia, Erica, Azalea, or any of the many useful greenhouse plants upon one side because its beauty is past cannot fail to bring future disappointment. Where so many are in standing such plants outside too early. Treat plants kindly for a time after the severe strain experienced dur-

ing flowering. How often do we see our hardy flowering plants and shrubs, such as the Spiraeas, Deutzia gracilis, Clematisses, Roses, and others, ruthlessly turned into the open at a time when they are fully three months in advance of outdoor growth. Yet their owners unreasonably complain of future failures, never having given the common-sense side of the question a thought. If the plants must come out of the house, let them at least have some slight protection for a time until cold weather is past. Roses, Deutzias, Azaleas, Camellias—in fact, almost all flowering plants—make considerable growth after flowering, much of which is already far advanced before the blossom is over, and, seeing it is on this after-growth that we rely for next season's blossom, it is surprising how many do not recognise the absolute need of protecting and maturing the same, instead of doing their utmost to ruin it.

FRUIT.

Vine leaves scalded (F. M. G.)—Judging by the leaves you send we should say that the trouble is due to scalding, through the ventilation not being properly attended to. Moisture settles upon the foliage at night, and if this is not dissipated early on bright and sunny mornings by ventilation carefully applied, or before the sun raises the temperature, scalding is sure to follow. You might try shading the particular Vine which is affected.

VEGETABLES.

Cucumber growing (C.)—The best way to do this is to make up a hotbed of equal parts stable-manure and leaves. When the violent heat has partly subsided, put a hill of rich soil in the centre of each light. One part of decayed manure to three parts of garden mould will do well. Put the plants out when the soil is sufficiently warmed. In three or four weeks they will have made considerable growth, and the whole surface of the bed should be covered about 6 inches deep with compost similar to that used for planting in.

Butter Beans (F. M. G.)—In France these are known as Haricot Beurre, some of them being of nearly the same colour as butter. The best varieties are Mont d'Or (a runner), Dugoin (a dwarf), Saint Piere (a runner), and Bon Jardinier (a dwarf), under which names seed can be had. The usual treatment given to Kidney Beans, as regards season, will do for the Butter Bean; but in this country it is always advisable to give it a warm corner and good, rich soil. The cooking is simple, and the way common with us of allowing Beans of all kinds to get too old will not hurt the Butter Bean so much, though no doubt it has its season of best condition like other things. The Pea you refer to is the dried seeds of our ordinary English Marrow Peas.

SHORT REPLIES.

Sydenham.—1, We have never heard of the Radish leaves being used in salads. 2, The unblanched parts of Celery may be used for flavouring soups.—E. C.—Try cutting it in the evening and soaking in water during the night, using it the following day.—W. W.—The corns have been kept too dry. It would have been better to have started them in small boxes and Cocoa-fibre, then, when they were growing freely, to pot them. The fact of the leaves being attacked by thrips shows plainly that they have been kept too dry.

NAMES OF PLANTS AND FRUITS.

Names of plants.—L. E. W.—1, Veronica Hulkeana; 2, Spiraea flagelliformis.—Mrs. S. Pain.—1, Billbergia species, cannot name from flower-spike alone, there being so many species in cultivation; 2, Coronilla Emerus.—A. Vigar.—1, Saxifraga muscoides atropurpurea; 2, Crassula tetragona; 3, Sedum Sieboldi; 4, Sempervivum arboreum probably, but cannot name from a leaf alone.—D.—1, Saxifraga ceratophylla; 2, Veronica vernicosa.—W. D. Halifax.—1, Saxifraga crustata; 2, S. Aizoon rosularis (probably); 3, S. Hosti (poor form); 4, S. Aizoon minor (probably), should be sent in flower; certainly not S. Engleri.—C. E. E. S.—Lonicera sp., impossible to say which, as flowers were faded.

CATALOGUES RECEIVED.

WM. WATSON AND SONS, LIMITED, Clontarf Nurseries, Dublin.—*Summer Bedding Plants.*

Book received.—"Flower Culture Month by Month," by Mary Hampden. Herbert Jenkins, Limited, Arundel Place, Haymarket, London, S.W.

Daffodil diseases.—Growers of Narcissi have suffered during the last few years from the loss of a considerable number of bulbs owing to the attack of a disease which has so far proved impossible of cure. The Royal Horticultural Society has just appointed an investigator to study the disease and, if possible, to devise means of checking it, and the Director of the Royal Horticultural Society's Gardens, Wisley, Surrey, would be glad if any having the disease in the foliage or bulbs of their Narcissi would send specimens to him with as full particulars as possible.

GARDENING ILLUSTRATED.

No. 1945.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

JUNE 17, 1916.

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THE ELM A DANGER.

As to Mr. Ballard's letter in GARDENING ILLUSTRATED, what I meant was that the Elm should not be planted anywhere near a house, or a garden, or a drive. Anybody who wants Elms for timber should grow them in the wood, where there would be no danger. As Elms are planted in Britain they are a constant danger, and an average of a death a week is the result of their stupid planting. They have no root-system at all. The common Field Elm, so frequent in our counties, is not a British tree and is always multiplied from suckers, which may be a reason for its tumbling over from want of deep roots. Our native Elm, the Wych Elm, is a better-rooted tree and is easily raised from seed.

As to the Elm being a better-looking tree than the Oak, Beech, Ash, or Eastern Plane, that is a very odd statement. It is quite inferior in beauty to any of those trees. I have seen in Worcestershire a Pear-tree 60 feet high that I should think more beautiful than any Elm. The counties of Westmoreland and Hereford have many examples of our native trees much more beautiful than any Elm, and, as we now know, less liable to be blown over. The common Elm before these strenuous days had hardly any value as timber—one could hardly get 4d. a foot for it.

Mr. Ballard says that Yew, Holly, or Evergreen Oaks are less beautiful than the Elm. I should say it is quite inferior to any of those trees for beauty. The Holly is the most beautiful evergreen of the northern world, and in the past winter has been clothed in splendid colour of fruit. Our native evergreens, Yew, Holly, and Fir, should never be left out of any right planting. Any one of them, old and right as to place, is worth all the Elms known, especially for winter scene.

Mr. Sargent, author of the *Sylva of America*, and who knows all the trees of the greatest northern tree land, told me of his great delight in seeing old trees of our native Scotch Fir. And a fine old Yew may be called our native Cedar, and beautiful throughout the year, most so in winter storms.

W.

NOTES OF THE WEEK.

Primula Red Hugh.—We send you some blooms of this, the finest of the progeny of the Cockburniana and pulverulenta crosses.—J. STORMONTH & SON, *Kirkbride, Carlisle.*

[Very rich in colour.—ED.]

Mimulus Whitecroft Scarlet.—From Mr. Stormonth, of Kirkbride, we have a brilliantly-coloured Mimulus, Whitecroft Scarlet. It seems worth growing. These flowers have in my soil a way of leaving without notice. They may want frequent division.—W.

A brilliant Pæony (*Pæonia officinalis lobata*).—Mr. F. Gifford, of the Montague Nursery, Hornchurch, sends us a striking bouquet of this splendid scarlet Pæony, the fine colour-effect of which it is impossible to over-praise. He has grown it for many years, and we may be assured of its merit and hardness.

Aubrieta Beauté de Bade.—We enclose blooms of the Aubrieta Beauté de Bade. It is a little darker than Moerheimi, but its main qualities are its hardy, dwarf, dense habit. In these respects it excels any of the red shades we have tried, and we have bought all that we have seen offered.—J. STORMONTH & SON, *Kirkbride, Carlisle.*

[Very distinct in colour.—ED.]

Rhododendron Doncaster.—This brilliantly crimson-flowered variety arrests attention whenever seen. With me some plants, though small, are smothered with blooms of the most gorgeous colour. The brightly-coloured forms are somewhat liable to scorching, and this one, like many others, is not immune from this, but it is, nevertheless, an indispensable variety.—E. M.

Pink Gloriosa.—This is a great favourite of mine and the earliest of all to flower. It forms a dwarf, tufted plant of slow growth. The comparatively large double flowers are of a delightful shade of pale pinkish lilac, and very sweet-scented. I have had my plant for three years, and it has not increased greatly in size since that time. With its air of refinement it seems more suitable for a position in the rock garden than in the foreground of the herbaceous border.—K. R. W.

The Norway Spruce.—Mr. A. D. Richardson, writing in *Gardeners' Chronicle*, dissents from Sir Herbert Maxwell and

Mr. Elwes, who both say this tree is over-praised and over-planted. He is quite wrong, and cannot have observed what a poor tree it is over a large area in the southern counties. It misses the rain and long-melting snows on its native mountains, though it grows well in wet and northern districts and beside streams, but many places do not enjoy these aids.—W.

The phenomenal Loganberry.—Mr. W. Allan, The Gardens, Gunton Park, Norwich, sends us some heavily-fruited shoots of this, the individual fruits large and well coloured. As to their culture Mr. Allan says:—

"Grown in house with Figs, no foreing; come on with the season. Just now the berries are quite a beautiful sight, and if allowed to hang to get thoroughly ripe they are much liked."

A noble white Pæony.—Mr. Gifford sends us from the Montague Nursery, Hornchurch, a bunch of this very strikingly beautiful Pæony. The flowers are a fine white with great golden-yellow stamens, and the plant is covered with buds and flowers. The Pæonies of the herbaceous kinds are more amenable to our garden culture than the tree Pæonies and do not often get the place they deserve in our gardens. It is named by Mr. Gifford *P. albiflora grandiflora*.

Menzies' Arbutus.—Professor Jepson writes from the University of California:—"Our Arbutus Menziesi is, in my opinion, the most wondrously beautiful of all our Californian trees. It occurs mixed with other species, and very rarely have I found even a small grove of it keeping completely to its own kind. It is a great pleasure to know your interest in it and your plans for planting. I can send you this fall a quantity of the berries. The seed is rather easily germinated in nursery beds with us. If you prefer nursery stock, it can be supplied. I am asking the California Nursery Company at Niles to send you their catalogue."

The Dittany of Crete (*Origanum Dictamnus*).—J. Cornhill speaks of this on page 275 as being at one time grown as a window plant by cottagers. This reminds me that some years ago, when spending a holiday in a little old-fashioned village in Surrey, I found this plant in almost all the cottage windows. It was known by everyone there as Pink Hops, which name suited it well, as the clusters of blossom were in shape just like Hops in maturity.

This pretty flowering plant is permanently fixed in my mind, for in those days I was rather proud of my knowledge of plants, but had to confess my ignorance of its correct name.—K. R. W.

The war and the garden.—Many eligible men who had obtained postponements until the end of May have now joined the army, and the scarcity of garden labour has been intensified. Nor is this all, for men, who might otherwise have been available, can earn much higher wages at other work, and refuse to do garden work at all except for wages which some gardeners of experience would be only too happy to get. Under-gardeners of any experience cannot, at present, be got, and those who have still some of the old school of garden labourers ought to congratulate themselves, and, if possible, see that they are adequately remunerated in this time of high prices.—Kirk.

The Nootka Sound Bramble (*Rubus nutkanus*).—For naturalising in the wilder parts of the garden, along the banks of hedgerows, or at the foot of trees, where the shade is not too dense, this is an admirable plant. It grows about a yard high and bears in May and June handsome Vine-like leaves and pure white flowers, each from 2 inches to 3 inches across and set off by a central bunch of sulphur-coloured stamens. The plant spreads freely by underground suckers and soon forms small colonies if left to itself. Although it appears to be quite happy on the driest banks and beneath trees, the foliage and flowers are larger if the plants are given a moist position.—E. M.

London Pride for hopeless banks.—I send you a photograph of a bank of London Pride planted last July. I had a number of banks of inferior turf, requiring much labour to keep them in order, and never looking well. Last July I pared off all the turf and planted them with pieces of London Pride about 6 inches apart. These banks are now a mass of bloom, and, when the plants are out of blossom, are green and tidy, requiring no attention.—LEONORA L. YORKE SMITH.

[No doubt it is a useful plant for places where few other things will thrive—as good for wet and sunless places as dry ones.—ED.]

New Lilacs.—At the Chelsea Show Awards of Merit were given to two Lilacs, both of which were raised and distributed by M. Lemoine, of Nancy. The variety Réaumur has massive trusses of dark carmine-coloured single blossoms, while in the other, President Fallières, the double flowers are of a soft lilac tint. Much has been written of the evil results of grafting the choicer varieties of Lilac either on to seedlings of the type or on the Privet. In the case of this latter the union is, as a rule, of short duration, while on seedling Lilacs the suckers from the stock are always a great nuisance. To obviate this M. Lemoine announces that all his Lilacs are on their own roots, which is certainly a step in the right direction.—K. R. W.

Double Narcissus failing.—Last year you advised me how to treat some old-established clumps of Gardenia-flowered Narcissus which had gone "blind." The treatment (weekly doses of liquid manure during the late summer and autumn, and then a mulch of manure for the winter) has been almost entirely successful, nearly all the clumps flowering well, with fine flowers. One clump, however, which a fortnight ago appeared to have eighty-eight buds on it, has refused to respond to the treatment; twenty-five buds were

"blind" and the remaining three are now deformed flowers. Can you give me any further advice? Had I better lift the bulbs and continue the treatment in fresh soil? If so, what is the best time to move them? Up to last year they had always flowered well, and the improvement in all the other clumps is remarkable.—LADY WINIFRED LOWRY-CORRY, *Castle Coole, Enniskillen*.

[We think you had better continue the treatment you have found successful. Leave the bulbs as they are, as this variety dislikes moving.—ED.]

Clianthus puniceus in Bucks.—It is surprising to find there is any trouble about growing *Clianthus puniceus* in Sussex. Here, in South Bucks, on sandy soil, with a wall behind it and shelter from the north and east, it luxuriates, and is just now a mass of flowers. Mild winters bring it on too soon, and then its flowers are injured in early spring, but mats and such like protection damage it rather than help. Our altitude is about 500 feet.—H. H. WORTHINGTON, *Wycombe Court, High Wycombe*.

Horminum pyrenaicum.—Although not one of the choicest alpine plants, this is very attractive when seen in good condition and properly placed. I have been very interested in a group of plants now in full flower. Those in search of easily-grown plants for the rock garden should give this a place. It comes from the Pyrenees, and has dark green, crinkled leaves, which form rosettes close to the ground—after the manner of *Ramondias*—from which issue several spikes of purple flowers on stalks a foot in length. The flowers, borne in whorls of six, hang from the lower side of the arching flower-stalks.—E. M.

Habranthus pratensis.—From Mr. Allan, of the Gardens at Gunton Park, Norwich, we have received as brilliant a flower as ever came to us. It is a Chilean bulb, which few people grow well—myself among them—but which in some places in the eastern counties grows like a Daffodil. Its colour is splendid, and its form, with a little yellowish centre, seems to emphasise the colour. To make it possible to cultivate this more would be a great gain, because it comes in when many of the spring bulbs have gone. The effect in the house is curiously beautiful from every point of view, and yet always brilliant. The plant is well worth growing for its value as a cut flower. Mr Allan writes as follows as to his mode of culture:—"I first saw *Habranthus pratensis* in the Rev. J. G. Nelson's garden at Aldborough, now a good many years ago. He considered it a tender subject, and his directions were:—'Plant at least 8 inches to 9 inches below the surface, and do not disturb the bulbs oftener than necessary.' This method of cultivation has proved to be all wrong. They did not increase, and in heavy soils died out. Mr. Oelee, of Blicking Hall, was the first one, so far as I know, to practise planting it at the same depth as *Narcissi* on a sunny border in lines, and he was rewarded with splendid results—dozens of most brilliant stems of flowers, which were quite a revelation to me on one of my visits at this season of the year (end of May and beginning of June), when it flowers in this part of Norfolk. I lift the bulbs every second year. It is not at all particular as to soil, growing well in our kitchen garden—good sandy loam—on either east or west borders. I have it on both, the bulbs increasing rapidly. The flowers are lovely whilst they last—all too short a period—from two to three weeks.'"

FRUIT.

NOTES ON GRAPE CULTURE.

THE practice of the best Grape growers for market is to get young Vines into bearing in the shortest possible time, give them high culture, crop them heavily, run them about fifteen years, root them out, and start again with young stock. This means a renewal of the borders at considerable expense, but it pays the market man, as he maintains a high quality which can only be obtained from Vines which retain a considerable amount of youthful vigour. How often have we seen an amateur, a gentleman's gardener, come to the front and carry off the principal prizes for several years and then be no more heard of. I can, in the course of forty years, recall several such instances. What has become of him. The answer is simple. The Vines had passed from the heyday of their youth, and though still bearing good crops of nicely-finished bunches, are not capable of furnishing those super-excellent samples termed prize bunches by the gentleman's gardener and specials by the market grower. These big bunches have, however, a limited sale, the demand being for bunches which average a pound weight, but which have berries normal in size and well coloured. The demand for specials is almost exclusively confined to London and the very large towns. In the provinces the fruiterers are seldom asked for them. They like to have variety in size, as many want half a pound only, and the very large proportion of their customers does not want more than a pound at a time. Naturally they prefer to supply whole bunches of the various weights required rather than cut up a large bunch. It is the same in private places. Bunches which weigh from half-a-pound up to a pound and a half, with full-sized berries, are the most serviceable. Such can be obtained from Vines which have been planted twenty and thirty years if the grower will take some pains to neutralise the tendency which the Vine has to push its roots deeply into the ground. When a Vine reaches a certain age the bunches become smaller, and very frequently partial shanking sets in and the berries do not colour well. When this occurs every year it is a sure sign of permanent deterioration caused in nine cases out of ten by defective root action. Faulty culture, such as over-cropping, want of food, and a non-observance of important cultural details, will, of course, lower vitality, but the grower has had sufficient experience to know that he has not committed errors of this kind. He may be certain that the trouble is in the soil. There are doubtless hundreds of Vines in this unsatisfactory condition at the present time, and owners generally know that the best thing to do would be to root them out and renew with young Vines, but amateurs generally are reluctant to do this. They hope things will alter, they do not want to be a year or two without fruit, and there is what at the present time is the chief deterrent—the question of expense and shortage of labour.

That Vines which have come into a very debilitated condition, bearing crops hardly worth the labour of thinning, can be restored to a fruitful condition I have ample proof. I have some Black Hamburgh that have been planted forty years, and some Alicante that were planted twenty-five years ago. Owing to the defective way in which a water-course was made the surface water was thrown back on me for twelve months. The consequence was that my Vine border was

flooded, many of the roots perished, and the following year the crop was not worth ten shillings. It was a heart-breaking affair and 95 per cent. of Grape growers would have rooted them out. I decided to try and renovate them, and in the winter I took out the soil where the roots were decayed and cut them back. Some that had gone down deeply I cut off, leaving a root intact here and there. I then notched the roots—I found very few fibrous roots—at intervals of 4 inches, and bedded the cut portions in peat. Naturally, such drastic treatment caused a check, and growth was weak the following year. I did not renew the soil, but worked in some rotten manure, bones, soot, and lime. This was done about seven years ago and those Vines are now bearing crops which many would be content to have on

NOTES AND REPLIES.

Fruit wall alleys.—The influence of wind and sun has for some weeks past caused the soil in the alleys under walls on which fruit-trees are grown to part with moisture at a rapid rate, and unless rain in abundance should fall very shortly water will have to be applied artificially. The borders beyond the alley are moist enough, but the alley itself is the objective to which attention is directed and which is so often overlooked. Before applying water the surface needs to be lightly loosened with a digging-fork, and if a fruit manure is to be applied this should be sprinkled on top and worked into the soil in the process of digging it. A thin covering of litter or something of a similar nature placed over the full width of

rants have set crops slightly in excess of the average. In the case of these fruits, and of Gooseberries, no signs of fly or of caterpillar exist, so far. Raspberries will, as is usual in these gardens, be a heavy crop, and during the week suckers which had made their appearance in unsuitable places were pulled up.

Morello Cherries.—These are now in bloom. There is now no further danger of frost sufficiently severe to do damage, so the crop is practically assured. Old trees will soon require a dressing of artificial manure to assist them in swelling off the fruits. A number of young trees, planted two years ago, are equally promising, but in their case a mulching of half-decayed manure will, meantime, suffice.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

CLEMATISES RAISED AT LYONS.

C. ROYALE VELOURS, here figured, is a hybrid Clematis raised by M. Morel, of Lyons, but which, unfortunately, the war prevents being sent out. I had the privilege of having some for trial, and among them this very pretty dark velvety one. Quite distinct and a free grower, it is certain of a welcome in our gardens as soon as it may be obtained in the trade. *Huldine* (see illustration, p. 297) is another fine seedling from the same raiser, white with brown exterior. W.

HARDY FLOWER NOTES.

ANEMONE NEMOROSA ROBINSONI.—In order to fully realise the decorative worth of this it must be seen in a broad, healthy mass. I have grown it from the time it first appeared in hardy-flower lists, but until this season have not been able to realise what a fine effect it is capable of creating. I have it in various positions, and in one place it forms a bed several yards square. Last autumn I top-dressed with several inches of Oak leaves, and later on a thin coat of manure was put on. This caused a vigorous growth to be made, the flower-stems being correspondingly strong, and, as they were near a *Thuja* hedge, the blossoms faced one way and they made a brave show. There were hundreds of blooms. Planting in this formal way is not, of course, to be recommended, but in my case I cannot group picturesquely, as my object is rapid increase. Where this *Anemone* is used in a liberal manner I would, however, advise a certain amount of concentration instead of dotting about over a considerable area. I have been in some few well-kept gardens where, however, owing to the dotting about of hardy plants, a considerable amount of monotony prevailed. A garden should, wherever possible, present a series of floral pictures, easily accomplished where there is a considerable area to deal with, and much in this way may be done in gardens of limited extent.

FORGET-ME-NOTS.—I like to see these springing up naturally, selecting, as they seem to do, cosy little spots where they are evidently perfectly happy. Instead of clearing away all the plants as soon as they are out of bloom, let some go to seed, and sooner or later young plants will appear in quite unexpected places where natural conditions prevail. With me this occurs every year. They come up among hardy flowers, under trees and similar places where there is the protection from wind, rain, and frost, and to me they always look happier than when in open beds, where I think the *Forget-me-not* seems out of place. The native species is not an inhabitant of the open fields. We find it in the hedgerows and on the borders of woods, where it enjoys light and sunshine in moderation, but is screened from hot sun. All the *Forget-me-nots* that



The little black Clematis (C. Royale Velours).

Vines not one-fourth of their age. Last year the Hamburg coloured remarkably well, and the berries were well up as regards size. The Alicante was very good, the berries being of maximum size. They were all a good market sample, and I had no difficulty in disposing of them to fruiterers with a good connection. I examined the roots the following year and found that from a large proportion of the notched parts new roots had issued, so that I got active feeders nearer the surface. This gave me the chance to feed heavily, which I did with dung and artificials. These Vines are now the picture of health, with abundant promise of a good crop, and anything more miserable than they were could hardly be pictured. What I have done, others may do.

BYFLEET.

the alleys afterwards prevents the soil again becoming so hard, and at the same time averts undue evaporation. Water in future must be applied whenever the condition of the soil demands it, a fact to be ascertained only by a frequent examination of the same.—A. W.

The Phenomenal Loganberry I sent you a few of should be freely cultivated by those having an orchard-house. We have it now, a strong plant, with four well-grown canes, in a Fig-house, which is not forced. It is now laden with its handsome fruit, which, when allowed to hang to get thoroughly ripe, a good dark red, is most refreshing and delicious. Grown this way, and ripening before the Strawberries are in, it is most welcome.—W. ALLAN, Gunton Park Gardens.

Bush fruits.—In the course of the week a look round was given to the bush fruits; and all over the prospects are gratifying. Gooseberries are, perhaps, scarcely so heavily laden as appeared from a casual glance to be the case; nevertheless, the crop will be quite heavy enough. Black Currants and Red Cur-

I am acquainted with enjoy similar conditions.

FRITILLARIA MELEAGRIS ALBA has a nice effect massed. It is a good thing to use freely among low-growing shrubs, as it does not crave for a great supply of good food, but will flourish for years in poor soil. It is one of the cheap good things that can be bought by the hundred by the not very rich amateur gardeners. With me it springs up here and there from naturally-sown seeds. It is good in the Grass.

ARTEMISIA PEDEMONTANA is one of the most distinct rock plants we have; very desirable, not on account of the inflorescence, which is by no means striking, but by reason of the colour effect which its silvery foliage is capable of creating when appropriately placed. It spreads freely and is hardy, but should be placed well up in the rock garden, so that it can trail over a ledge, and where roots and foliage are ensured against excess of moisture in the resting time.

ARMERIA ALPINA.—I believe that this is the smallest of the family. Any way, it is very dwarf, not exceeding 5 inches in height, and generally not more than 4 inches. It is a delightful little plant, and one of those things so useful to the owners of gardens of limited area, where the rock garden must be on a small scale. All alpine growers naturally wish for as much variety as possible, and should, therefore, avoid those things that spread freely and are of an encroaching nature. Another dwarf species is *Juncea*, somewhat taller, but a good companion to the above.

J. CORNHILL.

DOUBLE WHITE NARCISSUS FAILING.

I AM sending three buds of the double white Narcissus, and shall be much obliged if you can give me any hints as to growing this bulb. Every year the plants come up and are full of buds, looking strong and healthy, and then the buds all wither like those enclosed. Perhaps two flowers in the whole row come out. The bulbs have been in the ground a good many years, but when I have moved a few into a new place the same thing happens. I do not know if we are too high to grow the double Narcissus, as we have very late frost. All other *Dafodils* grow and flower very well. —M. H. CHAMPION, *Edale, Sheffield*.

[The failure of the double white Poet's Narcissus is more or less prevalent each year, and is due to a variety of causes. This Narcissus is a gross feeder, and, therefore, should be well manured. It prefers being planted deeply in the soil, not less than 6 inches, and preferably at 8 inches. A strong, almost tenacious soil is that most suited to its growth and flowering. In light soils, in conjunction with shallow planting, it is usually a failure. The bulbs are impatient of removal, and especially resent being dried off. When replanting is contemplated, this should be done in July, if possible. In digging in the manure—cow-manure and soot are best if your soil is light—keep it 4 inches or 6 inches below the bulbs. The root-fibres of this kind are almost perpetual in character. Bulbs that have stood some time and flowered in the same spot have impoverished the soil, and failure is sure to follow. In such a case, a winter mulching of manure would be helpful. It is not sufficiently recognised that by reason of its late flowering the autumn is approaching before the bulbs are fully ripened off. It is not generally known that the flowers that should appear in May of the present year are really formed and exist in embryo in midsummer of the previous year. It is for this reason that every support should be accorded the bulbs, so that the growing season may be prolonged as much as possible, thereby ensuring the fullest development and the

proper formation of the buds at this time. Not a few regard the "blindness," as this failing is called, as the result of the climatic or atmospheric conditions of the moment, but the true cause is, more probably, insufficient development in the previous year, as, even though blind, all the other parts may be good, and, as such, are produced by the bulb in its season. All you can now do is to encourage vigorous growth by mulching with manure, giving also a good dressing of soot, and, at least, weekly applications of liquid-manure.]

A PERENNIAL DELUSION.

WHEN I was a boy learning gardening a great lady near was always distressed about the scarcity of blue flowers, and tried to get them in all the ways she could. Now, after many years, when some ladies come in to see me they raise pretty much the same lament as to the scarcity of blue flowers or the difficulty of getting them. That was true many years ago, but is not so now, because if it is a question of colour among good garden plants one could name, the blues outnumber them all. There is such a rich store of these that, in fact, it is not easy to enumerate them all in one article. To begin with native plants, there are our true native Forget-me-not and its larger forms, all excellent and deserving of general culture, and there is also the wood Forget-me-not, which is easily naturalised if seed is scattered about grassy places. The trade forms of it differ a little, but are not more beautiful. These Forget-me-nots want no rock garden or other culture as the high mountain kinds might. Then we have the Gromwell (*Lithospermum*), a beautiful plant for a rocky or dry bank. The foreign kinds of this are also very beautiful; some find them slow and difficult, but they are free in sandy soils. A native one—*L. purpureo-ceruleum*—is now (end of May) in fine condition.

The Gentians are the most important alpine family of the northern world, and we have not enjoyed one-half of their beauty yet. If one thinks of the way the common alpine Gentian grows in Ireland and Scotland one is led to think that there are many other beautiful members of the family which may come in. In the south of England it does not do so freely, owing to a lower rainfall. The Willow Gentian, which inhabits the Fir woods of the Alps, is a beautiful plant for half-shady places. The Edinburgh var. of *G. ornata* is also said to be beautiful, and no doubt there are many others coming to us from China and Thibet. The Italian *Anchusa* was half neglected for years until some forms were found that are handsome plants and give us clouds of blue, perhaps best in the wild garden. There is a recent one which has clouds of Forget-me-not-like flowers, and the native *Anchusa* is also a very good plant for rough, grassy places. Where is there a more beautiful blue than that of the Rocky Mountain Columbine?

As I write, the Wistarias, noblest of all climbers, are in beautiful bloom, and Clematises, too, which are sometimes blue, as in the case of *Perle d'Azur*. Of all blue flowers of the spring, perhaps the most charming are the blue flowers that grow in the Grass, as, for example, the British Blue Windflower and the Greek Windflower, and the lovely blue Hepatica. The last I am not sure will grow in our rank Grass, but it deserves a little plantation to itself, slightly shaded for choice. The wild blue form is far better than any double varieties of it. Grape Hyacinths (*Muscari*) come in very well indeed, and often thrive well in Grass but best of all

is the one called *M. conicum*, and there is a native kind of some value.

The Mountain Hairbells that drape the alpine rocks and even grow along the roadways give us a choice of fine things. The handsomest perennial we have is the Delphinium, with its extraordinarily beautiful shades of blue and purple. The varieties of the mountain Violets are most exquisite in shades of colour, and some of them come true from seed and are otherwise easily raised.

The Blue Bindweed (*Convolvulus mauritanicus*) of the North African stony hills I use largely as an edging plant and for draping low walls. The Shamrock Pea comes later for like positions.

And as if we had not enough choice of blue things already, we have lately been endowed with some blue Poppies from the mountains of India, which, for colour and texture, are equal to any flower we have. Our Wood Hyacinth, the Spanish, the vernal Hyacinth of our coasts, and the Italian and Taurian Scillas are among the other beautiful hardy blues.

Annuals and biennials come in to help us, the Cornflower and the handsome wild Chicory of the chalky fields. The blue *Nemesia* is lovely, and gives us in summer the colour of the Forget-me-nots. *Nemophila* is lovely, so is the large blue Pimpernel, best in its rich blue form. So of the Swan River Daisy, best in its blue form. Several other Californian annuals are indispensable, as *Phacelia*, two kinds.

As I write a beautiful blue *Ceanothus* comes in to remind us how fine the *Ceanothuses* are as wall plants. Of this we have excellent proof also in the *Ceanothus Gloire de Versailles*, which, with me, grows well as a shrub, besides being beautiful on walls.—W.

PINKS.

THE season of Pinks will soon be with us, and at their best there are few more acceptable flowers for small beds and borders. As lately noted, they flourish amazingly in many cottage gardens, and make a brave show. My small collection consists of the old Pheasant's Eye, Albino (possibly the best white, as it is such a pure, beautifully-shaped flower, with no tendency to split), Paddington, and a sort very similar to one grown many years ago, and doubtless familiar to older readers of *GARDENING ILLUSTRATED* under the name of Hetty Dean. I never cared much for the large doubles like Her Majesty and Ernest Ladhams. Their beauty was short lived, especially if the season was wet and rough, the flowers split quickly, and the first heavy rain drove them to the ground. One of the prettiest bits in the garden at the present time is the result of associating the old white Pink with clumps of *Viola gracilis*. Few plants have increased more rapidly in favour or become more widely diffused in a short time than this charming *Viola*, and where thoroughly at home, the rich flowers are thrown well above the foliage on long, firm stalks. The foliage, too—a deep rich green that stands remarkably well—is beautiful. Among other plants that associate well with the Pinks are the varieties of *Lobelia cardinalis*, notably that known as Queen Victoria, which has purple-bronze foliage. I find, however, it does not winter satisfactorily outside in this soil, which necessitates lifting at the end of the season, boxing, and replanting in spring. Another plant that may be grown in connection with the Pinks, and that associates well with them, is *Heuchera sanguinea*, also, if space permits, occasional plants of the early dwarf Munstead Lavender.

E. B. S.

Hardwick.

BEAUTY IN HEDGEROW AND MEADOW.

NOTES have often been made as to the beauty of our common white Thorn, and it is strongly in evidence just at present under somewhat peculiar conditions on a stretch of road somewhere about two miles in length. It seems from what I can gather that close on seventy years ago there was a very high overhanging hedge which it was decided to cut, and the person in charge suggested leaving at intervals of about one chain one of the straightest bits that could be found, trimming it into a fairly symmetrical head. These are shapely trees now, a perfect mass of flower, and as the intervening spaces have not been cut for several seasons the whole length of two miles is a white sheet, the occasional trees making a pleasing break in the line. Anything like the above helps one to realise what beautiful effects are produced by what are known as common things, often quite as effective and

them. It will occasionally grow where it is not expected to thrive, and refuses to live in apparently ideal places. It is flourishing and flowering well in the rock garden at Terregles, Kirkcudbrightshire, on an elevated rockery, where, however, it has some good soil about its roots and partially sheltered from the sun. Mr. Reginald Farrer, in one of his books, gives a lively account of his failures and eventual success with this brilliant scarlet-flowered little plant, the successes being attained merely by chance. As a rule, a moist, shady position, such as that advocated in "The English Flower Garden," seems to suit it best.—S. A.

The Water Avens (*Geum rivale*), Leonard's variety.—The type, a native of this country, is found wild by the side of streams in a stony soil, and looking quite pretty when flowering, amid wild Grasses. In cultivation, however, it looks insignificant, but the form known as Leonard's variety is a great improvement and very effective when in bloom, particularly if planted about the level of the eye. The colouring is not nearly so brilliant as in many of the Geums, but it is very pleasing—a sort of dull coppery-red. Though fond of damp places in the wild state, this variety does not seem at all dependent upon moisture, but does well in the rock garden in any open pocket of sandy soil.—N. L.

Epimediums.—Among the late spring hardy plants the Barrenworts are conspicuous. Not only are their blooms freely produced, but the

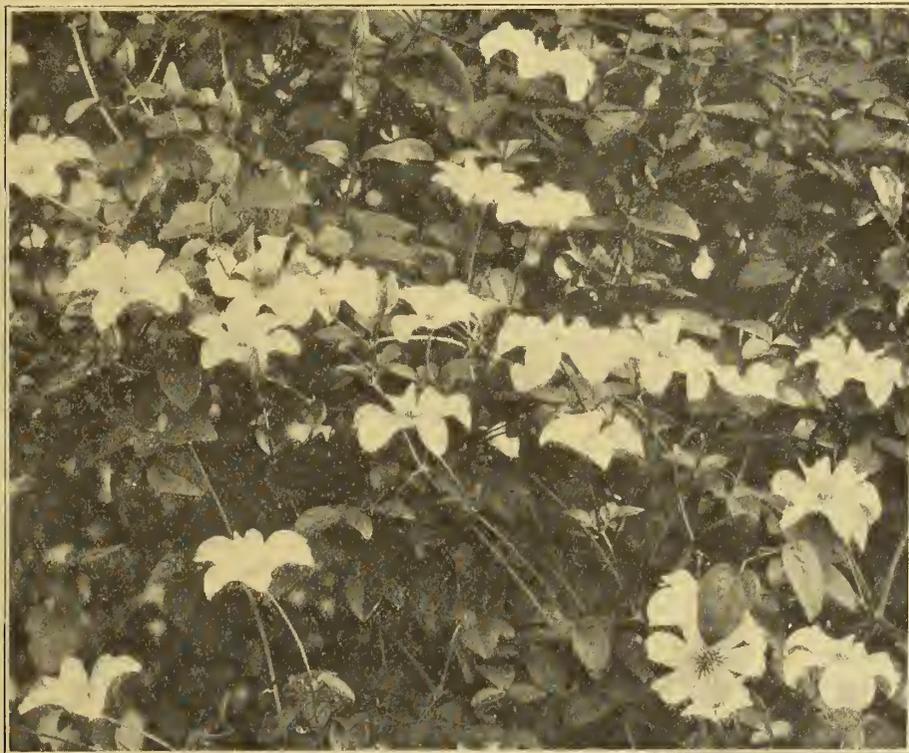
INDOOR PLANTS.

REPOTTING AURICULAS.

WHEN flowering is over repotting may begin. Large pots are not required, those 4-inches in diameter sufficing for the largest examples. The pots must be filled to one-fourth of their depth with drainage, over which is placed a little rough fibrous loam. Clean pots must be used, and those previously employed for Auriculas should be thoroughly washed to remove any of the woolly aphid that may be present. The compost should consist of good fibrous loam three parts and one part well-decayed leaf-mould, to which may be added a little manure from an old hot-bed. A sprinkling of coarse sand will be needed, and some growers add a portion of crushed oyster-shells, but these are not really essential. When repotting, most of the old soil should be shaken from the roots and the woolly aphid destroyed by methylated spirit applied to the pest with a small camel-hair brush. The soil is made fairly firm, and when the plants have been placed in a cold frame facing north, sufficient water must be afforded to wet the whole of the soil. If the frame is not shaded by a building some light material will be required as a protection from strong sunlight. When they are re-established plenty of air must be given, in fact the lights may be removed, especially at night, the dewy atmosphere being beneficial to the plants. Careful watering is essential at all times. During the spring and summer the plants must be kept just moist, but the winter is the most critical period for Auriculas. At this season very little water is needed, and the atmosphere must be kept as dry as possible by opening the lights on all favourable occasions. Dead leaves must be removed directly they will part readily from the stem, and a watch must be kept to prevent water collecting in the heart of the plant.

PROPAGATION.—This is effected by seeds and offsets. The seed should be sown directly it is ripe, and even then it is somewhat irregular in germinating, so it will not be advisable to discard the seed-pan when a few seedlings have been pricked off. Pot the plants on as necessity arises. Seedlings generally reach the flowering stage in about two years. The border Auriculas are all vigorous-growing and should be raised in quantity for the rock garden and flower borders. Offsets are procured in February and August. In the former month all those large enough are removed, but the smaller shoots are left until the latter month. Those offsets, with roots attached, are potted into small pots and then given the same treatment as established plants. A few will be without roots, and these are placed around the side of a pot similar to cuttings, when they will soon become rooted, and may be potted off singly.

INSECT PESTS AND DISEASES.—The chief pests are woolly aphid and green-fly. If the frame is vaporised with some fumigating compound the green-fly will be destroyed, while all the woolly aphid on the soil will also be killed, but this works chiefly underneath, and must be dealt with as described above. The Auricula must never be coddled; cleanliness must be strictly observed. Careful watering and a sweet compost are essential. No manure-water should be given and damp prevented during the winter. B.



Part of a group of *Clematis Huldine*. (See page 295.)

pleasing as the result of elaborate plans. Another long stretch of road will soon be gay with the blooms of the Dog Rose, in varying shades as affected by age and the different positions in which they are growing, not in mass like the May, but in varying heights, from the tall plant that has found its way among the lower branches of a tree to those that are prostrate. Big stretches of Cow Parsley (*Heracleum*) with an undergrowth of Bluebells, wide patches of wood Anemone among ground Ivy and the Dog Violets, Buttercups beneath the taller growths of Sorrel, and tall, feathery Grass above, and the white and red Clover are a few more instances of the beauty to be found just now in field and wood, as well as in the hedgerows. Three things one misses in this neighbourhood so effective on a large scale are Gorse, Heather, and the common Fern.

E. B. S.

Hardwick

Ourisia coccinea.—This handsome Chilean plant is the despair of many gardeners, while others find that it is perfectly happy with

effect of the young foliage is distinctly good. Epimediums are by no means exacting in their requirements, succeeding well in any ordinary garden soil. A further point in their favour is that the plants will succeed quite well under the shade of trees. *E. pinnatum* is perhaps the pick of the family, but *E. alpinum*, *E. violaceum*, and *E. macranthum* may also be relied upon in moist and shady borders.—KIRK.

Corydalis bulbosa.—This is a pretty little species with pale-purplish flowers, which comes into bloom quite early in spring. It is of very neat, dwarf habit, and not by any means showy, but has a quiet, refined beauty which is attractive, and it is doubly welcome because of its early blooming. A sheltered position in well-drained soil suits it, as it is otherwise liable to be nipped by late frosts.—N. L.

Godetia Bijou.—I was very much struck with this Godetia when I saw it blooming last year in a garden in the West of England. It is one of the most showy of all the Godetias, its compact habit being a point in its favour. The plants I saw were covered with lovely rose and white blooms. If the dead flowers are picked off, the plants will flower all the summer.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Campanula persicifolia Moerheimi.—This has large semi-double white flowers. I well remember having seen some noble plants in a Welsh garden last summer, and was greatly struck by their beauty. The plant varies in height from 2 feet to 3 feet, according to the site, and should certainly be planted near the front of the border.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

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VEGETABLES.

LATE PEAS.

It is useless to sow late Peas on any but deeply-worked and well-manured ground. Therefore, to attempt growing them on soil which has been dug but one spit deep, and where the sub-soil has been untouched, perhaps, for years past, is simply to invite failure. Sown under these conditions the plants will fall a prey to mildew and insect attacks, and finally wither up if the autumn be hot and dry, or, at any rate, yield but indifferently. The best thing to do in cases of this description is, after having marked out the positions where the rows are to be grown, to open out trenches 18 inches wide and the same in depth, in much the same manner as for Celery, and lay the soil out on either side. In the bottom of the trenches place 6 inches of well-rotted manure. On this return some of the soil thrown out, making, when finished, a total depth of manure and soil combined of 15 inches. The trenches will then be filled in to within 3 inches of the ground level, which space is left, with the object of facilitating watering in dry weather and in allowing for a good mulch of half-decayed manure being placed on either side of the rows should the nature of the season render such a precaution necessary. The spare soil left over after preparing the trenches can be levelled down between the rows. The rows should not be less than 2 yards apart, and, if space will admit of their standing 3 yards and 4 yards distant from each other, all the better. The ground between the rows can be utilised, when manured and dug over, for the growing of catch crops, such as Lettuces, Endive, Spinach, French Beans, etc., or it may be devoted, as is often the case, to the growing of Celery. The preparation of the trenches for the Celery and of those for the Peas can then be done at one and the same time.

DWARF OR FRENCH BEANS.

In these days when one is anxious to practise strict economy in the garden in the way of minimising labour and expense, getting as much as possible from a given area, and avoiding waste, there are many things of which it is advisable to sow a small quantity at brief intervals rather than a lot at one time. Among these are Dwarf and French Beans, a useful and profitable vegetable if sown with judgment, but decidedly wasteful when, as often happens, half the crop gets too old to be eatable. Also if the necessary steps are taken to anticipate and retard the season one gets a long time during which this vegetable is available outside, apart from crops obtained from pits or frames. The earliest and latest sowings should be made in one of the warmest spots of the garden, a few stout, forked stakes being inserted at intervals and a light cloth or mat thrown over the rows if frost is expected. A little extra attention is also necessary with the mid-season sowings, especially if the weather proves hot and dry, quick, kindly growth being the principal factor in warding off red spider, one of the chief enemies. At such times the chief points towards successful culture are a deep, fairly rich tilth, a mulching of short Grass or manure, and a liberal supply of water, not necessarily oft repeated, but a good soaking before and after the mulch. The crop should be closely picked to ensure tenderness. Unless the grower contemplates exhibiting and wants a Bean of extra size he will find *Ne Plus Ultra* one of the best. A row

or two or one sowing of Dwarf Green Haricot can be recommended. This is a fine cropper of excellent quality, and if a portion of the crop is allowed to stand and is harvested it will prove a useful and palatable vegetable through the winter. Indeed, so acceptable is it that a special sowing may be made for harvesting, together with one of a dwarf Marrow-fat Pea. E. B. S.

Hardwick.

Runner Beans.—Another sowing of these will be made now in trenches as advised for the earlier sowings. These will come in just right for the later supplies.

GARDEN FOOD.

NOTES AND REPLIES.

The Strawberry unwholesome.—A neighbour of ours could not eat Strawberries. A single one would at once produce nettles-rash, and several meant an illness. That was a curious and unusual idiosyncrasy. The doctor said that there is an acid in Strawberries which predisposes to rheumatism. Is that true, do you think? I only know that Strawberries and cream are very good, but I want the cream and the sugar. Not that I cannot eat the bare berry. I can, and do; but the "ingredients," as they say here, are an improvement.—J. W.

[The doctor was quite right. The late Sir Henry Thompson, the greatest surgeon in his way, told me more than once that he knew of nothing so bad as the common Strawberry for producing lithic acid in the blood. It will surprise many, it is true, and the addition of sugar adds to the evil effects. Having been much among Strawberries, I am inclined to consider this result as a question of kind. The common Strawberry is raised from the Chilean Strawberry, and that is certainly an acid fruit. I have always thought that the alpine Strawberry, which one gets in Switzerland, is better than the English common Strawberry in flavour. One of the best is the wild Strawberry, known as Hautbois (F. elatior), which has a good flavour. It always seemed to me that the British Queen has some of the Hautbois blood in it, as it is free from the sourness of the common kind.—W.]

Dandelion leaves.—These, in small quantities, are a very nice addition to salad, provided the mid-rib, which is very bitter, is not used. The best way is to strip the leaf from the stalk end by running the fingers down it, when it comes away, generally quite easily, from the mid-rib.—SYDENHAM.

ABOUT GOOSEBERRIES.

PERHAPS Gooseberries are the most gladly welcomed of the small fruits. This is no doubt due to the fact that they can be eaten from the time they are large enough to handle, and thus are often the earliest of the fruits to be gathered. Yet, as a rule, the housewife rarely cooks them except in Gooseberry fool, or in tarts, although there are many other delicious ways of serving the fruit.

RATAFIA AND GOOSEBERRY PUDDING is particularly good, and is a change from the usual boiled pudding made with the fruit. First having topped and tailed the Gooseberries, make a nice crust with a cupful (heaped) of finely-chopped butter, two cupfuls of sifted flour, a dessertspoonful of sugar, a pinch of salt, and sufficient water to make into a firm paste. Line a basin with two-thirds of the pastry. Half fill with Gooseberries, sugar to taste, and a grating of Lemon-peel. Cover the Gooseberries with a layer of ratafia

biscuits, and then add more Gooseberries and sugar. Finish with a layer of ratafia. Pour over the whole a wineglassful of port wine and the same quantity of cold water. Cover with the remainder of the crust. Tie a piece of grease-proof paper on top and steam for two hours. Serve with custard or whipped cream.

GOOSEBERRY MOULD is a nice supper dish in the summer. Soak $\frac{1}{2}$ oz. gelatine in a gill of water. Top and tail a pint of green Gooseberries, and simmer them in a second gill of water, with sufficient sugar to sweeten and a piece of cinnamon. When perfectly soft add the gelatine, and stir until it is quite dissolved. Wet a mould and pour the mixture into it; leave till the next day. Turn out and serve with boiled custard.

GOOSEBERRY FRITTERS are rather an unusual dish. Sift 2 oz. flour into a basin, add a pinch of salt, two well-beaten eggs, and four tablespoonfuls of milk or water. Mix the whole gradually, beating well until quite smooth. Set aside in a cool place for an hour. Have ready some large green Gooseberries which have been simmered in sweetened water until tender, but not broken. Add these to the batter and take up three in a spoonful of batter and drop into a hot, buttered pan. Flatten the Gooseberries gently, and when one side of the fritter is delicately browned turn and fry the other side. Send to table piled high on a d'oyly and sprinkled with powdered sugar. A simple and delicious

COLD PUDDING is made with stewed Gooseberries and fine breadcrumbs. Line a mould with thin slices of bread, and fill with alternate layers of stewed Gooseberries and breadcrumbs, adding just sufficient juice to moisten the whole. Cover the top with thin slices of bread and place a dish over all. Set aside to get very cold. Turn out gently and pile whipped cream on top, and send to table at once.

GOOSEBERRY SHORTCAKE is an unusual sweet. Take one large cupful of flour, a heaped teaspoonful of good baking powder, four tablespoonfuls of butter, and rub well together. Add a dessertspoonful of soft sugar and mix to a firm paste with a little water. Roll out very thin and cut into three squares exactly the same size. Place on a greased baking-dish and bake in a moderate oven until nicely browned. Meanwhile, top and tail 1 lb. green Gooseberries, and simmer in only just sufficient water to cover. Pulp them with a spoon, add a little powdered cinnamon, sufficient sugar to sweeten, and a few drops of essence of almonds. Wet a dessertspoonful of cornflour with a little cold water and stir into the mixture. Simmer for five minutes. Place a hot shortcake on a dish, cover with a thick layer of the Gooseberry mixture, place another cake on top and repeat, covering the last layer of cake with Gooseberry mixture, decorating it with tiny roses of whipped cream around the edge. This is a nice hot sweet. If preferred cold, allow the cakes to get cold, and cool the Gooseberry mixture in the square moulds the exact size of the cakes. When cold this will form a green jelly, which can be placed between the shortcakes, the top being decorated with roses of icing or whipped cream. To make

GOOSEBERRY SYLLABUB, stew a pint and a half of Gooseberries in just sufficient water to cover. When perfectly soft rub through a sieve, add sugar to taste, the whipped white of one egg, a gill of cream, and the same of new milk. A few drops of essence of almonds improve the flavour. Whisk the mixture, using an egg whisk, until the whole is very frothy. Serve in glasses, with a spoonful of whipped cream laid on the top. H. THORBURN-CLARKE.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

NOTES AND REPLIES.

Primula pubescens alba.—This, often listed as *P. nivalis*, has been very good this year, though in the somewhat smoky atmosphere of a London suburb it loses its purity after it has been open for a few days. It seems easy to grow, provided it is not allowed to get too dry. It does not seem quite so partial to shade as many of its congeners, and a situation where it gets morning sun without being baked up has suited it very well with me, in an open soil with a fair amount of lime in it. It has a densely-packed head of pure white flowers on a very short stem, which only begins to be visible after the flowers are going off. It was in bloom this year about the middle of April.—N. L.

Saxifraga Elizabethæ.—I find there are two distinct plants bearing this name.

of so deep a green as when grown in shade, but it flowered perhaps even more freely, and made a lovely picture with a few little patches of red and pink Daisies dotted about among it here and there.—N. L.

Mossy Saxifrage Wenlock.—This is one of the best of the now numerous red Mossy Saxifrages. It is perhaps not so deep in colour as some, but the flowers are large, well-formed, and of a good red. It is to be hoped that the number of new varieties sent out which differ in little except name will be more restricted than hitherto.—S. A.

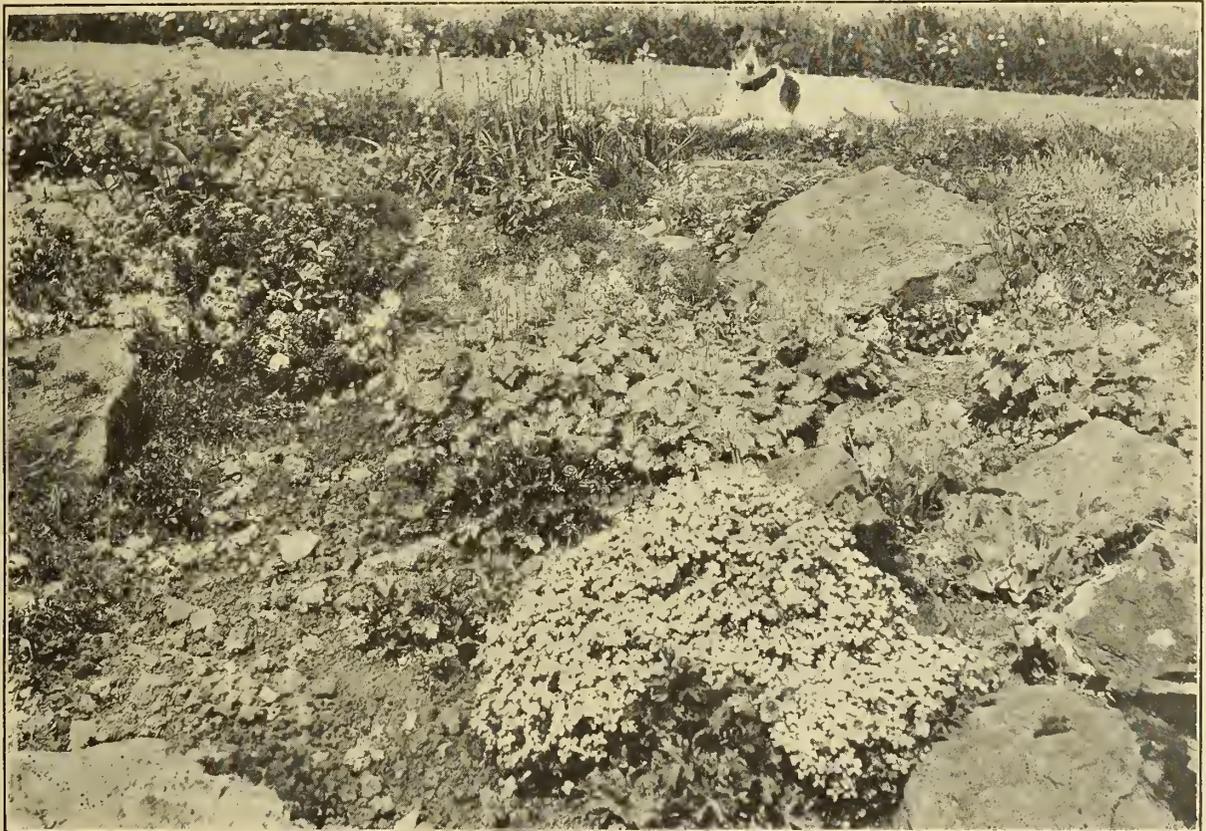
A MODEST ROCK GARDEN.

I HAVE long thought that some of the prettiest results to be had from rock garden plants might often be got in a simpler way than is usual. Most people who make rock gardens pile up the stones in what is usually a very ugly way, and all against the plants, too. Here is an example of a rock garden made by a lady who had no previous experience at all of making rock gardens, and the result is very good. The raised rock-work generally used is not in favour of alpine

FERNS.

POTTING FERNS.
(REPLY TO "PTERIS.")

IN the culture of Ferns much depends upon how they are potted, as well as the condition of the plants when repotted. Ferns should never be disturbed while they are in a dormant state; it is much better to wait until they have started into active growth. If care is taken not to expose them to cold winds during the operation, and a little extra shade given for a few days, the young fronds will not suffer in the least. The old system of using peat and leaf-mould almost exclusively for Ferns is now pretty well understood to be an error. Nearly all Ferns succeed better if some loam is used in the compost, and many may be grown almost entirely in loam. Many of the *Adiantums* will grow freely enough in good fibrous loam, while if potted in peat they refuse to



Rock garden raised only a little above natural level of ground.

The one I have is much closer growing and more compact than the other. It also flowers more freely and is altogether a superior plant. I think *S. Elizabethæ* still one of the best of the yellow Saxifrages of its class in cultivation. It blooms early and is now almost over, but in the shadier places it still gives a sprinkling of its bright yellow flowers, which show up so well against the deep green spiny leaves. I was induced to acquire it largely on the strength of the praise accorded it by a writer on alpinism. I see, however, that it wants a poor soil to enable it to look its best, as, if too highly fed, its foliage is coarse and it flowers with less freedom.—Ess.

The Balearic Sandwort (*Arenaria balearica*).—This grows like a weed in my garden in North London on the north side of rocks, and just now it is studded all over with its white flowers. It needs watching or it will soon choke other treasures if not kept within bounds. Although a shade-lover, I have seen it doing very well rambling over stone steps and pathways in full sun. The foliage was not

plants, but quite against their thriving. Among the plants grown are:—

- | | |
|-------------------------------|-----------------|
| Alpine Phloxes | Foam Flower |
| Daphnes | Rockfoils |
| Pinks | Rock Speedwells |
| Rock Roses | Rock Violas |
| <i>Anchusa myosotidiflora</i> | Cinquefoils |
| Edelweiss | Aubrietias |
| Gentians | Alpine Poppies |
| Alpine Auriculas | Stonecrops |
| Lithospermum | |

W.

Ethionema iberideum.—In the moraine, *Ethionema iberideum* is flowering freely, the white blooms associating well with the glaucous foliage, and the general effect is quite attractive. These Lebanon Candytufts are not nearly so much grown as they should be by cultivators of alpine plants. They generally thrive well in loam, sand, and leaf-soil, with a little lime rubbish, some of the last of which is in the moraine in which the plant referred to above is growing.—S. ARNOTT.

Saxifraga L. G. Godseff.—This, one of the freest and best of the yellow-flowered Rockfoils, is again in bloom. The precise parentage of this hybrid I do not know. If I dare hazard a guess, I should suggest as its parents a good form of *S. Burseriana* and *S. apiculata*, although it is even brighter than the latter in its shade of yellow. I find it grows better in a moraine than on the rock garden.—Ess.

make any progress, not perhaps because there is anything objectionable in peat, but because it gets sour through excess of moisture. If the loam is too heavy a little fibrous peat may be used with advantage, but we prefer to limit its use as much as possible.

An important point in potting Ferns is to keep the crown of the plants well down on to the soil, more especially in the case of those sorts which make new roots just below the crown. The *Aspleniums* will soon get weakened if not kept low enough for the new roots to take hold of the soil. The same may be said of many of the *Pterises*, *Gymnogrammas*, etc. All the vigorous-growing kinds which root freely should be potted loosely, and those with less vigour and slender roots should have the soil pressed moderately firm. The *Davallias* and others which have the rhizomes on the surface require more drainage, as the roots do not penetrate so

deeply, and the lower portion of the soil is liable to get sour through the constant watering required to keep the surface moist. Shallow pots or pans are best for growing all such sorts as do not root deeply, and for those which have the rhizomes spreading under the surface, either wooden or wire baskets should be used. In the case of all the delicate small-growing Ferns care should be taken not to overpot them; large pots for small plants are very unsightly, as well as injurious to the health of the plants, and in no case does this apply more forcibly than to Ferns.

ROSES.

ROSES FOR WINTER EFFECT.

MANY of the Rose species are very useful for winter effect because of the beautifully-coloured wood, foliage, and fruit, one of the best being

ROSA RUBRIFOLIA, or ferruginea, as it is also called. During the summer this is invaluable for indoor decoration, the lovely, tender, plum-coloured foliage being charming when arranged in vases with various flowers. The mauve-coloured blooms are insignificant, but they give a profusion of dark-red hips, which will hang all winter unless the birds take them. The deep mahogany-tinted wood is beautiful.

ROSA LUCIDA is valuable in the late autumn, when its shiny foliage assumes a brown-red hue, giving a lovely effect in conjunction with the ruddy stems and branches. In

ROSA MOYSEL, a recent introduction from China, the flowers are of a curious shade of violet-red, followed later by the grey-green wood is effective in the winter.

ROSA RUGOSA and its forms are largely used in woodlands, where the large, single, red or white blossoms show up beautifully, and fill the air with their sweet scent. Both *R. rugosa alba* and *rubra* produce very large bright-red fruits, which are much appreciated by game, and are often planted for that purpose. The variety *Blanc double de Coubert* does not fruit so freely, but is beautiful in the early winter, when its luxuriant foliage takes on a pure golden tint. The scarlet-red bark of

R. PIMPINELLEFOLIA BLANDA vies with the red Dogwood in richness of tint, making a pleasing object during the winter, while

R. POMIFERA is valuable on account of its masses of large scarlet fruits. It is seldom realised that our own native

R. CANINA is one of the most prolific, and also among the most picturesque, of fruit-bearing Roses.

R. MALYI has wood of an attractive violet-red hue, while

R. SERTATA, a new introduction, makes a handsome, bold shrub with bronzy-tinted wood covered with innumerable straw-coloured spines. A hedge or bold group of either of the last two species is beautiful during the winter. *R. Malyi* bears large single blossoms of a pale mauve tint early in the season. The

PENZANCE SWEET BRIARS quickly grow into bushes 8 feet to 10 feet high, and as much through. Besides being beautiful when in flower they are equally so in the winter, when covered with masses of bright-red hips.

There are also numerous garden varieties which possess handsome bark, foremost among them being the old Bour-saults, Amadis, and inermis Morletti, each of which has smooth, practically thornless wood of an effective reddish tinge. Other beautiful Roses possessing

handsome bark are the lovely old fragrant Bourbon, Zephirin Drouhin, the wonderful Hybrid Austrian, Louis Barbier, the Hybrid *R. rugosa* Carmen, the wood of which is covered with bloom like a plum, and Adrian Riverchon, a perpetual-flowering hybrid musk. Among the more vigorous Ramblers there are Tea Rambler, Ariel, Shower of Gold, Source d'Or, and Tausendschon.

There are no true evergreens among the Roses, but many varieties retain their foliage until a late date, especially in a mild winter, the most conspicuous in this respect being American Pillar, Edmund Proust, Shower of Gold, Robert Craig, and Alberic Barbier among the Ramblers, Monsieur Desir, Climbing White Maman Cochet, and Aimee Vibert à fleurs jaunes among the pillar Roses, and Mme. Antoine Mari, Lady Plymouth, Iceberg, and Agate among dwarf-growing varieties. Aimee Vibert à fleurs jaunes is particularly handsome. The better-known white-flowered Aimee Vibert also retains its foliage well, but I have not found it equal to the yellow variety. One of the prettiest Ramblers to grow for winter effect is Rubin, which is well named, for besides bearing masses of bright-red blossoms in the summer the wood has a delightful ruby-red tint, while the young growths, which often appear in January, are of a brilliant crimson. E.

H.T. Rose Mrs. Chas. E. Pearson.—This is likely to become popular with northern growers. I like the colouring of orange tinted with apricot, red, fawn, and yellow, while its habit is excellent, the flowers being well held up to the eye. It has also that indispensable charm in a good Rose—a delightful perfume.—*SCOREA ROSE.*

Autumn Roses in Spain.—Richard Le Gallienne, in "My Castel in Spain," says, "There would be no autumn in my garden." Would someone acquainted with that sunny land tell us whether September Roses bloom there?—*WALTER GYLES.*

GARDEN PESTS AND FRIENDS.

Carnation leaf-spot.—I am sending you some leaves from a Perpetual Carnation plant. Could you kindly tell me what the disease is and what to get to stop it?—*WILLIAM JACKSON, Huddersfield.*

[Your Carnations have been attacked by what is known as the Carnation leaf-spot, caused by a damp and stagnant atmosphere, sodden or unsuitable soil, a severe check in some way, or the overcrowding of the plants. Give as much light and air as possible, cut away the affected leaves, and put the plants into a dry, warm atmosphere to force them into growth. This disease is most troublesome in wet, cold seasons.]

Peach-tree leaves injured.—I enclose some leaves from a young Peach-tree, under glass, and will be obliged if you will let me know the cause of the spots on them and what should be done to prevent it.—*E. A. Cox.*

[The leaves you send have been attacked by the shot-hole fungus (*Cercospora coccinea*), a common pest in orchard-houses. Pick off and burn the affected leaves, and when the leaves fall in the autumn collect them and burn them. It would also be well before the buds open in the spring to remove the surface soil to the depth of an inch, so as to make sure that no spores are left anywhere near the trees. As soon as the new leaves begin to expand spray the trees with an ammoniacal solution of carbonate of copper made as follows:—Take 1 oz. of carbonate of copper and make it into a thin paste with a little water, then add to it slowly 1½ pints of the strongest ammonia. When all the copper carbonate is dissolved a deep, clear blue liquid should be the result. This, when diluted with nine gallons of water, is ready for use. Spray three times, or oftener if necessary, at intervals of a week.]

TREES AND SHRUBS.

THE YEW POISONOUS.

I AM sorry to see "E. B. S." (page 284) is inclined to sit on the fence about the deadly nature of the common Yew. There is no viper or asp of America or India more deadly in its effects. Let "E. B. S." consult any standard book on poisons in French or English. The escapes from the effects of this deadly tree are frequent, no doubt. They may be due to the trees being tall and out of the way of stock, or to causes that cannot be otherwise explained, and often stock will escape for some years and another time will all, perhaps, perish. It is an error to suppose that only the clippings of the tree are poisonous; the fresh young tree itself has killed valuable animals in my own place, and thousands of horses and cows have been killed in the same way. Young architects and pretended landscape gardeners scatter miles of Yews about country places, which is a most dangerous proceeding. It is rank carelessness to let any Yew-tree be anywhere within reach of stock. If the tree has a clean stem it may be considered safe, especially in a wood, but the rule should be never to put a Yew anywhere an animal can get to it. The tree is so very beautiful when old that one must keep it always in its right place. W.

NEGLECTED PLANTING.

THERE is an article in *Country Life* by a practical Scottish timber man, Mr. T. B. Jones, from which, as it does not deal with vague generalities as such articles so often do, we take a few of the most suggestive paragraphs. There is a great area of poor land which would be much better planted with fast-growing native trees. For firewood alone it would be worth our while to plant in districts where wood is scarce or nearly absent, as it is in some districts.

"With reference to Sir Robert Lorimer's article, entitled "The Neglect of Home Timber," permit me as a Scottish home timber merchant to give expression to a few opinions and suggestions.

That home-grown Scotch Fir and Spruce pitwood for mines, if selected and seasoned, is equal to foreign pitwood.

That battens cut from selected Scotch Fir and Spruce are equal, and often superior, to foreign redwood and white-wood.

That selected Larch is suitable for practically every purpose where Pitch Pine is specified, and at the same time possesses two great advantages, viz., greater strength and durability.

SUGGESTIONS.—The replanting of natural woodlands of not less than ten acres in extent to be compulsory upon owners within seven years of a clean cut, given suitable soil and altitude. Soils too poor for agricultural purposes can usually be profitably employed for afforestation.

If replanting is not done by the owners of land within seven years, the State to replant at its own expense. The State to give six months' notice of its intention to replant, and if no guarantee is given by owners within six months of notice being received that they will proceed to plant, then the State shall do so.

Owners of land to have the option for twenty years after planting being done of repaying the State the cost of planting, including interest and compound interest to date of repayment.

If option is not exercised by owners within twenty years, the planted area, on payment to the owners of a sum calculated upon the original annual agricultural value, ascertained by mutual agreement

previous to planting, to become the absolute property of the State. If, however, it was proved to the satisfaction of impartial experts that the State planting had not been justified by results, the optional period to be extended, but if the State did not care to proceed further with planting experiments, then owners to have the right to resume full possession of their land.

State demonstration areas to be opened all over the United Kingdom and Ireland. A certain species of tree may prove a wonderful success in some parts of the country, and be an absolute failure in other parts. The Oriental Plane, for instance, although sub-tropical, grows luxuriantly in the London streets. The same tree, however, does not thrive in the north of Scotland. If a sub-tropical plant like the Oriental Plane thrives in the

AZALEA VASEYI.

THE gardens of Europe are full of Azaleas of manifold kinds and regions, mostly very handsome and useful, but one of the most beautiful of all is a rather recent discovery in America—*A. Vaseyi*. It is quite hardy with us, most delicate in colour, and no doubt will be largely used by the hybridisers, though it is one of those things which we think they had better leave alone. The wild types of Azaleas are as pretty as any hybrids raised from them, and it would be difficult to beat this one.

NOTES AND REPLIES.

The dwarf Blueberry (*Vaccinium pennsylvanicum*).—The various Whortleberries or *Vacciniums* are not often grown in gardens, although several of them are

been given the distinctive name of *leucocarpum*. For the wilder parts of the garden or for planting in large masses in parks it might well be given attention, and is quite in place associated with *Rhododendrons* and *Heaths*. It is a deciduous shrub, the leaves appearing about the time the flowers fade.—D.

Leptospermum scoparium Nicholli.—This differs markedly from the type. As a rule, in the favoured parts of this country, the typical kind forms a freely-branched bush, the flowers usually white and borne very freely. At the International Horticultural Exhibition of 1912 the variety *Nicholli* was first brought prominently before the public, though it was known previous to that, having been discovered in the neighbourhood of Christchurch, New Zealand. It differs from the species in being somewhat more stiff in



Flowering shoots of Azalea Vaseyi.

south of England, may not a tropical plant like the valuable Teak also thrive? State demonstration areas would settle such questions.

The Death Duties to be revised, in order to encourage the planting of timber. At present a heavy death toll is taken upon all land. Owners usually find that to meet this toll they must either part with real estate, such as shares, live stock, and growing timber, or mortgage their property. The standing timber is frequently taken. It is obvious that the very reason that necessitated the cutting of the timber operates to prevent replanting. Common sense suggests that taxation on agricultural land should not be greater than it can reasonably bear, and that to rob Peter the Forester to enable Paul the Agriculturist to pay excessive taxes to the State Collector is very bad business."

worth a place. The reason for their exclusion from many gardens lies in their somewhat exacting requirements, for it is only in certain places that they give good results. Light soil, containing peat, free from lime and permanently moist, suits them best, and, provided the root conditions are moist, they do not object to full sun. Partial shade, however, suits them also. As a rule, the plant under notice grows from 1½ feet to 2 feet high, forming a dense mass and bearing during April and March a large number of bell-shaped flowers in colour creamy-white suffused with pink. The berries, black with a bluish bloom, can be used for cooking in the same way as the fruits of the common Bilberry of our hills and commons. It is a native of the eastern United States, where several distinct forms are found, including one with white fruits that has

growth, while the leaves have a reddish tinge. The main distinctive feature is, however, in the colour of the blossoms, which are of a rich ruby-red tint. Other varieties were also shown and received Awards of Merit, namely, *L. s. Chajmanni*, with rosy-red blossoms, and *L. s. Boscaweni*, much looser in habit than the other two, while the blossoms are larger, almost white, with a red centre, the buds being red. In the south and west of these islands the *Leptospermums* are charming outdoor shrubs.—K. R. W.

The double-flowered Gorse.—Some care should be taken in choosing a position for the double-flowered Gorse, which, however desirable, when established increases too much at the root and encroaches upon its neighbours if in congenial quarters. It is certainly more compact than the single form, and blooms for a long period. It should be planted where it will not harm anything when allowed to spread.—Ess.

ROYAL HORTICULTURAL SOCIETY.

JUNE 6TH, 1916.

THE meeting of the Society on the above date was of a quite representative character, examples of many prominent departments of garden and greenhouse being on view. The object-lesson of the meeting, however, centred in the superb group of Snapdragons staged by Messrs. Dobbie and Co., Edinburgh, which also demonstrated the perfection attainable when cultural skill of the highest order is directed to a particular flower. Finer produce we shall probably never see. In other directions Sweet Peas played a prominent part, while Pæony, Pyrethrum, Poppy, and Iris contributed their quota here as they are doing now in larger measure in the garden. Roses and Carnations were below the average; also alpines. Flowering shrubs, on the other hand, particularly Rhododendrons, were in good form. Several Orchid groups were staged, and of these and hardy plants, novelties of more than ordinary interest and importance received recognition.

SNAPDRAGONS AND SWEET PEAS.

Of these nothing finer than the Gold medal group arranged by Messrs. Dobbie and Co., Edinburgh, has ever been seen at any exhibition. Perfectly grown and imposingly as well as ideally staged, they were in the nature of a revelation. In the case of the Antirrhinum what appealed to us most strongly, apart from colour richness and diversity, were the exceedingly fine proportions of the flower-spikes and the perfect condition of the blooms, which the foot-long spires revealed to advantage, and surely nothing could assist to a greater popularity a justly popular garden flower than the perfection here attained. Tall, medium, and Tom Thumb varieties were alike well flowered. From a large collection we selected Yellow King, Yellow Queen, White Queen, Golden Morn (yellow and red), Cottage Maid (rose), Coccinea (the most brilliant red), and Noble (a bicolor of crimson and white). These are tall or medium growers. Tom Thumb sorts were in white, yellow, and crimson shades, and of special value for beds alone or as a margin to the taller sorts. Of Sweet Peas there were four dozen or so of selected varieties, Blue Picotee (white, finely-margined blue), Dora (recently certificated), and Anzac (of mahogany-red and heliotrope). These are novelties for the ensuing year. Another excellent lot of Sweet Peas was staged by Messrs. Bide, Farnham. In this, Farnham Lavender was one of the best. It is of good size and of decided colour. Lady Hunter (salmon, tinted apricot), President (scarlet), Ruth Bide (rose), Marks Tey, and Constance Hinton (white) were other very fine sorts. Messrs. R. and G. Cuthbert, Southgate, N., showed pot-grown Antirrhinums; also large groups of Clarkias.

HARDY HERBACEOUS FLOWERS.

To this section Mr. J. C. Allgrove, Middle Green, Langley, Slough, contributed not a few good things, and among them many species of Primulas in sensible groups. Of these we remarked the rich red Unique, Beesiana, Bulleyana, Sikkimensis, Cockburniana, Mrs. Berkeley, capitata, and others. Iris chrysographis (a new grassy-leaved species from Western China of imperial purple colour), Anthericum (Chrysobactron), Hookeri (yellow), and the curious red-flowered miniature Columbine (Aquilegia ecalcarata) were others of interest or merit. Anchusas were brilliant, while above towered the noble spires of the Eremurus. Near by

Mr. Amos Perry, Enfield, had an exhibit aglow with the brilliance of oriental and other Poppies, the rather dwarf-growing and small-flowered L'Unique being one of the more striking, and jagged of petal to boot. Mrs. Perry, Perry's Favourite, and Lady Moore were others. Iris sibirica Perry's Blue was very beautiful.

Messrs. Kelway and Sons, Langport, with two parallel-placed tables arranged an avenue of Pæonies and Pyrethrums, the whole a striking tribute to the wealth and beauty of these showiest of early summer flowers. We thought the single Pæonies very fine, and selected Mafeking (crimson), Emily and Jura (rose), Wilbur Wright (maroon-crimson), and Flag of Truce from out of an extensive lot.

Mr. F. Gifford, Montague Nursery, Hornchurch, Essex, showed a particularly fine lot of Pæonia albiflora grandiflora, the beauty of whose single white flowers is enhanced by a great cluster of golden anthers.

Messrs. George Jackman and Sons, Woking, contributed among other things a considerable variety of Irises. Bakers, Limited, Wolverhampton, showed Pyrethrums freely; also the very charming Pentstemon glaber roseus and Viola Valderia, a lovely blue alpine species.

Mr. G. W. Miller, Clarkson Nurseries, Wisbech, had a big lot of the single, white, golden-anthered Pæonia Whitleyi major; also Pyrethrums Pericles and Queen Mary, single yellow and double pink flowered respectively.

Messrs. R. W. Wallace and Co., Colchester, staged a collection of the finer-bearded Irises, but which, owing to the stormy weather immediately preceding the show, hardly did them justice. King of Irises (yellow and crimson), Isoline, Groust (rosy-mauve), Alcazar (one of the most imposing), Albert Victor (a fine pale blue pallida), and Kashmir (white) were some of the best. Iris sibirica Emperor (intense blue) was noteworthy.

ALPINES.

The most beautiful plant in this section was Meconopsis simplicifolia, Bailey's form, sent from the Edinburgh Botanic Gardens by Professor Balfour Balfour. The lustrous, sky-blue, saucer-shaped flower, 3 inches across, enhanced in beauty by a boss of golden anthers, appealed to all. Another very beautiful and remarkable plant—whether alpine or not we know not—from the same source was Monocharis pardanthina. It has pendent, reddish, Lenten Rose-like blossoms on Lily-like growth less than a foot high. Both gained first-class certificates.

Messrs. Waterer, Sons, and Crisp, Bagshot and Twyford, showed the lovely Dianthus neglectus, Wargrave variety (of taller growth than the original, and very beautiful withal). D. Spencer Bickham (a lovely alpine pink dowered with rosy-crimson flowers), Pentstemon heterophyllus (a fine blue alpine species), and Silene alpestris grandiflora plena were some of the more beautiful.

Mr. G. Reuthe, Keston, Kent, contributed Allium pedemontanum in two distinct forms; also Primula reticulata, whose flower effect is that of a pale P. sikkimensis. It is, however, quite distinct and beautiful. Rhododendron Keysi and R. strictum glaucum (white-flowered) were remarked.

ROSES.

We have seen these much finer. The best group was that from Mr. Elisha Hicks, Twyford, who staged particularly good stands of the large semi-double, white, climbing variety Una, whose saucer-formed flowers are each nearly 4

inches across. Alberic Barbier (yellow), Louis Barbier (salmon-pink), and the new Hybrid Tea, Henrietta, of orange-salmon tone, were others in the group. The best stands from Messrs. B. R. Cant and Sons, Colchester, were Silver Moon and Cupid, single white and single pink respectively. Mr. George Prince, Oxford, showed Louis Barbier, the Austrian Briars in variety, and the double yellow Harrisoni. A new climbing Rose, Lady Gwendoline Colvin (coloured salmon and apricot), was on view from Messrs. Chaplin Brothers, Waltham Cross. It is distinct and very freely flowered.

FLOWERING SHRUBS.

Messrs. Waterer, Sons, and Crisp, Bagshot, arranged a highly meritorious group of Rhododendrons, three of which—Donald Waterer (rosy-white), Duchess of Teck (rose-pink), and Dipole Pink (deep rose)—gained awards. Lady Decies and Mum (white) were also very good. Some well-flowered plants of Kalmia latifolia were very beautiful.

Messrs. J. Cheal and Sons, Crawley, had cut specimens of the rare Magnolia parviflora, Leptospermum Nicholii, Abutilon vitifolium, Kalmia rubra, and Azalea coccinea rubra, among others.

Mr. Charles Turner, Slough, brought a collection of Deutzias and Philadelphuses. Of Deutzias, Avalanche and hybrida erecta were the best. D. scabra (Thunberg) is an interesting species, having white, orange centred flowers. The best Philadelphus was the double-flowered Avalanche, whose colour purity is remarkable.

GREENHOUSE PLANTS.

Messrs. Stuart Low and Co., Enfield, were the only exhibitors of Carnations. These were largely of the Malmaison type, Princess of Wales, Lady Coventry, Hon. Charlotte Knollys, and Mrs. Myles Kennedy being on view.

From Messrs. H. B. May and Sons, Edmonton, came a considerable variety, Hydrangeas in red, white, and blue, Fuchsias and Ivy-leaved Pelargoniums, chiefly in well-flowered standards, Verbenas, and much else. The red-tinted Adiantum Veitchi was very good.

Messrs. Peed and Sons, West Norwood, contributed a table length of Gloxinias of a capital strain, in which the spotted varieties were a feature. Self-coloured sorts in white, crimson, purple, and other shades were very good.

Messrs. H. Cannell and Sons, Eynsford, showed the new Ivy-leaved Pelargonium Kathleen Bunyard very finely. The flowers are self-scarlet and the plant is a most profuse bloomer. Begonia Major Hope, one of the best dwarf double-flowered bedding Begonias, and of clear salmon tone, was very good.

ORCHIDS.

The most interesting novelty was the tri-generic hybrid Wilsonara insignis (Oncidioda Charlesworthi and Odontoglossum illustrissimum). It is in effect a crimson, starry-flowered Odontioda. It came from Messrs. Charlesworth and Co., Haywards Heath, and gained an Award of Merit. This firm also showed many good Cattleyas, among them C. Mossiae Wageneri (very fine white).

Messrs. Sander and Sons, St. Albans, had, among others, a big specimen of Cattleya Mossiae, carrying about ten flower-spikes.

Messrs. Hassal and Co., Southgate, N., showed Cattleya Mossiae Olympia with Cypripedium Chamberlainianum, a well-flowered group of C. Lawrenceanum Hyeaunum (Bank House variety) coming from Mr. F. Menteith Ogilvie, Oxford.

Dr. Lacroze, Roehampton Lane, showed *Miltonias*, *Cattleyas*, and *Brasso-Cattleyas*. In a group from Messrs. Stuart Low and Co., *Remanthera Imschootiana* (scarlet) and *Cattleya Schilleriana* were the chief items, while in that from Messrs. Flory and Black the white *Cattleya Mossiae* Wageri was noteworthy.

FRUIT.

The only exhibit consisted of gathered fruits in boxes and fruiting examples in pots of the richly-coloured Strawberry Laxtonian, sent by Messrs. Laxton Brothers, Bedford. The crimson-coloured fruits are of excellent flavour, the plant a great cropper.

A complete list of the plants certificated and the medals awarded will appear in our next issue.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JUNE 1ST.—*Siberian Pea-tree* (*Caragana arborescens*), *Slubby Spiræus* (in variety), *Native and American Thorns*, *Brooms* (various colours), *Rubus nathanus*, *Rocky Mountain Bramble* (*R. deliciosus*), the *Judastree* (*Cercis Siliquastrum*), *Wistarias* (in variety), *Magnolias* (several), *Mountain Clematis* (species and varieties), *Coronilla glauca*, *C. Emerus*, *Deutzias* (in variety), *Broad-leaved Spindle-tree* (*Euonymus latifolius* planipes), *Solanum crispum*, *Lilacs*, *Jew's Mallow* (*Kerria*) (single and double), *Polygonum baldschuanicum*, *Roses* (bush and climbing), *Azaleas* (in great variety), *Rhododendrons* (in great variety), *Pyracantha Lælandi*, *Egle sepiaria*, *Mexican Orange* (*Choisya ternata*), *Pyrus Malus* (various), *Laburnums*, *Evergreen Laburnum* (*Piptanthus nepalensis*), *Cydonias* (various), *Rosa* (many species), *Berberis* (several), *Olearia macrodonta*, *Kalmias*, *Elæagnus*, *Partridgeberry* (*Gaultheria Shallon*), *Andromeda Catesbæi*, *Periwinkles*, *Honeysuckles*, *Jasminum Beesianum*, *Yellow Jasmine*, *Fendlera rupicola*, *Daphnes* (in variety), *Sun and Rock Roses*, *Rock Spray* (*Cotoneaster*) (various), *Robinia Kelseyi*, *Diervilias* (in various colours), *Viburnum plicatum*, *V. Opulus*, *Genista Sullana*, *Allspice-tree* (*Calycanthus floridus*), *Hardy Heaths* (in variety), *Menziesias* (in variety), *Pernettyas*, *Sand Myrtle* (*Leiophyllum burifolium*), *Cornus florida*, *Rhus Cotinus*, *R. codonodes*, *False Heath* (*Fabiana imbricata*), *Grevillea rosmarinifolia*, *Celastrus articulatus*, *Crimson Chestnut* (*Esculus Briotti*), *Ribes speciosum*, *Coriaria japonica*, *Leontopodium* (in variety), *Cheiranthus linifolius*, *Sedum cæreuleum*, *S. spatulifolium*, *Isolirion tataricum* *Pallasi*, *Androsace lanuginosa*, *Linarias* (in variety), *Woodruff*, *Hypericum reptans*, *Myosotis sylvatica*, *Giant Summer Forget-me-nots* (in variety), *Siberian Iris* (various), *German Iris* (in several varieties), *common Water Flag*, *Nuphar luteum*, *N. Advena*, *Nymphæas* (in variety), *Ranunculus aquatilis*, *Globe-flowers*, *Day Lilies* (in variety), *Tradescantia virginica*, *Geums* (several), *Horminum purenacium*, *Salvia acaulis*, *Lychnis diurna*, *Potentillas* (in variety), *Linum arboreum*, *L. alpinum*, *Dic-tamnus Frazinella* (in variety), *Campanulas* (in variety), *Eremurus Bungei*, *E. himalaicus*, *Geraniums* (in variety), *Virginian Cowslip* (*Mertensia virginica*), *Asphodelus luteus*, *Larkspurs* (in variety), *Poppies*, *Star of Bethlehem* (*Ornithogalum*), *Solomon's Seal*, *Lily of the Valley*, *Gromwells*, *Lithospermum* (in variety), *Arenaria*, *Mossy and Encrusted Saxifrages* (in variety), *Aubrietias* (in variety), *Anchusas* (in variety), *Tree Lupins* (various), *Lupinus polyphyllus* (in great variety), *Herbaceous and Moutan Pæonies*, *Meconopsis cambrica*, *M. sinuata latifolia*, *Columbines*, *Tufted Pansies* (in great variety), the *Snowdrop Anemone* (*A. sylvestris*), *Erigerons* (in variety), *Sweet Williams*, *Rodgersia* (various), *Camassias* (in variety), *Libertia formosa*, *Alliums*, *Fog-gloves*, *Heucheras*, *Gypsophila prostrata* (in variety), *Achilleas* (in variety), *Helichrysums*, *Erodium Manescavi*, *Dianthus deltoideus ruber*, *Canary Creeper*, *Æthionemas*, *Ipomæas*, *Antennarias*, *Hyacinthus amethystinus*, *African Lily*, *Transvaal Daisy* (*Gerbera*) (various), *Maiden Pinks*, *Mule Pinks* (various colours), *Alpine Phlox* (in variety), *Oxalis* (in several colours), *Monroe's Mallow*, *Gazania splendens*, *Fuchsias* (various), *Veronicas*, *Cornus canadensis*, *Muehlenbeckia complexa nana*, *Meadow Rue*, *Trilliums* (various colours), *Armerias*, *Silene sylvestris*, *Crambe cordifolia*, *Homeria collina*, *Dicentra spectabilis*, *Gladiolus byzantinus*, *Aquilegias*, *Wahlenbergia serpyllifolia*, *Candytuft*, *Collinsia grandiflora*, *Saponaria ocyroides*, *Dryas octopetala*, *Paronychia polygonifolia*, *Epilobium nummularifolium*, *Nepea Mussini*, *Everlasting Pea* (in variety).

WORK OF THE WEEK.—*Hepaticas* are now growing freely. The cutting and cleaning up of Grass edgings have taken up considerable time, but such work adds greatly to the appearance of the garden and well repays the labour spent upon it. Two small beds have

been planted with *Snapdragon Nelrose*, and the same variety has been planted as a carpet to clumps of *Sweet Peas*. *Verbena Princess of Wales*, a beautiful purple variety, has been put out at the end of a bed of *Roses*, and a mixture of *Verbena Rose Queen* and *V. Bluebell* has been planted to wind about among groups of *Sweet Peas*. A further plantation of *Cardinal Lobelias* has been made to complete a large bed and a small group has been added to the mixed border. *Green-fly* has made its presence felt so strongly on *Roses* and summer-flowering *Forget-me-nots* that evenings and early mornings have been given up to spraying these plants. One good dose of *Quassa extract* practically cleanses the plants. A few plants have been added to the rock border, including *Sand Verbena* (*Abronia umbellata*), a charming little wanderer for sunny spots, and *Viola La Lorraine*, which, however powerful the sun may be, never ceases to bloom during the whole summer. *Crocus foliage* growing through a row of *Blue Bindweed*, having ripened, has now been removed. The *Bindweed* is rapidly showing itself, and a few blanks which have occurred during the winter have been made good with plants raised from seed sown last autumn. *Larkspurs*, hardy *Geraniums*, *Oriental Poppies*, etc., are now growing apace, and have needed support in the form of *Hazel boughs*. This is a better method of staking than using *Bamboo canes* and string, and looks more natural. *Lily of the Valley*, herbaceous *Phloxes*, *Funkias*, and various other subjects have received attention, and where possible the soil is broken up amongst the plants. A border containing *Christmas Roses*, edged with the little *Gypsophila prostrata alba*, has been forked up. A few plants of *Fuchsia fulgens*, which had been previously well hardened, have been planted out, and a quantity of *Cannas* in variety have been put out at each end of the *Lily tank*. Everything is well watered in as soon as the planting is finished. A large number of specimen plants in tubs and vases has been placed in their summer quarters. A group of *Salvia patens* has been put out among yellow *Roses* and mixed *Violas*. *Salvia splendens* has been given a place in the mixed border, and a few plants of *Salvia Greigi* have been put on a hot sunny corner.

Sussex.

SOUTHERN COUNTIES.

Late Muscats.—During the early part of the flowering period dull weather prevailed, which necessitated the use of fire heat, both to ensure suitable temperatures and to render the pollen potent. Brighter conditions afterwards allowed of the house being amply ventilated throughout the forenoon, and followed by a judicious employment of a camel-hair brush and a tapping of the rods several times daily, a good set, notwithstanding the fact that pollen of a free-setting variety was unavailable, has resulted, and the scissors are being brought into play more than is usually the case with Muscats. In thinning, great care is taken to get rid of seedless berries first. Then such as are of a pale colour, although they may swell, but do not keep pace with berries containing their full quota of seeds, are, whenever it is admissible to do so, cut out, as these, owing to their having but one or at the most two seeds in them, never swell to full size. Ofttimes a bunch when rid of all doubtful looking berries will look very thin, but it is surprising how by dint of good feeding and proper attention such will fill out, and by the time the berries have finished there is little, if any, spare space between them. Some exceptionally handsome pieces are having their shoulders suspended clear of the body of the bunches, but time and labour will not permit of anything further being done in this direction. On the completion of thinning the border will be mulched with short stable manure, the material being too scarce to allow of the removal of the greater part of the straw. As this gives off a certain amount of ammoniacal vapour when first introduced to the house, a chink of air must be left on night and day for a time to allow for its escape.

Early Muscats.—As the Grapes approach the colouring stage a final application of liquid manure will carry them through to the finish. That the colour may be as perfect as possible, the bunches where much shaded should be more freely exposed by drawing or tying the leaves on one side to admit of their experiencing a fuller share of the direct light. The colouring of the berries is taken as an indication that less moisture is now required and that a freer circulation of air, especially in the early part of the day, is necessary to ensure a good finish. The front ventilators now come into play, and, although closing them in the afternoon is in the earlier stages of colouring advisable, they may be left just a little open at first and afterwards wider as the Grapes near maturity. That the berries may attain a large size the close stopping of laterals should have strict attention.

Early vineries.—These, as soon as clear of their crops, should be ventilated to the fullest extent and the Vines well hosed now and again or washed with a garden engine. Whether necessary or not, so far as insects are concerned, this has a very refreshing effect on the foliage and prevents it from dying off prematurely.

Early planted-out Figs.—The fruits on these are now ripening, and syringing has

had for the time being to be discontinued. To prevent the footpath and border becoming too dry both are damped several times daily in bright weather. The fruits are not gathered until they are so ripe that they barely sustain their own weight. This is the only way to ensure full ripeness and impart that lusciousness which should be the distinguishing feature of forced Figs. A plentiful second crop will succeed the foregoing, and as soon as gathering ceases, syringing of the foliage and feeding from the surface will be resumed.

Kales.—The last of the latest crops have been cleared off, and the ground will, when circumstances permit, be dug with forks. This will leave the soil in a finer condition than would be the case with spade digging, and plants when set out will not be so adversely affected by hot weather should such at the time prevail.

Seed-sowing.—More Peas have been sown for late supply, while the moulding up and staking of advancing crops have been kept, so far, well in hand. With the exception of the earliest varieties, a great many of the seeds of which rotted in the ground, Peas are looking remarkably well, and promise an excellent yield. More French Beans have been sown and gaps made good in *Scarlet Runner rows*. A further sowing of *Globe Beet* for autumn use is now necessary. This saves having to begin using the long-rooted types before winter sets in. To keep up a regular succession of *Lettuces* of both the *Cos* and *Cabbage* types, fortnightly sowings are needed. Unless a cool border or partially shaded piece of ground is at liberty on which to plant them, thinning must now be ignored, hence the necessity for sowing frequently. Another sowing of *Short-Horn Carrots* will be made shortly.

A. W.

MIDLAND COUNTIES.

Early vineries containing ripe Grapes, which are being cut as required, should be ventilated rather freely, and during the day in the present warm weather abundance of air should be admitted both through the top and front ventilators. *Black Grapes* are apt to lose colour, and if they are to hang for a considerable time they will keep better if a light shading is placed on the roof. This is best done by stippling the glass with whiting. Damp the surface of the border and paths once on dull days, but more frequently in hot weather. During the day no fire heat is necessary; but it is advisable to keep a little heat in the pipes at night. Now that the fruit is finished, the sublateral growths may be allowed to extend. After all the fruit has been cut give the foliage a thorough syringing with clear water.

Mid-season Vines are afforded varying stimulants to encourage the development of large berries. Plenty of atmospheric moisture is now required, and also a free circulation of air, otherwise the foliage is apt to get scorched. The closing of the houses is now deferred until later in the afternoon, damping every available space. Later in the evening a little air is admitted by the top ventilators, allowing them to remain open all night, increasing the amount early in the morning to avoid scalding of the foliage and berries. Outside borders should be covered with a light mulching, preferably of long strawy litter. If the borders are in the least dry, give a thorough soaking of water before applying the mulch. If the natural drainage is good and the soil light, outside borders require liberal supplies of water in hot weather, and much benefit will be derived from a little artificial manure scattered over the border before the water is applied.

Strawberries.—Early varieties of Strawberries planted on a warm border look promising, and the fruits are swelling rapidly. It has been necessary to water the plants freely. The framework has been erected on which to place the nets. When the nets are merely spread over the beds many of the best berries are spoiled by birds. By using a framework the fruits are more easily gathered. Slugs and snails are great pests, and every precaution should be taken to protect the fruits. The supporting of the trusses of fruits on young plants should be done at once, and if extra fine berries are required the trusses should be well thinned. Stock plants put out last August for the special purpose of furnishing layers have been denuded of all their flowers, and will provide early runners. Soil in which Strawberries are to be planted should be trenched and manured the previous winter, and then cropped with early Potatoes.

Herbaceous borders.—Many of the plants in these are now in their full beauty. Coarse-growing subjects need to be restricted to their proper limits. Where the hoe can be used without injuring the plants, it is advantageous to stir the soil, as much for the purpose of conserving the moisture in the ground as for destroying weeds. This operation is best carried out on a dull day after rain.

Sweet Peas are making good progress, and the earliest plants are commencing to flower. It is necessary to train the leading shoots, so that they will grow in the right direction. The soil being very dry, watering has had to be done, and the ground about the plants mulched with stable manure. An occasional good dressing of soot will impart clearness and brilliancy to the flowers.

Summer-flowering Chrysanthemums are commencing to grow freely, and the soil requires hoeing at frequent intervals to keep it in good condition and clear of weeds. If slugs are troublesome, dust the plants occasionally with a little soot in the evening when dew is on them or after a shower. The soot will keep them clean and healthy, and is also a good stimulant. If the weather continues dry a light mulch will be beneficial and will save much watering. If the plants are strong and healthy they will branch freely naturally, rendering much stopping unnecessary. Place the stakes in position early, and secure the main stem firmly, using strong ties to loop up the other growths.

Dafodils that need division, either through having occupied the ground long enough or for purposes of extension should now be lifted for the first heavy rain experienced after the middle of June will cause them to commence growing, which should not be allowed before lifting. It is really much safer to lift even while the leaves still have some green left in them than to delay too long. After having been lifted they may be kept out of the ground for a week if other work is pressing, but it is much better to replant at once. In planting the bulbs, see that each rests firmly on the soil at its base, for bulbs that are "hung up" through making the hole too small at the bottom do not grow well.

Asparagus.—By the middle of the present month cutting will cease, taking care to leave growths as far as possible all over the bed, where practicable the beds should be given a thorough drenching of manure water, and in exposed positions the stronger growths will need support.

Leeks.—Early-planted Leeks should be watered frequently with liquid manure, and the soil between the plants stirred with a Dutch hoe to promote free growth. Those raised for the main crop are now ready for planting out. The ground having been trenched and well manured early in the year, it only requires to be forked over before drawing the drills at 18 inches apart and 3 inches to 4 inches in depth, planting the Leeks at 1 foot apart, using a garden dibber. Only a small quantity of soil should be allowed to fall among the roots, the remainder being afterwards worked in with the hoe, so that nothing may retard the swelling of the stems. Leeks are gross feeders, and therefore derive great benefit from frequent applications of weak liquid manure.

Winter Greens.—Many of these will be planted in their permanent quarters at the first opportunity. Every bit of ground available is utilised at this season, and in some cases it is necessary to plant between other crops, such as Peas, Beans, and Potatoes. In all cases sufficient space must be allowed for the plants to develop properly.

Potatoes are generally sufficiently advanced to complete the earthing up, but before commencing make sure that the surface of the soil is thoroughly freed from weeds. If extra fine tubers are required for any special purpose, the growths should be thinned to two or three of the strongest shoots. This is easily accomplished by placing the feet near the plant and drawing the weakest growths out with the hand.

Lettuces are sown frequently on a border somewhat sheltered from strong sunshine. These now succeed better if sown thinly where the plants may develop without disturbing them than if transplanted. The plants require liberal supplies of water during dry weather so that they may grow away without a check.

Endive.—A small sowing of Batavian Endive will be made now to afford supplies during the autumn, sowing the seeds in a somewhat shaded situation, and transplanting as soon as the seedlings are large enough to handle.

F. W. GALLOP.

SCOTLAND.

Planting out.—The filling of flower beds and borders with their summer occupants was begun in the course of the week. To some extent there is this year a curtailment in this respect. Much use is being made of plants which are easily raised, and, withal, showy. Antirrhinums are being used to a considerable extent. Each bed or group of beds is filled with plants of a decided colour—for example, crimson, white, pink, and orange varieties being planted. These are all of the intermediate type, and make neat, bushy plants, which fill up well, and give a good display over a prolonged period. Pentstemons, too, are being freely used, and, as has been previously indicated, "The Gem" varieties are preferred for planting out. Beds of *Salvia* *Pride of Zurich* are always bright and attractive in late summer and throughout the autumn, and several beds have been filled with single-flowered *Begonias*. A border will be devoted to yellow *Begonias*, while some use is being made of *Salvia* *patens*, *Ageratum*, *Lupins*, and *Brachycome iberidifolia* (the *Swan River Daisy*) in beds given over to blue flowers. The only edging plants used during the present year are *Lobelia* and *Alyssum* *miniaturum*, and their use is strictly limited. Ten-week *Stocks*, *Asters* (single and double), *Tufted Pansies*, *Marigolds*, *Sweet Geraniums*, *Calceolarias* (in limited numbers), and, in fact, the usual run of bedding-out plants will find places. At the time of writing, the weather is not unfavourable for this work.

Vegetable garden.—In the early part of the week, the soil having become surface dry, some arrears of work among vegetables were brought up. More Peas were moulded up and staked, and another 50 yards row was sown. Two sorts were used for this purpose—namely, *The Duchess* and *Alderman*—each variety occupying 25 yards. These two Peas form an invaluable succession when sown on the same date, both are of practically the same height, of robust growth, and carry heavy crops of well-filled large pods. Former sowings of these Peas are well advanced, and will shortly be in bloom. A return will now be made to early-maturing varieties in the remaining sowings—*The Pilot* and *Gradus* being preferred. More reliance is, however, placed on the former, for while *Gradus* is an excellent Pea, in some years it hardly justifies its inclusion. A line of *Broad Beans* was sown at the same time, the variety being *Harlington Windsor*. More *French Beans* went in, *Negro Longpod* being used at this time, and a line of *Veitch's Climbing French Bean* was sown on the same date. This and similar Beans, being very prolific, have been substituted for *Scarlet Runner Beans*, which are not in favour. A further line or two of *Climbing French Beans* will be sown shortly, the pods of which are used for bottling and preserving. More *Spinach*, *Turnips*, and *Lettuces* were sown.

Asparagus has received a good dressing of concentrated fertiliser, and this will be repeated from time to time during the growing season. At present the produce is closely cut, and the beds are being kept free from weeds as far as possible.

Potatoes.—Moulding up having been completed in the case of the earliest Potatoes, the next breadth has been forked up, and they will be moulded in the course of next week. Late varieties just breaking through the soil have been hoed through in order to keep seedling weeds in check.

Brassicas.—Successional lines of *Cauliflowers* were planted during the week, including *Early Giant*, *Eclipse*, and *Walcheren*. A few further lines of *Sprouts* and *Savoys* were also got out; but the main plantings will be deferred for a few weeks. Meantime, in order that no delay may take place at planting time, shallow trenches are being prepared for the reception of the plants.

Hardy-plant borders grow increasingly attractive. There is always something requiring attention among hardy plants, and to keep them free from weeds, if possible, ought to be the care of the grower. Formerly we used to hoe and rake these borders at frequent intervals, but last year the hoe only was used. It was found that if hoeing was tidily done the use of the rake could be dispensed with, and the same course will be followed throughout the present season.

The woodland.—The usual occasional look round the woodland was given during the week, in order that ties, stakes, etc., of young or recently planted trees might be seen to. The display at present is, perhaps, the best afforded by the woodland throughout the year. *Narcissi* and *Primroses* have gone, but their place is supplied by myriads of *Wood Hyacinths*, colonies of *London Pride*, large patches of *Star of Bethlehem*, *Pimpernel*, *Forget-me-not*, and of the double and single forms of *Saxifraga granulata*. The shades represented among the *Wood Hyacinths* range from white, through pink and purple, to various shades of blue. In addition, *Broom* is in full bloom, and all round the *Gorse* (*Whins*) is striking. *Azaleas*, *Lilacs*, *Laburnums*, and *Rhododendrons* are in excellent form. While looking round it was noticed that some large colonies of *Montbretias* which were naturalised some years ago are again coming away very strongly, as are some pieces of *Rosa* *Daisy* and of the more vigorous *Michaelmas Daisies* which have been put out in different positions from time to time.

Hydrangea paniculata.—In the case of this useful flowering shrub, the usual annual top-dressing was given in the course of the week. Some of these pieces are of great size, and never fail to flower freely. Planted in rich, deep, and rather peaty soil, they do not appear to require any further treatment than the removal of the flower-trusses when they cease to be attractive, and the yearly dressing of well-decayed manure and leaf-mould in mixture referred to. The same remarks may be taken as applying to hardy *Fuchsias*. Differing, however, from the *Hydrangea*, *Fuchsias* succeed in almost any kind of soil and in any exposure. They grow so freely that, perhaps, on that account one is at times apt to underestimate their value in the garden and in the shrubbery.

W. McGURROG.

Balmie Gardens, Kirkcudbright.

Trial of autumn-sown Onions at Wisley.
—The Royal Horticultural Society will carry out a trial of autumn-sown Onions at Wisley during the ensuing season. Seeds for trial (one packet of each variety) should be sent so as to reach the Director, R.H.S. Gardens, Wisley, Ripley, Surrey, from whom the necessary entry forms (one for each variety) may be obtained, on or before Monday, June 19th, 1916.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Destroying Nettles (*A. M. M.*).—Next to clearing out the roots of Nettles, the best way is to have the tops cut off hard with a hoe so fast as they appear through the soil. No perennial weeds can long withstand this treatment.

Roses in poor condition (*M. de C.*).—From what you say as to the position of the roses, the cause of the falling of the leaves is quite evident. The plants are dry at the roots, and if you give them a thorough soaking of water you will find, we think, that they will improve. You ought also to syringe them every evening as there are traces of red-spider on the leaves due to the dryness of the soil.

Iris *diseased* (*Miss Wilson*).—Your Irises are suffering from a fungoid disease common to the Iris. You ought to have moved the plants to fresh quarters directly you noted signs of the disease. Cut off all the diseased parts, and plant any that are not affected in this way. You should do this at once or as soon as flowering is over. Your plants have evidently been in the same position for some years. Irises should be divided and given fresh quarters at least every third year, as the soil gets impoverished, thus causing disease and failure.

FRUIT.

Growing Peach-tree in tub (*W. E. Woolley*).—Yes; a Peach-tree grown in a tub of good diameter and depth, such as may be obtained by cutting a paraffin barrel in half, and trained on the back wall of a house of the dimensions stated should succeed. The heating of the house during the months mentioned would, provided a temperature of 45 degs. to 50 degs. was not exceeded by these means, prove beneficial, and when the tree is sufficiently established to begin bearing it would, of course, place the flowers beyond the harmful effects of frost and render a crop more certain. We have had little or no experience in the heating of greenhouses with oil as fuel. It is the fumes arising from the combustion of the latter which are detrimental to the health of plants. If these can be kept from entering the house there would be nothing to fear. On the whole, we think you would be well advised to put down a cheap form of portable boiler with piping attached, as you would find such an apparatus perfectly safe, efficient, and far less costly in the end.

VEGETABLES.

Bottling green Peas (*Lady Winifred Lowry-Corry*).—Green Peas for bottling should be quite young and also of one size. Put them into wide-mouthed bottles with a pinch of salt on the top. Stand the bottles up to their necks in a large pot of water, which stand over a fire and boil slowly. So soon as the Peas seem to be soft, take the bottles out, cork them up, seal them over, and keep them in a dry, cool place. Bottling of green Peas is best done by someone who has intimate knowledge of the business, as a slight mistake may lead to failure.

Spraying Potatoes (*Chas. A. Ledward*).—The proper proportions of the sulphate of copper and lime solution, commonly called Bordeaux mixture, are 1 lb. of each. Tie the sulphate, which is bluestone, in a coarse piece of canvas, and put it into a wooden tub which will hold some 10 gallons. Put in 2 gallons of boiling water on the sulphate, and let it dissolve during the night. Also in a pail dissolve the lime, which should be fresh, and when clear add the water to that in the tub. Still further, dissolve in hot water 1 lb. of common treacle, and add that also. Then fill up the tub. The solution should be applied about the middle of July, with a second application three weeks later. It must be applied in the form of spray from a knapsack-sprayer, or by the aid of a spraying syringe. It is best applied in the evening.

SHORT REPLIES.

H. F. W.—You may cut down the *Lilacs* as you suggest, but by so doing you will sacrifice the bloom in the coming year. Seeing you have such handsome plants, we should advise you to leave them alone.—*Drury White*.—1. Certainly; but make sure that you give a thorough soaking. Dribbles are of no use. The evening is the best time to water. 2. No. 3. Yes; in the early spring. 4. Yes; you may do it in the early autumn. Of course, if you do not object to the untidy appearance of the lawn, you may top-dress now, the watering washing the goodness of the said top-dressing down to the roots. 5. Better without. 6. No. 7. Cut it every week, using the machine without the box, the short Grass helping to minimise the power of the sun. 8. No. We do not reply to queries by post, and are always ready through our pages to help those in any difficulty.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*Hybrid*.—*Laburnum Adami*.—*J. E. Kelsall*.—*Veronica Hulkeana*.—*Diana W. M. Cunningham*.—*Staphylea colchica*.—*M. Tudor Grevy*.—*Ceanothus Veitchianus*, a Californian shrub.—*Mrs. H. T. Barker*.—*Diosma ericoides*.

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DESIGN IN PLANTING.

Who is to help? I believe the best results can only be got by the owner who knows and loves his ground. The greatest evil is the stereotyped plan, the evil results of which are evident on all sides. But the man must love the work and know one tree from the other, and feel that his pictures can only come from constant thought as to the ground itself. Lessons? Yes, from Nature mainly. A few days in one of the valleys in the Tyrol or any beautiful mountain land will tell more than many books, also pictures of the great landscape painters like Corot, Daubigny, Constable, and R. Wilson when free of the conventions of his day. The breadth, air, forms, foreground, and values that interest painters may teach us much. The atmosphere of Corot, skies of Diaz, water of Daubigny, and Nature's trees, landscape, and atmosphere should teach us much. It is ours to make such use of them as will give us better pictures than ever were painted. One wants the spade of the forester and the eye of the artist. Stereotyped plans are of no use. The lie of the ground must be studied in somewhat the way of the good leader of soldiers, and there is also the quality of the soil to be thought of, as soil useless for rich cultivation may give us fine tree effects. With hardy trees in the landscape, views, air, and distances also must be studied, not only in the place but from it to the neighbourhood. If rides essential to woodland are planned at first it will be a gain and simplify the protection of the young trees in early years. There is no organised profession to help. Anyone may call himself a landscape gardener; a navy who has some experience of walk and road making, a jobbing gardener, and others without any training may offer to do the work.

But how are we to know a landscape gardener? By this sign among others—that he will study the ground thoroughly first and bring no plan in his pocket. Office plans are poor substitutes for the thing itself, but the custom of plans on paper is so fixed that it is not easy to get this truth accepted. There can be no true work in landscape save by one who knows trees by heart, and there is no royal road to that knowledge save by life study.

The relationship of nurserymen to garden design is a delicate one. A nursery-

man's business is a wholly different one, and a useful and honourable one, and if he does his work well he has not the time to act as a designer of gardens. And in his case where is the control which should be exercised in all extensive work? W. R.

NOTES OF THE WEEK.

Sophora vicifolia.—We do not make enough of these Pea-flowered shrubs. The above-named is a graceful bush, with blue and white flowers. It is quite hardy and apparently easy to grow. It was introduced from China some fifteen or more years ago. From Kew.

Mr. Ernest Markham, for some time past the writer of the lists of hardy shrubs and plants flowering each week, and also of the "Work of the Week" among them, has now been called away from us for the Army. His good work will, we hope, be continued by a writer in a different county. Our gardens will suffer much from gardeners having gone to the war.

A dwarf rock Woodruff.—This seems of slight value when seen in dots or pots, but allowed to spread into spreading carpets it is quite pretty, and in that way can be best grown on a rock garden reasonably made. Many rockeries are made more to show off the stones than for the good of the plants, and there is no room on them to group a rock plant in any natural way. From the Pyrenees.

Primula denticulata cashmiriana.—The greatest measure of success with this is attained in a border with an easterly, but sheltered, exposure. The soil is heavy, moist, and deep, and loses the sun in mid-summer as early as 3 p.m., so that it is, generally speaking, quite cool. In this border the plants thrive amazingly and increase very rapidly, so much so as to be a source of wonder to those whose conditions are, perhaps, not quite so favourable.—W. McG., *Balmæ*.

Hybrid Poppies.—About thirty years ago several hybrids between *Papaver orientale* and *P. atlanticum* appeared here, and between *P. orientale* and *P. rupifragum*. I divided some of these in the early spring of last year and replanted in very good soil. The quantity of flowers on these hybrids and the brightness of the colour this season are remarkable. Perhaps the *rupifragum* hybrid is the brightest of all. I believe the same hybrid Poppies appeared in Mr. Carrington Ley's garden at

the same time as they did here.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

Heracleum pyrenaicum.—The Latin names of these Giant Parsnips are many, but one very often sees the coarsest of them all grown under different names, and it is quite a relief to find one distinct from the others. This one has in the great head of flower a rosy effusion which should make it a very good wild garden plant. Being a Pyrenean plant it must be quite hardy.

Erodium trichomanefolium.—These pretty Geranium-like plants of the southern rocks are never made good use of in the rock garden even. Lately, at Kew, I saw a rosy-coloured one, a very pretty tufty thing. The new and sensible ideas about moraines and avoiding rich soils in rock gardens should help their culture well, even the most delicate of them. They are very happy on retaining walls, and some flower a long time. They deserve a better place than they usually get.—W.

A good combination.—*Viola cornuta* and the old white Pink, planted alternately, make a really good mixture. The pale blue of *V. cornuta* contrasts well with the greyish-white foliage and the pure white flowers of the Pinks. Blooming simultaneously, and over a long period, such a mixture can be recommended to those who admire combinations for early summer display. Both, of course, are so easily increased that the trouble incurred in working up a stock is infinitesimal, and the best display is obtained from plants which have been a few years established.—Kirk.

Begonia corallina.—Like others of the older Begonias, *B. corallina* does not now seem to be so popular as was formerly the case. Easily propagated from cuttings, young plants grow rapidly and are invaluable for furnishing trellises or roofs in warm greenhouses. *B. corallina* succeeds best when planted out, but fairly good results may be obtained when it is grown in large pots in a compost consisting of peat or good leaf-mould and loam in equal parts, with a free admixture of coarse sand and, if possible, a few fairly large pieces of broken sandstone. The flowers are of a bright coral-red, and a well-furnished trellis covered with bloom is a sight worth seeing. The late Mr. Jeffrey, at St. Mary's Isle Gardens, grew this fine Begonia very well, but he insisted that, to do it justice, it required the

heat of the stove. My experience is that it does equally well in a warm greenhouse, and that in such a house the display is prolonged over a greater period.—W. MCGUFFOG, *Balmæ*.

Abelia floribunda.—These always interesting plants are seldom rightly used in gardens, except in the extreme south. This one was in flower on the first day of June at Kew, and very handsome too, but evidently very tender and in need of the protection of an old brick wall there. It shows that the valley cold does not kill the plant and that it deserves to be grown wherever there are warm soils and walls.

Rhododendron Mrs. Wm. Agnew.—This lovely kind deserves to be more frequently seen in gardens. In a collection of these popular shrubs the pink flowers, shading to deep rose towards the edges of the petals, the upper petal blotched with yellow, stand out conspicuously. The trusses of bloom average 6 inches across and deep, and are freely produced all over the plant. Another advantage of this variety is that the flowers retain their colour and are not so easily damaged by rain as are the more floppy varieties. For grouping it is unsurpassed by any other variety of this colour. A very poor substitute is often sent out, therefore care should be taken to obtain the true form.—E. M.

Economy in the garden.—A recent article on this subject from the pen of Mr. Hudson (p. 214) contains several valuable hints, and one which is the reverse. I quote his words: "With both Peas and Runner Beans, what is needed is more seed, and so let the rows be as close again." Anything from Mr. Hudson is worthy of attention, but surely he is on the wrong track here. Good crops of these two particular subjects cannot possibly be expected if crowding—one of the greatest mistakes in vegetable growing—be practised, more especially if, as is recommended, the seeds are sown thickly. What benefit can be obtained by following this advice—even if it does favour the seedsman—and wherein consists the economy of buying more seeds of Peas and of Runner Beans than are actually necessary? With the other remarks no fault can be found.—KIRK.

New Zealand Satin Flower (*Libertia formosa*).—This is one of the choicest herbaceous plants for late May and early June. It belongs to the Iris family, though, unlike many of that genus, its leaves are evergreen. Once established, this plant sends up numerous spikes—a yard in length—from which issue bunches of pure, waxy-white, three-petalled flowers with yellow stamens. It is a first-rate plant for the herbaceous border, the rock garden, or as a group in the foreground of shrubs, where the soil is warm and friable, and fully exposed to sunshine, under which conditions it increases freely. With me a group of this *Libertia* is very happy at the base of some old Pine-trees, where it flowers freely annually. The long, stiff, and somewhat branching spikes of bloom are excellent for indoor decoration.—E. M.

Tulip Golden Crown.—Although an old Tulip, this holds its own, and deserves still more extended cultivation, especially where Tulips are permanently planted. I know gardens where it has been left undisturbed for many years without any signs of deterioration. Possibly the flowers may be a little smaller when the bulbs become rather crowded, but it is amazing the amount of bloom given by groups of this Tulip, even when closer together than the best cultural practice would warrant. Few Tulips would stand

the hardships this one has to undergo in certain circumstances. Almost every day I pass a front garden on a dusty road where many plants of Tulip Golden Crown are all aglow in their season. The lot of the plants may seem an unhappy one, as daily in dry weather leaves and flowers alike are thickly coated with dust; yet they bloom bravely as they have done for years. It is a Tulip I grow largely in different positions. Its flowers are of a bright yellow, gradually becoming faintly margined with crimson. This margin extends, and eventually the entire flower becomes flushed with bright crimson. I have grown this Tulip for fully thirty years, and my bulbs have only had their natural rest in the soil.—S. A.

Achillea ptarmica The Pearl.—The difficulty experienced by "H. F. S." (p. 282) is by no means uncommon in some districts with *A. ptarmica*. "H. F. S.," perhaps, suffers from excessive rainfall during winter, and, if so, the roots of the plants put out in autumn probably never make a real start, and this, combined with the profuse bloom in summer, no doubt leads to the collapse of the plants during the ensuing winter. At Dunalastair Castle, in Perthshire, the same difficulty is found with *A. ptarmica*, and the reason suggested is that given above. On the other hand, in these gardens the plant runs through Box-edgings, invading the stools of other plants, and getting, generally, out of hand. I would suggest that "H. F. S.," instead of cutting the stems after flowering ceases, should, for the first season, prevent the plants flowering at all. This might, possibly, have a good effect, and the variety is so useful in its way that a little experimenting would not be altogether time thrown away.—W. MCG., *Balmæ*.

[In a London suburban garden, in a light, rich, warm soil, this plant, though so valuable for providing cut flowers in plenty, is a perfect weed, over-running all the other plants in its vicinity. Every season I have to curtail it, and even when seemingly cleared out it comes up in the most unlikely places. Still, with all its faults, I would not care to be without a piece of it in the garden.—T.]

The English Bluebell (*Scilla festalis*).—It is pleasant to read the appreciative notes by G. H. Raynor, in your issue of June 3 (p. 270), on the English Blue Bell. I have found all the varieties mentioned as occurring among the wild plants except the buff one found by his friend. The varieties offered by Mr. Van Tubergen, most of which I grow, are very beautiful, and when in groups of separate colours are full of charm on a carpet of Grass, or with a mossy wall covered with Ferns and trailing plants in the background. The varieties of *Scilla festalis* are much more graceful than those of *S. campanulata*, the Spanish Squill, which look stiff and ungraceful. My finest variety of *S. festalis* is one I received many years ago from Holland as *S. patula alba*. It has larger and more arching spikes of flowers than any other variety I possess, and they are of a beautiful pure white. I have many seedlings in my garden, the colours varying from the ordinary blue, through lilac, to deep blue, and various shades of pink, in addition to whites. The blues predominate, even among seedlings from the white or pink, but a group or two of mixed seedlings generally meets with the admiration of those who see these flowers. I have a curious variety with narrow, constricted flowers. I got it many years ago from the late Mr. P. Neill-Fraser, of Rockville, Murrayfield, Edinburgh. Its

flowers are white but of a creamy hue, and the form is more curious than beautiful. It was given me under the name of *S. stricta*. There is no *Scilla* under that name in the "Index Kewensis," and I am of opinion that it is simply a seminal variety of *S. festalis*. This is borne out by the fact that self-sown seedlings are of the normal form of *Scilla festalis*, without any trace of the constricted shape of *Scilla stricta*. It is interesting, although a little disappointing, to find that seedlings from the named varieties rarely equal the parents.—S. ARNOTT.

Primula pubescens alba.—"N. L." (page 299) does not seem to know that there is another plant in existence—a white, too—under this name. Kerner, the great authority on the European Primulas, found *P. pubescens* growing wild along with *P. Aretotis*. He found, too, that both were hybrids of *P. Auricula* and *P. hirsuta*, but that *P. Aretotis* had not as much of *P. Auricula* in its composition. He gave the name *P. Aretotis alba* to the plant generally known as *P. nivalis*. The above information I had from the late Robert Lindsay, of Edinburgh, who was a very safe authority in such matters. I had a curious confirmation of his correctness when, several years ago, I found a large batch of *P. nivalis* in a continental nursery under the name of *P. Aretotis alba*. I have known the true *P. pubescens alba* for thirty years. It is a taller plant with tubular, drooping flowers and clammy at the base of the leaves. Farrer mentions finding this plant in both a Yorkshire garden and also in Devonshire. My original plants came from Aberdeen. "N. L." may be interested to know that there are several other whites in these small "Auriculas" as *P. marginata alba*, *P. helvetica alba*, *P. decora alba*, and White Pearl raised by Mr. Lindsay.—J. STORMONTH, *Kirkbride, Carlisle*.

Wood Lilies (*Trillium grandiflorum*).—Seldom have these been so effective as they are this year, their luxuriant foliage and delicately-coloured flowers borne on stout stems almost 2 feet in length when the plants are in good health. A few groups were made here three years ago beneath large Magnolias. Large rings were thrown out and the clayey soil disposed of, its place being taken by a mixture of peat, loam, sand, and rotted leaves. In this the plants have done remarkably well, as what originally was a single crown has now developed into four and five crowns, and the plants are increasing in vigour year by year. The crinkled flowers, each 5 inches across, vary in colour from the purest white to deep rose, just the delicate shades so much sought after for decoration, to which use they are admirably adapted. The slight shade of the Magnolias appears to suit them, and the effect when the sun is just broken by the shade of the thin branches is very pleasing. I cannot imagine these charming perennial plants happier even in their native habitat, North America. The threefold arrangement of both flowers and leaves has given them the name, Trinity Flowers, and other names. All who can devote a suitable space, however small, to them, should grow these charming plants.—E. M.

—The fairest flower of the last days of May to me is the Wood Lily of the North American woods. In the gentle shade of a colony of Magnolias I find it does well. For years I lost it in Azalea beds. Well grown, it well deserves its name of Wood Lily. Peat and leafy soil seem to help it much. The natural conditions of things are always worth looking into.—W.

TREES AND SHRUBS.

HARDY HEATHS IN STORM.

I WAS pleased, the other day, to see the Heaths taking the place they deserve at Kew, and rejoiced to hear from Mr. Bean that there are two wild species in Spain which we have not got. It is a very pleasant excuse for a man to go to Spain and find these things. The two shown in our illustration are the beautiful Southern Heath and the Portuguese Heath in the background. Both have passed through the winter and harsh, wet spring and flowered beautifully all the time. It would be very interesting if we could get new varieties of these in their native countries as we have of our own native Heaths; also if there are Heaths in Asia Minor and other countries such as Serbia. The charm of growing them is, that rightly used they

flowers, but these rarely ripen here. It should be planted in good, loamy soil in a sunny position, and it is advisable to provide shelter from cold winds. Propagation is usually effected by layers or seeds. In America the fruit is sometimes eaten, and the plant is of interest as being a close and, perhaps, the hardiest relative of the Anonas.—D.

HARDY BAMBOOS.

IN the Bamboos we have a family of evergreens which for beauty and gracefulness cannot be excelled by any other plants. From North India, China, and Japan quite a large number of species and varieties has been introduced, while one, *Arundinaria macrosperma* var. *tecta*, comes from the United States. The majority have proved quite hardy if sheltered from bleak north-east winds, these being far more injurious than sharp frosts. In selecting a

look at home, apparently benefiting from the moist condition of the air in such places. The Bamboo is valuable for home woodlands, especially where the trees are summer-leaving, and, when used in this way, spreading in many cases to an alarming extent and providing excellent shelter for game. Rabbits do not touch them, although they will burrow beneath and lie among the accumulated bottom, which in the case of *Arundinaria palmata* is like a number of layers of crossed wire, difficult even for a dog to penetrate. For bordering woodland rides or furnishing dells and pond-sides nothing is more effective.

They are divided into three groups—*Arundinaria*, *Bambusa*, and *Phyllostachys*, from which selections—for even the smallest gardens—can easily be made. Many of the dwarf forms have a variety of uses and are great favourites.

PLANTING.—The best time for this work



The Southern and Portuguese Heaths after winter storms.

give us lovely gardens in winter and all through the spring. W.

The Papaw (*Asimina triloba*).—Although introduced many years ago, this interesting and curious small tree or shrub is uncommon and but rarely met with. There are, however, several good bushes in the Kew collection, and one or more occurs in the garden of H.R.H. the Duchess of Albany at Claremont. It is a native of the south-eastern United States, where it forms a large bush or small tree and is known by the common name of Papaw, although a very different plant from the Papaw or Papau of Tropical America (*Carica Papaya*), a tree widely cultivated in tropical countries for its fruit. *A. triloba* is distinguished by its oblong, prominently-veined leaves, and by its curious, triangular, purple flowers, which are produced singly from the leaf-axils and are each about 2 inches across. Clusters of curious, sausage-like fruits succeed the

SITE FOR BAMBOOS it is necessary to use discretion. It has often been observed that plants exposed to cold winds and frosts lose their freshness long before those enjoying a certain amount of shelter. They will grow fully exposed and make handsome specimens in isolated positions, but shelter is necessary to see them at their best, and where possible a little shade is an advantage. Few evergreen plants or shrubs show to such advantage during the winter, especially during wet and stormy weather. They are interesting when bent to the ground by a fall of snow, the whole plant often being left without a single erect cane. This does not injure them, and with the advent of more favourable conditions they again display their great beauty.

The ideal spot is undoubtedly in groups along the sides of a small stream, where they receive abundance of moisture during the late summer and autumn. Indeed, when seen in association with water they

is the early part of May, just as the new leaves appear, but in private gardens planting at this season is not always convenient, owing to pressure of other important work. Where this is so I would recommend early autumn planting, which I have invariably found to be most satisfactory, even with very large specimens. I have planted them at intervals all through the winter, from early October to May, with excellent results. I remember one nice collection of these plants arriving from the nursery in January, the balls of soil frozen right through. The ground, of a sandy and clayey nature, having been previously prepared, they were planted the same day, plenty of good leaf-soil being added as the work proceeded. The growth made by these plants during the following season reached a height of 10 feet, while the second season the magnificent canes gave rise to comment. A good heavy loam suits them best, and where the soil is light I would add some clay and

plenty of leaf-soil. Care should be taken that newly-moved specimens do not become dry at the roots until active growth is visible, otherwise they take much longer to become established, and occasionally the best canes shed their leaves. These, with care, break into leaf again and quickly recover if kept supplied with moisture. Our climate is quite different from that in their own country, where the season of heat is also the season of deluging rains, conditions admirably suited to their rapid development, whereas our summers are often accompanied by periods of drought, followed by late autumn and winter rains, which leave the ground cold and sodden, coming, too, when most of the species have matured their season's growth. Apparently they quite enjoy even these conditions, forming under suitable conditions magnificent specimens.

These hardy Bamboos are admirably suited for growing in large tubs and vases for the decoration of rooms, porches, and terraces, their light, graceful forms appealing strongly to those responsible for this class of work. Where used for this purpose the shelter of a cool greenhouse is necessary during frosty weather, otherwise if the roots are allowed to become frozen right through for any length of time the probability is that they will not survive such treatment. When visiting a neighbouring garden last year I was astonished to see Bamboos growing in what appeared to me an old quarry. Protected on two sides by large deciduous trees and evergreens it presented a perfect mass of tropical luxuriance. Here were Bamboos of such proportions as I have never before seen, revelling in the rich, leafy soil; in some cases they were growing in beds edged with large stones, while others were planted on the steep sides with little pathways—over which they had long since formed an arch—winding among them. This must be an ideal retreat during hot spells, as it was quite possible for a person to walk about beneath them in comfort. This spot must be very moist in winter, although I saw no actual stream, and, being low, the position was sheltered from cutting winds, which, in my opinion, is of the greatest importance.

A selection of these elegant subjects should include the following:—

ARUNDINARIA ANCEPS.—A beautiful tall-growing species often reaching 18 feet in height. Of a spreading character, it quickly forms a large clump by underground suckers.

A. AURICOMA is a dwarf kind from 2 feet to 3 feet high, the rich golden foliage becoming intensified as the season advances. I have used this brilliant plant as an edging to beds of tall shrubs, in which position it is most effective, especially so when associated with the purple Barberry, *Ribes sanguineum*, and *Buddleias*. Planted in full sunshine and cut to the ground annually (in March) is the most satisfactory way of treating this kind, as in this way there is an absence of old and shabby leaves, and the young, fresh growths are seen to great advantage. In warm soils it spreads rapidly and is very suitable for small gardens.

A. FASTUOSA.—A fine species which forms a stately column, its lofty, plumed canes presenting a richness excelled by no other kind. As an isolated specimen it is one of the best.

A. NITIDA.—A favourite wherever grown. It is one of the hardiest of Bamboos, spreading rapidly under favourable conditions.

A. SIMONI is a vigorous, tall-growing kind, reaching 18 feet and more with age. It requires plenty of space and is seen at its best when half-developed.

A. JAPONICA.—This well-known form makes a dense mass of shining evergreen foliage and will grow almost anywhere. For grouping beneath and near summer-leaving trees or bordering woodland rides it is most suitable. I saw this accommodating plant a few years ago growing over the roof of an old cave in the Deepdene Gardens, Dorking, where there were scarcely more than 6 inches of soil, which at times must have been very dry, but such a thicket had it become that a dog could scarcely have got through it.

A. PALMATA.—A handsome plant reaching about 5 feet in height, this should be planted only where it can spread freely. As undergrowth in woodland or wild garden, or as a large colony near the water-side, it is seen to advantage, the large leaves, each over a foot in length and 3 inches across, being very striking, especially after rain.

A. PYGMAEA is the smallest Bamboo in cultivation. As a groundwork to small trees or large shrubs it is excellent, carpeting the whole surface with its soft, fresh, green leaves. It should not be planted near choice subjects.

PHYLLOSTACHYS.

In this group we find the noblest forms of the whole family.

P. AUREA.—This is not one of the tallest, generally reaching from 12 feet to 14 feet, with an equal spread; nor does it ramble, but it is much sought after for isolated specimens on lawns. Its pale green leaves borne on rather erect, greenish-yellow stems are pleasing, and although so popular as a single plant, it is one of the most effective when boldly grouped.

P. CASTILLONIS is a slender form which reaches from 8 feet to 10 feet in height. Under favourable circumstances this is very fine, its long leaves being usually striped with gold in their early stages, while the canes are quite golden and remain so to maturity. I have found this Bamboo rather tender in a young state, but it seems quite able to take care of itself when well established.

P. HENONIS.—A well-developed plant of this Bamboo is unsurpassed by any other kind. Reaching from 12 feet to 14 feet or more in height, this kind is not easily mistaken, while its distinctness stamps it as one of the most precious of Bamboos.

P. MITIS is the tallest of the group, reaching in its own country (Japan) 60 feet in height, while some examples have attained 20 feet in this country. It is remarkable for its immense canes, often 2 inches thick, and its rapid growth. A well-sheltered position should be chosen for this, as the wind has a disastrous effect on the newly-developing canes. In Japan the young shoots are cooked and eaten as a vegetable. A curious and distinct feature of this form is the rough, gritty-like surface of the canes.

P. NIGRA reaches, under generous treatment, 20 feet in height. Its lofty black stems and shining green foliage are its great attraction. This is a splendid form either for grouping or as an isolated specimen in medium-sized gardens and one which keeps within bounds.

P. QUILLOI.—The feature of this is its thick, highly-polished canes and large leaves, the latter about the largest of this group. It reaches about 18 feet high in this country. I have noticed that in an adult state this striking form becomes a little naked towards the base, which shows up its thick canes to advantage, adding to, rather than detracting from, its stately beauty.

P. VIRIDI-GLAUCESCENS is a free-growing and very distinct Bamboo reaching 18 feet or more in height, throwing out its long,

slender, branching growths in every direction, and forming a huge, spreading, and arching mass. I consider this one of the most beautiful Bamboos in cultivation. It increases rapidly, therefore plenty of space should be provided at the time of planting.

P. KUMASACA is a gem for small gardens. Its curious zigzagged stems and glossy dark green leaves, arranged in fours, have always appealed to me. It is a unique and charming little plant easy to grow, and, unlike most of the dwarf kinds, stays at home. It is suitable for low, moist spots in the rock garden and as a foreground to the taller species.

E. MARKHAM.

CRATEGO-MESPILUS.

This composite name is used for three hardy trees which are hybrids between the Hawthorn (*Crataegus monogyna*) and the Medlar (*Mespilus germanica*). Two of the three trees, *C.-M. Asnieresii* and *C.-M. Dardari*, are of peculiar interest, inasmuch as they are graft hybrids and behave in a similar manner to *Laburnum Adami*, a better-known graft hybrid between the *Laburnum* (*L. vulgare*) and the *Purple Broom* (*Cytisus purpureus*). The two *Cratago-Mespilus* forms referred to occurred after a *Mespilus* had been grafted upon a Thorn. Both grow into bush-headed trees, and bear sometimes two and sometimes three distinct types of flowers, leaves, and fruits. The majority of the flowers are in clusters, but are larger than those of the Hawthorn. There are, however, others which closely resemble those of Hawthorn, and others again that are borne singly and are similar in size to those of the Medlar. Similar remarks apply to the fruits. Apart from their scientific interest, they are very beautiful flowering trees, blooming as freely as any Thorn. The third hybrid is *C.-M. grandiflora*, which has been called *Mespilus Smithi*, *Pyrus lobata*, etc. This is considered a natural hybrid between the Thorn and the Medlar, and was originally found wild in France. It forms a fine tree of medium height with a dense, wide-spreading head, bearing distinct oval leaves and small clusters of white flowers, each one about 1 inch across. All are easily grown, thriving in ordinary loamy soil and are well worth planting where interesting and out-of-the-way trees are encouraged. The full history of these graft-hybrids is to be found in "Trees Hardy in the British Isles," by W. J. Bean, where also fuller descriptions of the trees may be found. D.

NOTES AND REPLIES.

Escallonia Philippiana.—This, which is at its best usually about midsummer, is a very beautiful and distinct *Escallonia*. Furthermore, it is the hardiest member of the genus. It forms a sturdy-growing yet graceful-habited shrub that will reach a height of 6 feet or more. The flowers, which are borne on the ends of short twigs, are pure white, and when at their best so numerous that the entire specimen is quite a mass of that tint. A notable feature is the fact that the blossoms are totally without the tube common to many *Escallonias*, and also that the plant is summer-leaving. It is a native of Valdivia. A very desirable hybrid between *E. Philippiana* and *E. punctata*, *E. Langleyensis*, has come very much to the front within recent years. This flowers in June. The first blooms opened with me on the last day of May. They are of a bright rosy-carmine colour, and very numerous. In the open ground this will form a large, spreading bush as much as 8 feet in height.

It is just the thing for furnishing a wall or fence, as, if the main branches are secured to the support and the secondary ones allowed to dispose themselves at will, a charming effect is produced. This Escallonia is often spoken of as being evergreen or sub-evergreen in character, but, with me, in the south-west of London, it loses practically all its leaves during the winter. The new ones come out with a rush, so that, once started, the plant is soon a mass of foliage. This Escallonia can be readily struck from cuttings of the half-ripened shoots put into a close frame till rooted.—K. R. W.

Escallonia macrantha.—For the south and south-west counties this is a useful evergreen. Its partiality for sea air is noticeable in many southern gardens, where it is met with as a fine bush or hedge in exposed places; in fact, it might well be used more widely than at present as a hedge plant, for it is far more interesting than many now used for the purpose, and, where it succeeds, might well take the place of Privet. On Mr. Dorrien-Smith's bulb farm at Tresco it is used as

bare bank of poor soil has to be covered this is the best method to adopt. It can be used as a companion to the common Broom for clothing rubbish-heaps at collieries and railway embankments, in which places it can be sometimes made to act as a nurse for seedling trees.—W. K.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

OXALIS ENNEAPHYLLA.

This beautiful plant, from the Falkland Islands, is among the choicest of subjects for the rock garden. Well-grown specimens are not so often met with as one would like, as in many gardens it is regarded as somewhat capricious. The rootstock is in the form of an elongated, scaly bulb, and the foliage is extremely pretty. The flowers, pure, glistening white with a greenish tinge at the base of the petals, are carried upon slender stems similar to those supporting the leaves. The flowers appear about the

temperature from 20 degs. to 50 degs. and a summer one of 45 degs. to 65 degs.

This tells us at once that *Oxalis enneaphylla* will not be at home in a sun-baked position. Yet it is most sensitive to the sun's influence; it shuts up at sundown, and is shy about opening on grey, sunless days. A cool position, shaded from the sun during the middle of the day in well-drained stony soil, should suit it.

It flourishes and increases well here on an open ledge where it gets the morning sun, but is partially shaded by rocks for the greater part of the day, in soil containing plenty of crushed granite and small stones. It can be propagated without much difficulty, just as it comes into growth in the spring.—J. HARPER SCAIFE in *Irish Gardening*.

NOTES AND REPLIES.

Arenaria montana.—I have seen this in many gardens, but nowhere have I met with more flourishing plants than in Mr. Galbraith's delightful garden at Terregles, by Dumfries. Here, *Arenaria montana* is planted by the rockwork edging of a slightly elevated bed, and it is this season a mass of white flowers, hardly a leaf being visible among the thousands of blooms. For covering a stone edging to an elevated bed it is delightful, and it is equally fine when hanging down over a rock face. In some places it is a little difficult to establish, but, once settled down, its only defect is its tendency to encroach upon its neighbours.—S. ARNOTT.

Eriogonum umbellatum.—A patch of this in a sloping pocket of the rock garden has given me pleasure all through the winter, the tufts of leathery, evergreen foliage tinged with bronze being very attractive. It is now in blossom, but the flowers are not specially pleasing, and I should not grow it for the sake of the blossoms. The flowers are in flat heads, and of a very pale, almost greenish, yellow. I give it a little lime in the soil, which seems to suit it well, as it spreads fairly rapidly, and the prostrate stems layer themselves so that it can easily be increased. It is of neat habit, and, though growing freely, does not ramp.—W. O.

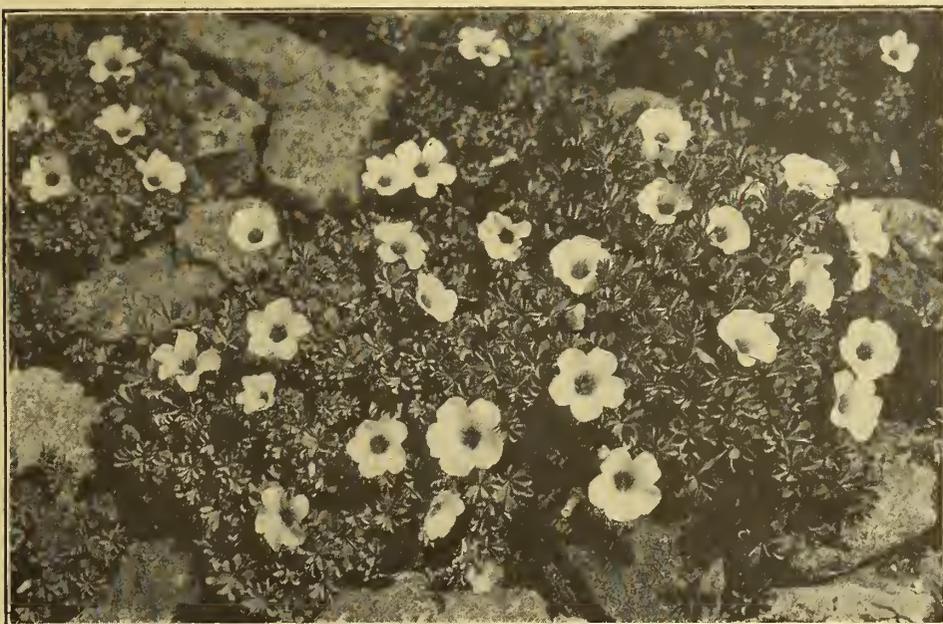
Geranium Robertianum album.—The white form of the wild Herb Robert is much dwarfer in habit and more compact than the type, and is very pretty growing in the chinks of a retaining wall. Though only biennial, it seeds freely, and never sprawls about like the common form. I grow both on a retaining wall, as I think both are very pretty, though the common pink type seeds so freely that it takes up more room than I can spare it.—W. O.

Campanula barbata.—This does very well in a moraine made of crushed brick with a little soil and lime, improving year by year, established clumps throwing up a great number of flower-spikes. The flowers remind one very much of those of a miniature Canterbury Bell, and are of a soft luminous pale-blue colour. It is easily raised from seed, but unless grown in the moraine seems to be of only biennial duration.

Valeriana supina.—This is a pretty little plant of compact habit, growing only a few inches high, having small, flattish heads of tiny flowers of a pale pink. It looks very neat in the rock garden, and a good patch of it is very pleasing. It likes a soil with a little lime in it and a flat, sunny pocket suits it well.

Stachys corsica.—This pretty little carpenter seems happy in any open soil, and blossoms with great freedom over a long period. It is of very neat habit, and the curious flattish flowers, of a pinkish-white colour, nestle closely among the foliage. It quickly spreads, and can readily be increased by division.

Morisia hypogæa.—In spite of the wet winter this has come through very well in my London garden, and at the beginning of May two little clumps of it were covered with their delicate flowers of a pure rich butter-yellow. Many people seem to lose it in the winter, but it does not appear at all difficult to suit in my garden, where it is grown in a retaining wall in warm, porous soil.—N. L.



Oxalis enneaphylla in the gardens at Lilford Hall, Oundle, Northants.

a wind-break between bulb fields, and there forms fine hedges 5 feet or 6 feet high. When allowed to grow freely it forms a fine bush up to 10 feet or more in height and as much through. The rose-red flowers are borne freely during summer and are very effective. Where it cannot be grown as a bush in the open ground it can be used with good effect as a wall shrub, particularly if it is not too severely pruned.—D.

The Hairy Broom (*Genista pilosa*).—Found wild in some parts of the British Isles, this dwarf Broom is an acquisition for gardens, particularly where a low covering is required for an exposed bank of poor soil or a ground covering for a bed of tall bushes. Growing from 18 inches to 2 feet high, it spreads over a wide space, and continues in good condition for many years without any attention in the way of pruning or top-dressing. The golden flowers are borne very freely from the middle of May until the middle of June, an established group being a perfect sheet of gold for the greater part of that time. Seeds are produced freely, from which plants, which after a year or two in the nursery quarters can be moved to permanent places, are easily raised. Seeds can also be sown in the positions the plants are to occupy, and when a

middle of May and are effective for a month. This plant succeeds with me in a cool, sandy soil, in a position exposed to a fair amount of sun. A cool rooting medium and abundant sunshine are the principal requirements for the successful cultivation of this charming plant.

F. W. GALLOP.

Lilford Hall, Oundle.

—Opinions will differ as to which is the most beautiful of the rock garden plants, though there is little doubt but that *Oxalis enneaphylla* would easily get a place among the first half-dozen. It is a fascinating and extremely beautiful plant with crinkled glaucous grey leaves, in themselves very attractive. The flower, somewhat like a *Convolvulus* in form, but pearly-white, with a splash of purple at the base of the cup, must be seen to be properly appreciated. It is not only unlike anything else in the rock garden, it is almost without a rival in its loveliness. Yet it is hardly an alpine, as it comes from the Falkland Islands, a bleak inclement country with a rainfall greater than the average for this country, and a winter

VEGETABLES.

LATE PEAS.

PREPARATION for the sowing of these should now be made. Deeply-worked soil is essential for this crop if good results are looked for, but on soils which dry out quickly a little extra trouble in the way of preparing the drills beforehand pays in the long run. This consists in digging out the soil where the rows are to stand—which, by the way, should not be closer together than 12 feet—a good spit in depth, and, after breaking up the bottom with a fork, putting in a layer of rotten manure some 3 inches thick. Then return the soil, breaking it down to a fine condition when doing so, and place the surplus on either side of the drills, so that the latter will lie, as it were, in a kind of basin and act as a conservator of water, whether applied artificially or when it falls in the form of rain. Mulchings can then be easily applied, should the nature of the season demand it, later on. The seed should be sown thinly, so that the plants have ample space for development, as the majority of late varieties are of a robust growth.

Of varieties there are several which, if sown at the same time, will afford a good succession or render a supply more certain than if one sort alone is selected. *Ne Plus Ultra*, in its improved form, is on some soils hard to beat. *Autoerat* enjoys a good reputation, and in some gardens succeeds better than the first-named variety. *Gladstone* is another reliable variety which in some seasons continues to yield until cut down by frost. *Continuity* and *Late Queen* are also worth growing where the demand is large and Peas are required as late as they can be had. To succeed the main crop sorts and to come into bearing before any of the foregoing, *Eureka* stands unrivalled. G. P. K.

SECURING THE STEMS OF ASPARAGUS.

I WISH you would give us an article upon the value of supporting the long shoots of *Asparagus* with the seeds attached. Recent winds have blown down a good many of mine, and, labour being so scarce, one wonders if the snapping of them is really any great damage to the beds.—J. D. THORBURN.

[This is not practised so often as it should be, and yet it should be looked upon as one of the most important details connected with its culture. One might go into numbers of gardens during the summer and find the *Asparagus* quarters somewhat neglected, the tops bending over. Even if not partially broken through, they are in such a condition that they cannot perform their proper functions—viz., storing the roots with nutriment for another season's crop. Considering that *Asparagus* is one of the most important of vegetables, it is surprising that it should so often be left to take care of itself, and yet when the season comes round the crop is eagerly looked for; in fact, when vegetables are scarce it has to prove a veritable sheet anchor. Being truly herbaceous, it is all the more desirable that the growths be well cared for. We have known seasons when the stems would have been quite free from injury until the summer was far advanced, or, indeed, well into autumn, before any violent storms have occurred, but one can never tell what may happen, and it is always best to be well prepared.]

The process of staking is not at all difficult, and the time it takes is hardly worth mentioning. Where the crowns are very strong and planted some distance apart, these should have a stake placed to them

individually, taking care that the stakes are not thrust into the centres of the crowns. In other cases stout stakes may be placed at each end of the lines, and a few others intermediate down the rows, or according to the distance, these being for the support of long and slender rods, and to which the stems must be tied. Another advantage, besides protecting from wind-waving, is that by being tied upright, direct sunshine and light reach the crowns. Not only established plants, but seedlings also should be carefully staked.]

NOTES AND REPLIES.

Leeks—sowing versus planting out.—I have given both ways many trials side by side, and am convinced, when wanted for ordinary kitchen use, that sowing where to grow is the better way. I sow the seed early in March on land that has been trenched, working plenty of manure into the bottom spit. Before sowing, the soil is made very firm. A sprinkling of poultry-manure and soot is thrown over the seeds, this giving them a start. When large enough to handle they are thinned to 4 inches apart. During the growing season these receive two or three dressings of soot or manure-water. In the early winter the soil is drawn up to them in a ridge 8 inches high. This blanches them and protects them. The plants are about the thickness of a large broom-handle. If Leeks are wanted for exhibition then the seed must be sown early in heat, planting out in trenches, and giving generous treatment.

GARDEN FOOD.

NOTES AND REPLIES.

Helpful hints to health and happiness.

—Mrs. Earle has written a little book with the above title. It is full of her ideas of food reform and kindred subjects, and much good sense and good cooking, too. It costs 2d., and is published by Simpkin, Marshall, and Co., and may be had from all booksellers. We quote the following:—

A great obstacle to the change of diet is the family doctor, and I wish to warn people that if they consult their doctor no change of diet will be tried. Doctors and surgeons are good kind men on their own lines, and devoted to their profession as long as it means curing illness by drugs and operations, but a little reflection teaches that the members of a learned profession are naturally the very persons least disposed to innovation upon the practices which custom and prescription have rendered sacred in their eyes. The state which is called disease, or being very ill, belongs to the doctors and surgeons, the hospitals and nurses; but keeping well and curing small ailments, both our own and our children's, depend on ourselves.

The Newtown Pippin.—An article in a recent number of *GARDENING ILLUSTRATED* on the above has brought us a few lines from the Rev. H. S. Clubb, a minister of the New Church, Philadelphia, and President of the Vegetarian Society of America. Mr. Clubb believes that it was the *Newtown Pippin* that made the importation of Apples to England a possibility. In spite of the success of this Apple, he tells us it is seldom seen in American markets. Mr. Clubb had a good deal to do in his earlier years with the development of *Apple-growing* in the States. After the war between North and South (in which he was

twice wounded) he settled in Michigan and began to grow fruit. His success with Apples was so great that he was invited to visit other States and advise how to proceed. Thus he did great service for America and for fruit lovers.

WHITE VEGETABLE SOUPS.

MANY housewives consider that white soups are more trouble to make than the ordinary kinds. This is a mistake. A white soup takes less time to prepare; in fact, many of them, if made from cold boiled vegetables, might come under the heading of "fifteen minutes" soups, they are cooked so quickly. A good clear vegetable stock may be used. The water in which Celery, Haricot Beans, Salsafy, Potatoes, Cauliflower, or Parsnips have been boiled should always be saved for this purpose. To make a good

POTATO SOUP take four large Potatoes (or the equivalent in cold boiled Potatoes), boil, and mash them finely. Melt a tablespoonful of butter in a clean saucepan, add a tablespoonful of flour, and fry for three minutes. Chop a medium-sized English Onion, which add to the mixture in the pan and cook for another three minutes. Do not allow the contents of the pan to colour in the least degree. Finally, pour over the fried flour and Onion a pint of boiling water or clear, colourless vegetable stock. Flavour sufficiently with salt and pepper. Stir well and simmer until the whole is well blended and smooth. Mix the mashed Potatoes gradually into a pint of new milk, and add to the mixture in the saucepan. Simmer for ten minutes and serve with tiny squares of fried bread or toast in a separate dish. A tablespoonful of finely-chopped Parsley should be sprinkled on the top of the soup just before it is sent to table. A tablespoonful of good, rich cream improves this soup.

CAULIFLOWER SOUP is easily and quickly prepared, provided, of course, you have some cold Cauliflower at hand, otherwise time must be allowed for its cooking. Take a pint of water, one finely-chopped Onion, all the white parts of a Cauliflower, also chopped, salt and pepper to taste. Simmer the Cauliflower and Onion until quite tender, and add a tablespoonful of butter, a breakfastcupful of white bread-crumbs, and a pint of new milk. Bring the whole to a boil and simmer until the crumbs have pulped. This will take about ten minutes. Beat with a fork for a few seconds and pour into a tureen. Sprinkle a little chopped Parsley on top and serve at once. To vary this soup omit the Onion and sprinkle a tablespoonful of grated Parmesan cheese into the soup the instant it has been poured into the tureen.

The following, although not strictly a white soup, is made with milk and is very nourishing and good. Boil half a cupful of rice in just sufficient water to cook it. When tender rub it through a sieve and return to the saucepan with three breakfastcupfuls of milk, a tablespoonful of Onion-juice, salt and pepper to taste, and two cupfuls of Tomato purée made by boiling Tomatoes with a little water and rubbing them through a sieve. Simmer gently for three minutes, then add a dessertspoonful of flour rubbed into the same quantity of butter, and continue simmering the soup until the whole is smooth and well blended. If too thick add a little more milk. Serve with tiny squares of toasted bread. Nutmeg or mace can be added to the flavouring if this is liked, and the top can be garnished by sprinkling it with chopped Chives or Shallot tops. H. THORBURN-CLARKE.

OUTDOOR PLANTS.

GLOBE FLOWERS IN ROUGH GRASS.

GLOBE FLOWERS are handsome, hardy things, not often well done in gardens. Their blooming time is not very long, and their cultivation in flower gardens is not the best way. We want a piece of coarse Grass to put them into. The one shown here is just on the edge of a little plantation of shrubs, and the Grass is not mown. The plants begin to bloom well in that position, and give us a pleasure we never had when cultivating them as mixed border plants, though some kinds of Globe Flowers are well worthy of a place in borders. W.

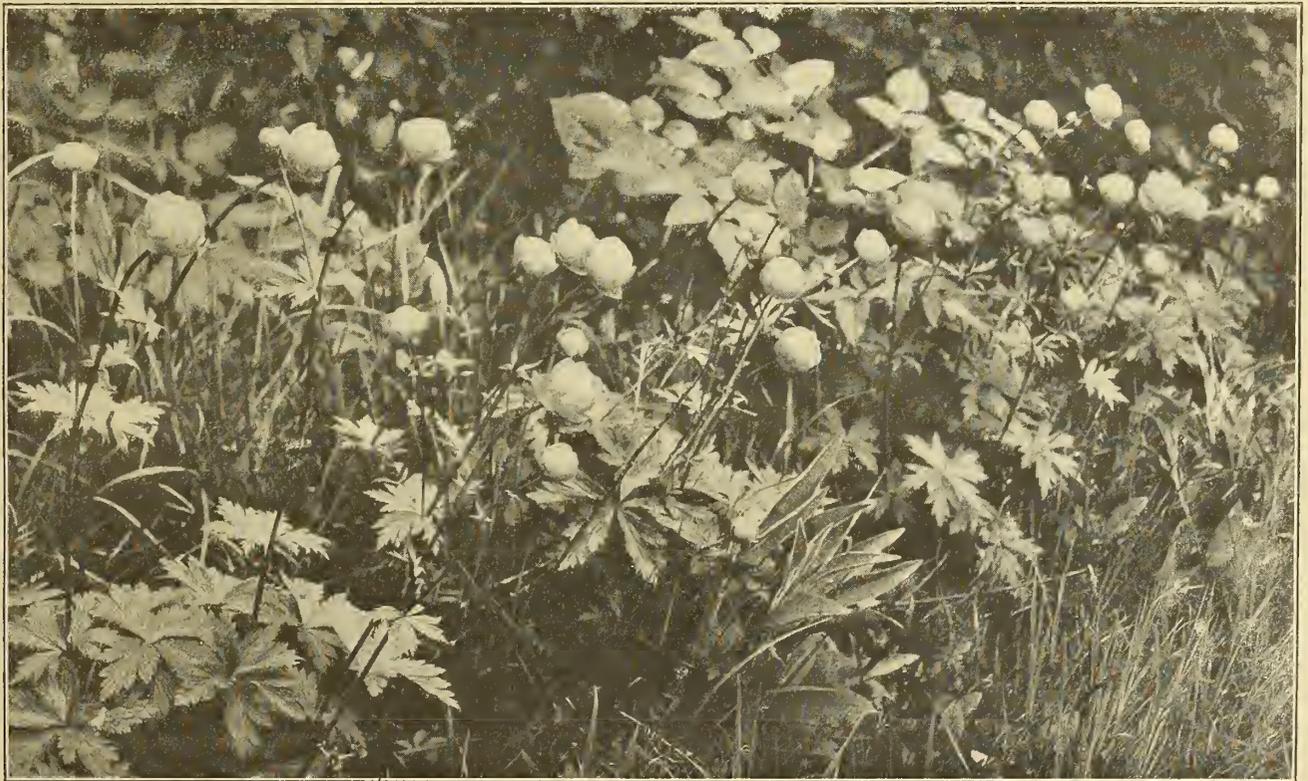
AMONG THE HARDY FLOWERS.

MONARDAS.—Is "Kirk" doing justice to *Monarda didyma* in his note on p. 286? There are several varieties, some of which are very fine and others very

permanent quarters about the following April. I have found that plants divided in autumn or spring are liable to suffer from the attacks of slugs. In light soils Pyrethrums are greatly benefited by cow-manure in the soil, as also by occasional soakings of weak liquid manure before they come into bloom.

SUN ROSES.—These are among the glories of the garden in June, and I do not wonder that they are appreciated by those who have long known them. I am gradually trying to increase the number in my garden by securing good varieties, and I have also raised some from seeds. I have not secured anything which is very new among the seedlings, but I have obtained quite a number of plants with a variety of colours and at a cheap rate. I found them no more difficult to raise than any other hardy perennial. I do not like the double varieties so well as the singles. My great objection to most of the doubles which I have met with is that their flowers

caterpillar in some clumps of *Iris sibirica*. I could not understand at first why the plants were not flourishing, until I investigated the matter carefully and found that in many cases the interior of the stems had been eaten away. The caterpillar responsible for the damage is the larva of *Apamea ophiogramma*, a smallish moth which at one time was reckoned somewhat of a rarity by collectors, but of late years has occurred pretty abundantly round London. The first sign of the caterpillar's presence is that the central leaf turns yellow, and the only thing to be done is to cut the whole shoot off close to the root, when the caterpillar will be found in the heart of the shoot and can be destroyed. In gardens it usually feeds on the stems of Ribbon Grass, where its presence can be detected in the same way, by the withering of the central leaf. It is getting quite a nuisance in my garden, and this year I found it had attacked a small clump of *Iris Tolmieana*. I wonder



Part of a group of Globe Flowers in the Grass.

poor, both in colour and in size of flower. A good deal also depends upon the soil, and it is just possible that in "Kirk's" garden it may not be of the kind liked by the Monardas. A good, rather moist soil I find suits the Monarda. The best variety is known as "Cambridge Scarlet," in which the flowers are large and of a rich scarlet.

PYRETHRUMS.—These are useful in the garden and also for cutting. The best time to divide them is, I find, as soon as they have finished flowering. My practice is to lift the plants which I wish to divide as soon as the bulk of the flowers is over, cutting them up with a sharp knife into almost single crowns, retaining, if I can, a bit of root on each of these. The pieces are then dibbled out into a bed made up of loam, leaf-soil, and a little sand. I make the soil firm, water frequently if the weather should be dry, which it often is at that time, and shade them slightly from strong sunshine for a few days. They rarely look back, and are put into their

are too heavy for the stalks and hang down. That bright scarlet one called Mrs. Earle is an exception, and there are, it appears, some sports from that variety with the same excellent habit. The advantage of the doubles is that they are not so evanescent, but the flowers are lumpy compared with the delightful blossoms of the single-flowered varieties. If *Helianthemum* are planted where the sun does not reach them too early in the day they can be had in bloom in the afternoon.

ANEMONE NARCISSIFLORA.—What a charming plant this is! It gives me little or no trouble and flowers every year. It is said to like a calcareous soil, but in my garden it does not get this, and is happy in ordinary loam. I have it in sun and shade, and my plants in both cases are doing well.

AN AMATEUR OF HARDY FLOWERS.

Caterpillars in *Iris* stems.—I have during the last year or two been a good deal troubled by a small stem-boring

if others have been troubled in the same way. I have also had it attack *Iris stylosa*.—N. L.

THE CORNFLOWERS.

Among the many things known familiarly as common flowers that help to beautify our gardens at this season, Cornflowers, both annual and perennial, take a front place, whether in small patches or massed on a large scale. In the latter the most satisfactory results are obtained when a little trouble has been taken in the selection alike in the way of height and colour. Blue is the predominating shade among the annuals, and so, for the sake of variety, one has to save some nice flowers among the clarets and also in the white, getting the latter as clear as possible, and avoiding the dull, dingy flowers. There is nothing at present to equal the exquisite whiteness of, for instance, some of the *Campanulas*, but careful selection effects great improvement. The dwarf strains of the annuals are pretty and useful, but if

not available, their places can be filled by the perennial *Centaurea montana* and its varieties in varying shades of blue, dull red, lilac, white, and sulphur, and these, being of dwarf habit, can be used occasionally among and in front of the taller annuals.

This system of gathering together the representatives of any particular family in groups gives very pleasing results, and might be extensively carried out where space permits, anything of indifferent quality being weeded out as better varieties come to the front. There is nothing much among the taller perennial *Centaureas* worth a place other than in the wild garden, except it may be *macrocephala*, which furnishes a colour not to be found in any of the annuals. A garden close by was very bright at this time last year with an association of blue *Cornflowers* and *Lilium candidum*, but this season the display is lacking, the whole of the Lilies having completely collapsed, not so much as a single spike of bloom. I suggested the advisability of clearing them out and substituting one of the new white varieties of *Lupinus polyphyllus*, which would be a very good companion for the *Cornflowers*. E. B. S.

Hardwick.

NOTES AND REPLIES.

Iberis Little Gem.—I fear I am repentant regarding *Iberis Little Gem*, which "J. S." criticises so unfavourably in your issue of June 10th (p. 282). It would be useful to know what your correspondent calls "a fair trial." In its small stages it does not show its real value, and nobody will ever claim for it the "vigour" of other hardy evergreen *Candytufts*. It is just in the latter point that the defect of the larger varieties is evident, except for those with large rock gardens or other places where strong-growing plants can be safely planted. *I. Little Gem* is a plant for many places where these stronger-growing *Iberises* cannot with advantage be utilised. It is not out of place in the smallest rock garden, and is thus a boon for the small garden. It is such a slow grower that it takes some time to reveal its true worth, and I know that an established plant here, which has been in its present position for a good number of years, has for some time never failed when in bloom to please even the most critical. I have seen others quite as good. I have handsome plants of the other evergreen *Candytufts* and think highly of them, but, given a fair chance, *Little Gem* deserves the fullest consideration from those who wish a neat *Iberis* of slow growth, unaggressive in its ways, and giving a plentiful supply of white flowers in its season. The failing of the other evergreen *Candytufts* is usually that of too rampant growth for many places. I have some masses of these 4 feet and 5 feet across, and do not wish to reduce their size, but *Little Gem* is a plant of a different kind, cultivated for merits which to me are undeniable when it is well established and thoroughly happy. Long experience has taught me that plants of little or no beauty in some places are of the highest charm in others. I have seen and also grown this *Iberis* where it was a disappointment for a few seasons, but where it afterwards displayed its true worth.—S. ARNOTT.

Thalictrum aquilegiaefolium.—This plant will soon be in bloom. I like it as well as any of the *Thalictrums*. The height is about 3 feet, and it usually blooms very freely in June and July. The flowers are creamy-white, and the foliage also is beautiful.—E. T. ELLIS, *Westwood, Ecclesall, Sheffield.*

CHRYSANTHEMUMS.

FINAL POTTING OF CHRYSANTHEMUMS.

CHRYSANTHEMUM-GROWERS will now be very busy attending to the final potting. Inexperienced growers very often think that older cultivators use very elaborate composts for this potting. An ideal compost is one which will for some time furnish all the nourishment—with clear water—that the plants require, then act as a good store-house for the liquid manure and artificial manures given, without becoming sour and water-logged. A good compost is fibrous loam which has been cut and stacked outside for about three months, two parts half-rotted leaf-soil and horse-manure, one part old mortar rubble and coarse silver sand. To the above add to each bushel of the combined parts a 3-inch potful of soot, bone-meal, and wood-ashes respectively. All the ingredients should be thoroughly mixed. I am not in favour of adding much artificial manure at this stage, as I think it is best not to force the growth, but to feed later on. Ten-inch pots may be used for the strong-growing varieties, but 8-inch ones are large enough for the others, except March and April rooted plants, which are generally confined to one stem and one bloom. These should be grown in 6½-inch and 7-inch pots. It is not the bulk of the drainage material, but the way in which it is arranged in the pots that ensures the free passage of the water. One hollow crock over the hole with a few small ones, with thin pieces of turf placed on them, will make good drainage. Both the pots and the crocks must be washed and used while they are perfectly dry. Examine the plants carefully. If the roots are numerous round the outside of the ball of soil, lose no time in getting the plants repotted. For this purpose the soil will be in just the right condition if the plants are watered about two hours before, but no watering must be done if the soil is moist. Each plant must be potted so that ample space will be left for a top-dressing and for watering. Make the compost in the bottom of the pot firm and even, and also that used for filling in between the pot and the ball of soil. No new soil must be placed on the old ball, neither must the latter be rammed down with the stick. Where new stakes are required they should be placed in the holes made by the smaller stakes, then damage to the roots is avoided.

If possible, the plants should be placed in their summer position when taken from the potting-bench, as early exposure to light, sunshine, and air is beneficial. The plants should be arranged in rows running due north and south, if this is convenient; and if there is a natural protection, about 20 yards away, against the south-west winds, so much the better. Specimen plants and late-flowering varieties, too, must have ample room in an open position, as the best results are obtained from gradually-matured wood. G. G.

Chrysanthemums planted in open ground.

—Last year reference was made to this plan in your pages, but no description how to proceed was given. It was merely stated market gardeners grew quantities so and lifted them in autumn. Please say how soil is prepared, how far apart to plant, if any stimulant is applied, when to lift into pots, and anything else desired? I grow only for conservatory and house decoration, and have all sorts, but more of what I see described as decorative and late varieties, and I wish to save heavy labour involved in potting on, watering, etc.—BRENTWOOD.

[Ground that has been prepared as for

other crops—that is, deeply dug and kept free from weeds—should do for planting out *Chrysanthemums*. Choose an open spot. In the matter of moisture the season will, of course, have a lot to do with it; but to be prepared for drought in the case of this thirsty subject it is well to plant in trenches slightly lower than the surface, so that when water is applied the roots of the plants get it. Rows 1 yard apart, and each plant 18 inches from its neighbour, should allow ample space for the strongest grower. The sorts, of course, vary in growth, but each should be staked and properly trained. The branches may be thinned at will, but the points of all should be allowed to proceed untouched. It is not safe to leave the plants in the ground after the first week in October, and at this time, whether placed in pots or planted into soil in glass-houses, one should be careful to note that the roots do not want for moisture. If the soil approaches dryness the plants cannot be lifted with good balls, and without this the flowering will not be satisfactory. It is not advisable to feed if the leaves be of good colour, as such practice would cause gross growth. When the flower-buds appear, assistance in this direction will be needed. When lifted in early autumn the plants should be kept close and shaded and sprinkled overhead for a few days. Afterwards they should be treated in the matter of air as those that have been grown in pots the whole summer. Later varieties, not perhaps showing buds by the time named, should be lifted then, because frost would harm them.]

INDOOR PLANTS.

NOTES AND REPLIES.

Feeding Pelargoniums.—I should much like to know the best stimulant to apply to *Zonals* specially to increase the size and quality of blooms. I have quantities of cow and horse manure, and lately have been using the former enclosed in a sack in a large can, adding water as the liquid is used up, but find little result. What do those who grow for exhibition use? My compost is five parts light turfy loam, one leaf, one manure, and one sand.—BRENTWOOD.

[Other conditions being satisfactory, you should find the manure used an aid to size and quality of bloom. One could not wish for a better stimulant than that from cow-manure. Those who grow for exhibition use sulphate of ammonia to put size and colour into the flowers; but, after all, the chief thing is strong and healthy plants. In such a compost as you describe your plants should be such. In the case of your *Zonals*, perhaps you have made the mistake of allowing the flower-trusses to develop from the time the plants were struck from cuttings. A good plan is to remove these until a plant has had time to produce a specimen of a bushy nature; then let it blossom. To enhance the size of trusses and pips, manure-water may be employed, and besides this it is well to pinch out the points of the shoots above the trusses of bloom.]

Greenhouse flowers from seeds.—At the recent Chelsea Show the value for greenhouse decoration of plants that can be raised from seeds was well exemplified. Some of our prominent seed merchants vied with each other in showing what a variety of plants can be obtained in this way. Among them may be mentioned *Gloxinias* of various colours, *Streptocarpis*, of which the same may be said, *Calceolarias*, especially those of the herbaceous section, though of other kinds the variety *Clibrani* was very conspicuous. *Schizanthuses* were freely represented, as

also were Petunias, Stocks, Primula obconica, and others. The date of the show is a very suitable time for Cinerarias, and they were, of course, very much in evidence. Some annual flowers usually regarded as outdoor subjects served to show their great value for greenhouse decoration when grown in pots. Among them may be noted Phlox Drummondii, Nemesias of sorts, different Clarkias, and Mignonette. The different hybrid Nicotianas were also seen to considerable advantage. The cheap rate at which seeds of the above-named can be obtained and their easy culture, combined with the fact that they are not long in attaining the flowering stage, are all points in their favour.—W. T.

FRUIT.

GOOSEBERRY WHINHAM'S INDUSTRY.

APART from its value when ripe, Whinham's Industry is a first-rate variety to grow for gathering green. Especially is it valuable where large quantities of small,



Part of a fruiting branch of Gooseberry Whinham's Industry.

green Gooseberries are required for bottling. Whinham's Industry is a very prolific variety, and is, in addition, a sure and consistent cropper. The berries, red in colour, when ripe are of a good size, and if not of the highest flavour are yet of very fair quality.

LATE VINES.

THESE are now in flower, therefore syringing has been discontinued, but as a too dry atmosphere is detrimental to setting at this time of year, damping of the foot-paths and the surface of the borders is practised as usual. With the exception of a few rods of Gros Colman, which are on Madresfield Court Black Muscat and Lady Downe's respectively, and do not set well without artificial aid, an occasional tapping of the rods suffices to disperse the pollen and ensure a good set. As soon as this is accomplished free ventilation in accordance with the weather will be indulged in, as it is not desirable from a labour point of view to hasten the swelling of the berries more than can be avoided, as a house of Muscats is now engaging attention in the way of thinning, and must be finished before a start is

made with the former. When this takes place Black Alicante and Gros Maroe will be thinned first, in consequence of the berries soon becoming wedged, and difficult to deal with if neglected for a few days. Stopping of snblateral growths and the final tying of laterals into place succeed the completion of pollination, and with a good soaking of tepid water the border will, for a few weeks, need no serious thought bestowed on it. The weather will now soon be warm enough to dispense with fire-heat, but on dull and wet days damping down must then be cautiously done, if not actually suspended, for the time being. Ventilating by the front lights should also be eschewed until the berries have finished stoning or an attack of mildew may result. The proper manipulation of the top ventilators will suffice to maintain the temperature at the proper figures until that period is reached.

A. W.

PEACH TREES IN UNHEATED HOUSE.

I should be obliged if you will inform me as to the treatment of Peach-trees grown under

to allow for the extension of the trees. If there is not space for the two basal shoots to be laid in, then reduce them to one, giving that on the upper side the preference. When properly regulated this young wood should stand about 4 inches apart all over the trees. This then will serve as a guide and enable you to judge how best to deal with the growths now present on the tree, only instead of removing them with the finger and thumb, as when disbudding, recourse will, we surmise, have to be had to the use of a knife to effect their removal, so that neither bark nor wood is injured.

As regards the fruit, this, as soon as it has "stoned"—i.e., when the seed vessels have become quite hard—must be thinned down to safe limits. One fruit to every square foot of trellising covered by the trees is the proper number to leave. In carrying out this thinning give as far as possible those fruits the preference which are situated on the upper part of the wood or branches, as they will, on account of being fully exposed to the sun, be more highly coloured and of richer flavour than those which ripen in semi-shade. It is very important that the border does not get dry and the trees suffer from want of water.]

NOTES AND REPLIES.

Grease-banding fruit.—Early last autumn I put paper bands covered with grease round all my Apple and Pear trees, but I had a lot of trouble, chiefly in renewing the grease. I am now told that bands of cotton wool make the best bands against the codlin-moth, etc., and I am anxious to know how they are to be applied, and if they can be bought in any convenient form. Do these cotton-wool bands do more than the hay bands or the canvas sacking bands, which, to quote from one of your articles, were "to provide a convenient place for the caterpillars to become chrysalides."—F. W.

Raspberry canes.—I notice that "A. W.," page 291, hoes off his surplus canes at the ground level. I venture to think that this is a mistake. These hoed-off suckers will inevitably break away from underground eyes, and a perfect jungle will result. I speak from experience. It is much better, and equally as quickly done, to pull such suckers out by the roots. This, if done when the soil is moist, inflicts only trifling damage to the roots of the canes left.—KIRK.

The weather of April.—In the current number of *Symons's Meteorological Magazine* it is stated that "the distribution of rainfall compared with the normal, showed in general a deficiency over the southern half of England, most pronounced in the Devon-Cornwall peninsula, where many stations had only a quarter of the average, and an excess elsewhere. The greatest rainfall, 10 inches or more, fell in the normally rainy areas in Kerry, Carmarthen, and West Inverness, and the least, about half an inch, on the south coast from the Isle of Wight to Torquay. Heavy daily falls were uncommon, the greatest being 2.47 inches at Seathwaite on the 17th. Heavy local thunderstorm rain in east Yorkshire on the 20th yielded quantities slightly under 2 inches, and in the south-east of Ireland on the 24th and 25th falls of about the same amount were recorded during the passage of a shallow depression secondary to that of the main disturbance in the north-west. In the Thames Valley the distribution of rainfall was remarkably uniform. A little more than 1½ inches fell along the North Downs and that part of Suffolk on the Thames Valley map. Less than an inch fell to the north of the Thames estuary and over a large portion of the south-western areas.

glass without heat. I have two, Hale's Early and Royal George. They are putting out a large amount of growth. Should they be pruned now—that is, some of the growth taken out? The fruit is about the size of Walnuts. The trees are about eight years old. The Royal George has about fifty fruits on it; Hale's Early only two. Royal George is a year or two older. The trees are in very good heart, having been lifted and root-pruned two years ago. They did well last year.—P. PRIESTLY.

[With regard to the first part of your query, the number of young growths should be reduced so that enough and no more are left to furnish the trees with bearing wood in all parts for another season. This should have been done directly after the fruit had set. When performed at this period this is known as "disbudding," and consists in pulling off in a tentative manner to start with all shoots pointing in an outward direction on the bearing or flowering wood. This done, a start should then be made with those situated on the sides of the bearing wood, gradually reducing the number of these in the same way until but two are left at the base and one at the tips to draw the sap for the nourishment of the fruit, and

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JUNE 8TH.—*Clematises* (in various colours), *Shrubby Spiræas* (various), *False Heath* (*Fabiana imbricata*), *Wistarias*, *Rhododendrons* (in great variety), *Ghent Azaleas* (in variety), *Bush and Climbing Honeysuckles*, *Laburnums*, *Kalmias*, *Broom* (various colours), *American and Native Thorns*, *Pyrus Malus* (in variety), *Olearia macrodonta*, *Berberis* (several kinds), *Rhaphiolepis ovata*, *Jasmines*, *Polygonum baldschuanicum*, *Lilacs* (various), *Deutzias*, *Rubus* (several species), *Philadelphus* (in variety), *Roses* (many species and varieties), *Snouberry*, *Stranvesia undulata*, *Rock and Sun Roses* (in great variety), *Viburnums*, *Kerrias*, *Diervillas* (in various colours), *Magnolias* (in variety), *Robinia Kelseyi*, *Honeysuckles*, *Ribes speciosum*, *Calycanthus floridus*, *Ericas*, *Bruckenthalia spiculifolia*, *Grevillea rosmarinifolia*, *Crimson Chestnut*, *Anemones* (in variety), *Heucheras*, *Geums* (in variety), *Forgloves* (various colours), *Libertia formosa*, *Alliums*, *Crambe cordifolia*, *Homeria collina*, *Camassias* (various), *Geraniums*, *Rodgersia podophylla*, *Everlasting Peas*, *Sweet William*, *Torch Lily*, *Linarias*, *Paenies*, *Thymus Serpyllum* (in various colours), *Gladiolus byzantinus*, *Meconopsis* (several), *Achilleas*, *Moss and encrusted Rock-foils*, *Tufted Pansies* (in great variety), *Gazania splendens*, *Mule Pinks* (several kinds), *Maiden Pinks*, *Helichrysums*, *Gysophilas*, *Tropæolum polyphyllum*, *Canary Creeper*, *Silene sylvestris*, *Anchusas* (in variety), *Trea Lupins*, *L. polyphyllus* (in several varieties), *Thrift* (*Armeria*), *Columbines*, *Muehlenbeckia complexa nona*, *Irises*, *Wood Lilies*, *Thalictrums*, *Lithospermums* (in variety), *Sweet Peas*, *Nepeta Mussini*, *Myosotis*, *Opium Oriental*, *Field and Iceland Poppies*, *Globe-flowers*, *Tradescantia virginica*, *Flax* (in variety), *Alpine Speedwells* (several kinds), *Edelweiss*, *Candytuft*, *Antennarias*, *Oralis* (various), *Erigeron Asa Grey*, *Dictamnus Fracinnella* (in variety), *Phlomis Samia*, *Larkspurs*, *Day Lilies*, *Eremuri*, *Campanulas*, *Betonica grandiflora robusta*, *Asphodelus luteus*, *Gerbera Jamesoni*, *Monroe's Mallow*, *Nierembergia frutescens*, *English and Spanish Irises*, *Hypericum reptans*, *Coronilla cappadocica*, *C. minima*, *Androsace lanuginosa*, *Ethionemas*, *Sopponoria ocymoides*, *Epilobium pedunculare*, *Cheiranthus linifolius*, *Nymphaeas* (several), *Rheum palmatum*.

WORK OF THE WEEK.—Climbing plants are now growing freely, and unless given a certain amount of training quickly become a tangled mass, thereby losing half their charm. Several Clematises are already in bloom, and others are rapidly approaching the flowering stage. *Polygonum baldschuanicum* should be planted at the foot of trees where it can wander and trail freely. A good deal of planting has been done, and the weather being showery, newly-planted things have gone away freely. An edging of Bellflowers has been made good, and a few plants of *Nolana atriplicifolia* were used to furnish the end of a Rose bed. *Viola Moseley Perfection*, a beautiful deep-yellow self, has been planted among Roses, and a number of *Cynoglossum amabile* has been put out at the base of Sweet Pea columns, while various kinds of *Nemesias* have been used for a similar purpose. Blue Gem is excellent for carpeting Rose beds, and has been used extensively. A few plants of *Cherry Pie* (*Heliotrope*) raised from seed have been planted out on a warm, sunny border, and others will be added as the plants become sufficiently advanced. These seedling plants are very satisfactory, and grow much stronger and taller than plants raised from cuttings, moreover they produce larger trusses of bloom. *Monroe's Mallow* has been planted across the corner of a bed, and a further supply of *Blue Bindweed* has been planted beneath thinly-disposed *Fuchsias*. Having a nice lot of seedlings of this plant to spare, they have been used as a carpet to a bed of yellow Roses. Weeds are a constant source of trouble when coming up in flagstone paths. We intend to try weed-killer along these narrow crevices later on, though hitherto fear of its reaching the occupants of the beds has prevented its use. The decaying flowers are removed from *Rhododendrons*, and as the

various Rock Cresses pass out of bloom the seed-vessels are removed and where necessary the plants cut hard back. A long line of the Pasque-flower has been relieved of its seed-vessels, which if allowed to mature rob the plants of much vigour. A few *Felicia abyssinica* have been planted in the foreground of the mixed border, and *Gazania splendens* forms a carpet to a mixed bed of African Lilies (*Agapanthus*). *Verbena purpurea* has been used to form an edging to a bed of Roses and Sword Lilies, and a batch of *Blue Nemesia* has been planted to form a carpet to the Wand-flower (*Dierama pulcherrima*). A further batch of *Desfontainea spinosa* (raised from cuttings) has been put out in the nursery border. E. M.

Sussex.

SOUTHERN COUNTIES.

Wall fruit trees.—Peaches and Nectarines require a final look over to relieve them of surplus shoots which have hitherto escaped attention, as no more of these than is absolutely necessary should be retained. Some amount of tying and tacking is now required, as the earlier and the straighter the shoots are trained in and secured to the face of the wall the better for the trees. Apricots also need to have all breast wood again pinched back to three and four leaves to form the foundation of fruiting spurs. Young shoots for the filling in of vacancies and extension purposes should also be neatly fastened back to the wall. Sweet Cherries are best pinched back while the wood is in a succulent condition, as it can then be stopped without the aid of a knife, and risk of gumming afterwards is averted. Plums may have the breast wood left a trifle longer than for the last-named, and all extensions and shoots needed for furnishing blank spaces, and so on, should be trained out in good time. Pears must be treated in a similar manner—only the pieces of wood left with the intention either of forming new or the further furnishing of existing spurs should be left somewhat shorter, or, say, three to four leaves instead of five. The wood in Morello Cherries requires a judicious thinning—in fact, no more should be reserved than there is room for when it is fastened back to the wall. The inveterate enemy of the Morello (black-fly) is much in evidence this season, but it quickly succumbs when well wetted with a solution of Quassia extract. This takes greater effect when the young shoots are in a rigid position, so that an excellent time to give the trees a thorough dressing is directly the tying and tacking in of young growths have been completed. Where time for the tacking in can hardly be spared, the young growths, both in this and previously mentioned instances, can be securely held in position with portions of the young shoots of Privet or Hazel. Armed with a quantity of either, cut to convenient lengths, a great many shoots can be quickly secured in position by placing the former in front of the shoot which has to be trained in and passing either end behind the adjacent main or subsidiary branches. The only disadvantage is that the young wood cannot be trained out so straight as when ties or nails and shreds are employed. A quantity of growth has already been made on espaliers, and stopping must, therefore, be done to prevent any further undue shading of the main leaves and fruit. Pears, Apples, and Cherries may, therefore, have their surplus growths stopped at the fourth, and Plums at the fifth leaf respectively. Extensions, both vertically and diagonally, should be tied into the training wires intact.

Strawberries have set well, and promise an abundant crop, but the fruit will be much later in ripening than usual. Birds, particularly blackbirds and thrushes, being so numerous, the beds have had to be securely netted, and that the gathering may be the more conveniently carried out the nets are stretched over a framework of poles raised some little distance above ground level. With regard to root moisture, matters are as yet in quite a satisfactory condition.

Bush fruit quarters.—Weeds are proving a great nuisance, and much time is being devoted to a vigorous use of the hoe to keep any-

thing like a semblance of tidiness. Red Currants are making a quantity of strong growth, which will ere long, with the exception of the leader, be shortened back. Another application of the hoe is required to rid the Raspberry plantation of further surplus growths now pushing through the soil. The shoots pushed up around the stools of autumn-fruiting kinds should now be thinned, leaving the best as a matter of course, and so situated that when eventually trained to the wires they will be about 9 inches apart. Summer-fruiting Raspberries will be netted over at the first convenient opportunity.

Seakale.—The young growths on Seakale intended for forcing, as well as those on crowns growing in permanent positions for late supply must now be thinned. Two shoots may be left in the former case on good strong roots, and one only on those of a less robust nature. With regard to the latter, the roots of which vary in size from one inch to 3 inches in diameter, from three to four shoots may be left, as these invariably grow vigorously and make very robust crowns ere autumn arrives. The removal of surplus shoots greatly accelerates growth, and to stimulate it, sprinklings of salt, guano, or any nitrogenous manure may from time to time—preferably during showery weather—be given with beneficial results.

Rhubarb.—With a more than ordinary demand to meet, the crowns are, as a result, in a rather exhausted condition. To enable them to recuperate, feeding with manure either in a solid or liquid state is necessary.

Chicory.—The plants in the last sown drills should be thinned to 9 inches apart, and the soil well hoed through afterwards.

Maincrop Celery.—This will be planted out shortly in the trenches prepared for it. To avoid exposing the roots to the air longer than is necessary, one man should remain in the trench and set the plants out as fast as they are carried to him. If this is followed up by a good soaking of water the plants experience little or no ill-effects from the removal. Watering for some time to come must have regular attention, as a check to growth has to be carefully avoided.

Amboldt's Bouvardia.—The general stock of this will now be planted out. Except in dull weather, the plants will be syringed twice daily, and the requirements of the roots in the way of water regularly attended to. After the roots get a grip of the surrounding soil and new growth is put forth, weak liquid-manure applied now and again encourages the production of a quantity of vigorous shoots, all of which bloom in August and September next. A. W.

MIDLAND COUNTIES.

Gooseberries and Currants.—The bushes of small fruits have been badly attacked by aphid and other insect pests, which have been very destructive amongst other fruit-trees. Only by incessant warfare can these pests be kept in check. The shoots are shortened back to five or six leaves and the trees thoroughly syringed with Quassia extract. This shortening of the shoots will favour an early maturation of the wood, especially on cordon-trained trees, and, in addition, the fruits will be greatly improved thereby. Early Cherries will be given a final cleansing of their shoots before being netted to exclude the birds, which attack the fruits directly they begin to change colour. The trees require plenty of water at this stage. Later-fruiting varieties must also be given copious supplies of water, and the foliage must be kept clear of all pests by a free use of the garden syringe. The netting of the maincrop Strawberries must no longer be delayed. Birds are apt to attack the fruits even before they change colour, and if once the attack is commenced they will be most persistent in their efforts to reach the fruits, even after the nets are placed on them. In this locality there is every prospect of a heavy Strawberry crop.

Raspberries must have their young canes tied, and should be mulched by giving the ground a good dressing of rich manure, well soaking it with water after it is applied. Remove all useless suckers, retaining those

only that are required for the production of the crop next season. Any weeds that may be growing between the stools should be kept down, as if allowed to remain they quickly exhaust the surface-soil of moisture and nutriment to the detriment of the growing crop.

Cinerarias.—Seedlings raised from spring-sown seeds should now be pricked out into boxes, which are better than small pots for the purpose. Fill the boxes with soil of a light texture containing a considerable amount of leaf-mould. Prick out the seedlings about 4 inches apart each way, and then stand the boxes in an unheated frame, under a north wall if possible, and on a bed of ashes, which should be previously well damped. Keep the frame closed for a few days, syringing both morning and evening. On warm nights the lights may be removed to allow the dew to settle on the plants, but in the morning they should again be placed on the frames, and if the sun's rays reach them shading must be afforded.

Primulas raised from seed this season should now be potted into 3-inch pots. A suitable compost consists of good fibrous loam one-half, leaf-soil one-fourth, and silver sand one-fourth. Use perfectly clean pots, or the soil will cling to the sides when turned out for repotting, and many of the roots will be damaged, thus causing a severe check. Stand the pots near to the glass in a structure having an intermediate temperature, and shade the plants from the sun's rays. As soon as they become established in the fresh soil remove them to an unheated frame.

Polyanthus seedlings are now large enough for transplanting. Choose a site on a shady border, such as under a north wall. Plant them at sufficient distance apart to enable the hoe to be plied between the rows.

Wallflowers sown early in May are now ready for pricking out. In transplanting from the seed-beds pinch off the tap-roots, as this induces the plants to make numerous fibrous roots near the surface, and, given plenty of room, nice, dwarf, bushy plants are produced. One good bushy plant is always better than three drawn, lanky ones. Plant in rows about 10 inches or 12 inches apart each way, and after they have begun to grow go over them and top them.

Pentstemons now require to be neatly supported; this is best done by placing a neat stake to each plant and looping up the growth loosely as it is made. These succeed in almost any kind of soil and are well worthy of the space they occupy and the little attention which they require.

Pyrethrums.—The varieties of Pyrethrum roseum have made a brilliant show for some weeks past. By cutting all the flowering stems away quite down to the base they may be induced to give a good second crop of most useful flowers during the autumn months. This cutting down should not be postponed a day longer than is necessary, and when the plants have again commenced to grow they may be helped by watering in dry weather and by mulching with short manure. Where cut flowers are much in request the slight labour entailed by this will be well repaid.

The rock garden.—It is necessary to go over the rock garden occasionally to prevent the stronger-growing plants encroaching too far in the vicinity of the weaker. If this is not attended to there is danger of losing some of the choicer plants. This work should be done at regular intervals, as the cutting away of too much growth at one time gives the whole an untidy appearance. Do not let the plants suffer from want of moisture.

French Beans are making good progress, and plants from the earliest sowings are in flower. The ground between the rows has been mulched with short manure, and a liberal watering applied. Small sowings will now be made weekly until the middle of July. It is much better to make frequent small sowings than to depend on plants which have become partially exhausted, the produce from young plants being much more tender.

Scarlet Runners sown early in May are now growing freely. These also have been mulched with stable litter and a good watering given. The plants should be stopped as soon as they have reached the top of the sticks in order to induce the formation of side shoots.

Celery.—All side growths and split leaves should be removed from the earlier plants, the surface soil stirred frequently, and an abundance of both liquid manure and clear water applied to the roots. Keep a sharp look-out for attacks of the Celery fly, and destroy the maggots whilst quite small by pressing them between the thumb and finger. Apply a good dusting of fresh soot once a week, early in the morning or late in the evening. The latest plants should be put into the trenches as quickly as possible; though it is more convenient to plant in single rows, it is often necessary to economise space by planting two or three lines in a single trench.

Maincrop Onions.—The dry weather of the last few weeks has delayed the thinning of this crop. Thinning is only carried out where the plants are very thick, and if the weather continues dry it will be necessary to give a thorough watering before this can be carried out. If Onions of medium size only are required the plants may be left as thickly as 2 inches apart. Onions of moderate size keep better and are just as good for cooking. The ground between the rows should be frequently lightly stirred with a Dutch hoe to keep it from cracking.

Tomatoes planted out of doors are making rapid growth. Keep all side shoots removed, and should the plants be extra strong the lower leaves may be shortened a little. No manure of any kind must be given the plants until the crop of fruit is set.

General work.—Whenever a crop of vegetables is over it is good policy to manure and dig the land as soon as possible, so as to be ready for another crop. Nothing is more harmful to the ground than allowing a plot of vegetables to stand after they have run to seed, and nothing gives a garden a more untidy appearance. Keep the hoe going as freely as possible during dry weather, so that when rain comes there will be little of that kind of work to do, and full advantage can be taken of the change to put out as many plants as possible. F. W. GALLOP.

SCOTLAND.

Planting out.—During the week bedding out has been practically finished, with the exception of the more tender subjects and the usual odds and ends which are usually left until the bulk of the planting out is completed. Provision is made in all cases for failures among the plants in beds and borders, a sufficient number of each variety being held in reserve for this purpose. Owing to the showery weather no artificial watering in the case of the newly put out plants will be necessary.

Vegetable garden.—Under similar favourable conditions the bulk of the Brassicas intended for early autumn use has been planted out. A supplementary planting of Cabbages was made, two varieties being used. These are Enfield Market and Defiance, both excellent sorts and which provide good-sized heads in September. Cauliflowers were extensively planted. A good breadth of the ever useful Walcheren was put out, and during the present season these have been planted more thickly than is usually the case. Some hundreds of Brussels Sprouts were put out at the same time. Scrymgeour's Giant and Dalkeith are preferred at this date. The next planting will consist of smaller and more compact varieties which, I think, endure a severe winter better than the taller-growing sorts. A first planting of Drumhead Savoy was made. This is not a large planting, but it gives some heads at an early period, and which are occasionally useful. Curly Kale and Hearting Kale were also got out, and these plantings will be supplemented at a later date.

Potatoes.—Second early varieties having come away very rapidly, the soil was forked up between the lines and drawn up to the stems in the course of the week. For moulding up, a small garden plough which is easily drawn by a man and a boy is used. It makes a very tidy and effective job and is very much quicker than moulding up by drawing up the soil with hoes. A considerable proportion of the late varieties was hoed through when weather conditions were favourable. Early varieties continue to make satisfactory progress, and, despite a rather inclement spring,

will not, I think, be noticeably later than usual.

Celery.—A further planting has been made, some white and pink sorts having been put out. There has been no necessity for watering these plants, and, rather dull, showery weather still continuing, they ought to go away without any check.

Parsley.—Sown out Parsley has germinated exceptionally well and has grown freely. Thinning has, therefore, become imperative, and some progress has been made in this direction. The thinnings of Parsley transplant well, but as the bed is uniform all over no need for this arises. Good pickings are now available from plants pricked off into cold frames in spring and afterwards transferred to the open.

Onions and Carrots also are ready for thinning. In the case of the Onions come use will be made of the strongest seedlings for transplanting. These make very useful bulbs, are firm and hard, and keep well, although, naturally, they are not large. Nevertheless, considering the high price, consequent upon limited importations, which was asked in late spring for Onions, it would appear to be advisable for those who have superfluous thinnings and spare ground to transplant as many seedlings as possible instead of throwing them away.

Spinach is sown from time to time as occasion requires. The dripping May has been good for Spinach, the usual wholesale bolting having been for once in a way noticeably absent. A further sowing of Spinach Beet was made during the week in order to provide against a possible scarcity in the event of the early autumn proving, as is sometimes the case, hot and dry.

Turnips are being thinned and sown as needful. White Stone is a useful variety for present sowing and one which matures quickly.

Peas during the week were staked, and further lines were sown. Growth among the previously-sown varieties is well maintained. Present sowings included a line of Ne Plus Ultra, a reliable old sort if a true stock can be obtained.

French Beans.—Some lines of these were thinned to a foot apart. One is, at times, apt to overrow Beans of all kinds, but thinning is well repaid. A further line of Climbing French Beans was sown, and with the sowing of a couple of long lines of Canadian Wonder in a fortnight's time the sowing of French Beans will be completed.

Sweet Peas.—Stakes were placed to Sweet Peas which were sown out. Small Spruce branches had been previously put in to protect and to support the seedlings, and now the permanent tall stakes were supplied. Sweet Peas raised in frames and planted out were given a look round, and where necessary were lightly secured to their wire supports. The earliest tier of buds is visible, but as the sun is absent and the nights cold it is more than likely that these buds will drop. This is, however, to the ultimate benefit of the plants, even although the earliest Sweet Peas are always welcomed.

Peaches and Nectarines on walls.—From time to time thinning is being done as opportunity offers. There is a full set, and much thinning will be needed, which, however, will be spread over a considerable period. As was anticipated, the variable weather and the cold nights have induced an outbreak of leaf-blisters upon Nectarines. This cannot be dealt with until a period of settled weather comes, and in the meantime the worst of the infected leaves are being removed. With more genial weather blistering ceases, and, so far as my observation goes, it is more unsightly than dangerous, although, of course, it were better absent.

Strawberries.—Prospects of a good crop appear to be satisfactory. Bloom is plentiful, frosts have been absent, and there has, above all, been sufficient moisture. There seems to be a disposition now to avoid Royal Sovereign because spring frosts so often cut the bloom of this variety, which comes early. Nevertheless, those who grow this Strawberry in a place where the morning sun does not reach it early after a night's frost will find it useful. When well done, Sir C. Napier yet remains a good late variety.

Ventilation and Vines.—Those who are careless in the matter of ventilation assuredly have not their troubles to look for. Beyond question, careless or unequal airing is to a great extent responsible for scalding, cracking, spider, and mildew. A little air may safely be left on all night now. The merest chink at the apex of the house will keep the air moving in the house and prevent the condensation of moisture on the berries. The amount of ventilation ought to be increased as the thermometer rises; but at no time should a sudden volume of cold air be admitted. Increase the ventilation as the temperature rises, and gradually reduce it during the afternoon.

Hardy-flower borders.—The taller and more robust plants now making vigorous growth require periodical attention in the way of tying up. It will be noticed that if these are not regularly attended to in this respect they are quite as likely to be beaten down by heavy rains as by high winds. During the present season the experiment of leaving some of the dwarfier varieties unstaked is being tried. Phloxes, Pæonies, Enothers, the dwarf Asters, and so forth, are being thus treated. In the case of Pæonies now in bloom, the rains have not done any damage, and the plants certainly look much more natural than they do when supported by Spruce twigs or when loosely tied in to stakes. The display of bloom increases almost daily, but a spell of dry weather would be welcomed in order that the crop of seedling weeds due to the wet might be got rid of. W. McGuffog.

Balmae Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Pæonies diseased (B. H.).—Had you sent us some pieces of the diseased plants, we then could have been better able to help you. Judging from what you say, your plants are affected with a fungoid disease known as Botrytis Pæoniæ, and your only remedy is to collect and burn all the affected parts. As it is more than likely that the germs of the disease remain both in the tissues of the plant and the surrounding soil, you had better burn all the foliage and some of the surface-soil around. Then in September lift the plants, and after washing away all the soil, give them a sulphur bath before replanting in fresh soil.

Winter-flowering Pelargoniums (W. F.).—Any varieties of the Zonal type of Pelargonium will bloom well in the winter if prepared for that purpose. To that end get nice spring-struck cuttings, now in small pots, shift into 5-inch pots, and keep them growing on in a frame or greenhouse (cool), and from time to time pinched so as to make them bushy. They must not be allowed to flower. Then, a few weeks hence, shift them once more into 6-inch pots, and, after keeping in a frame for a week or so, stand them outdoors on a hard ash floor in the sun to harden the wood. Keep freely watered, and occasionally turn them round. Continue to pinch up to end of August. At the end of September get the plants into the greenhouse, and give a moderate temperature of from 50 degs. to 60 degs., and they will then bloom profusely for some months.

FRUIT.

Ivy and fruit-trees (M. O.).—Your fruit-trees are suffering, without doubt, from such close contiguity to the Ivy on the wall behind them. No doubt, such Ivy, which is old and covers the wall, has a perfect network of roots that eat up the soil and greatly impoverish it. We should expect that, being only 18 inches from the wall, the roots of your fruit-trees are starved and strangled. If you cannot or may not destroy the Ivy, then you must resolve next autumn to remove your fruit-trees elsewhere. No doubt, the Ivy roots extend and feed greedily on the soil fully 7 feet or 8 feet from the wall, probably even much further away.

Silver-leaf on Plum-tree (F. P. Grandin).—Yes; the shoot of Plum-tree you send us has been attacked by the silver-leaf fungus, for which, so far as we know, no remedy has yet been found. If the disease makes any head-

way, then your best plan will be to grub up the tree and burn it. If you purpose planting a young Plum in its place, then you must be careful to remove all the old soil, as there is just the possibility that some of the spores will be present in the soil and attack the newly-planted tree. If you decide to plant any other tree bearing a stone fruit, then there will be no need to remove the soil, but care should be taken to remove all the roots of the Plum-tree, otherwise such would breed fungus.

VEGETABLES.

Cucumbers cankering (R.).—Your Cucumber plants are suffering from a complaint that every grower knows. Sometimes it is attributed to over-watering, sometimes to soil being too light and porous, sometimes to sourness. Wherever it gives trouble water should never be given near the stems, and a little lime may be heaped up round them with advantage. The trouble always shows itself just on the surface of the soil, and seems always to be associated with water contact. Sometimes it has occurred through the twisting or bending of the stems, such as happens when plants are grown on the soil and are not tied up erect.

SHORT REPLIES.

Sedum.—"Cactus Culture for Amateurs," by W. Watson. This, no doubt, could be had through any bookseller. We do not recall any firm which now issues a catalogue for succulents or Cacti.—**Quicklime.**—You may use the lime-water when clear for destroying slugs and worms in pots or in lawns, but you must not water plants overhead with it, as it leaves a sediment on the leaves.—**Puzzled.**—We do not think that woodlice are the culprits. You will find that the loss of your seedlings is due to slugs, which are very numerous this season owing to the rains we are having. Dust the plants with fresh lime to destroy the slugs.—**Rockdene.**—We should not trouble to keep the plants. You will find it far better to raise a stock from seed every year, as such will be far more vigorous, and, in consequence, flower better.—**Miss Wootton.**—Impossible to say what disease has attacked your Gentian. Please send a complete plant, including the roots.

NAMES OF PLANTS AND FRUITS.

Names of plants.—H. H. Hartley.—The Caper Spurge (Euphorbia Lathyris).—M. Gloyne.—Ceratium tomentosum.—Anon.—1, Saxifraga umbrosa var., we should like to see a complete rosette; 2, Send in flower, please; 3, Veronica rupestris; 4, Helianthemum vulgare, var. mutabile.—W. Howard Bell.—Genista tinctoria, var. mantica.—(A) B. G. L.—Nepeta Mussini.—Robt. Greening.—Saxifraga Camposi.—X. Y. Z.—1, Sedum oppositifolium; 2 and 3, Varieties of Saxifraga cuneifolia; 3, Most nearly resembles that known in gardens as taygetea; 2, Was not in flower; 4, Saxifraga umbrosa serratifolia.—J. E. Kelsall.—Hibiscus syriacus Bleu Celeste.—E. B. Tucker.—Anemone obtusilata (Don).—W. D. Hallifax.—1, Saxifraga aizoon minor; 2, Primula, please send more complete specimen, including leaves.

The dumping of bulbs and plants.—At a recent meeting of the Horticultural Trades Association of Great Britain and Ireland, attended by upwards of 100 delegates from all parts of the United Kingdom, representing the nursery and seed trades, it was resolved to petition the Government to take steps to prevent the dumping of foreign-grown trees, bulbs, shrubs, plants, etc., on our markets after the war, more especially from those countries with which we are now at war, due regard being paid to the interests of our Allies. In a letter addressed to the Prime Minister and leading members of Parliament it was pointed out that large accumulations of stock are taking place in Continental nurseries where no export trade whatever has been done for two years, and that if this is allowed to be dumped on our markets at the conclusion of the war, a trade which had perhaps suffered more heavily than any other through the war would be absolutely ruined.

200 BEDDING PLANTS, 2/-

5 LOVE LIES BLEEDING GRATIS.

6 Crampel Geraniums, 6 Calceolarias, 6 Cactus Dahlias, 12 Asters, 12 Stocks, 12 Tropæolums, 10 red Marguerites, 10 Schizanthus, 12 Asters, 12 Stocks, 10 Gaillardias, 12 Window Plants, 6 scarlet Salvias, 20 Alyssum, 20 Mignonette, 20 Marigolds, 10 Climbing Hops (variegated), 6 Foliage Plants, all packed separate and free on rail for 2s.

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Double and single early flowering varieties, some of the newest and latest varieties, 12 for 1s. 3d.

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6 Dahlias, Cactus .. 3d	15 Salsiglossis 3d
6 " Pompons 3d	15 Scabious 3d
3 " Collarete .. 3d	12 Verbenas, mixed .. 3d
3 Fuchsias, dbl. or single 3d	15 Nemesias 3d
15 Gaillardias 3d	12 Foxgloves 3d
2 Geraniums, scrib., wht. 3d	1 Oleander, pot 6d
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6 Hollyhocks, double .. 3d	1 Palm, in pot 3d
15 Sweet Sultans, yellow or white 3d	4 Bridal Wreaths .. 3d
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1 Passion Flower .. 3d	2 Asparagus Sprengeri. 3d
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250 Dracena Palms, 3ft. high, 9d. each.
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GARDENING ILLUSTRATED.

No. 1947.—VOL. XXXVIII.

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THE ROSELESS GARDEN.

Most people in trades are liable to become stereotyped in their ways, and few more so than the British nurseryman. Able and successful as he is, he takes a short view in some ways, and the Rose is by him only grown in one way—that is, grafted on the Brier. If one speaks to one of these able men in England and the north of Ireland of another way of propagating Roses, he may not say so, but he will probably look upon you as mentally deficient. The prejudice of these men is extraordinary. Roses do very well in heavy lands, and in one way and another, from catalogues and books, people get the idea that the Rose will not do well on certain dry lands, as in Surrey. I have made an attempt to get a friend there, who lives on hot sand, to give up the ordinary way of getting Roses from the trade and try them on their own roots, but I failed. I see a writer in *The Garden* bears out what I say:—

We have been here sixteen years, and at first wasted much money on buying Roses, sometimes English, sometimes French grown. They were all on Brier stocks and did well the second year, not so well the third year, and after that were only fit to throw away. I then noticed that all the plants of Zephirin Drouhin flourished, and as they were all on their own roots I decided to try growing all Roses on their own roots and to abandon such as would not grow in that way. The trial of the last eight years has convinced me that for this garden it is the only way to grow Roses. We strike the cuttings under bell-glasses. A good mud pudding is made and the cuttings pushed into it. The bell-glass is turned down over the cuttings and also pushed into the mud, and is there left until the following spring. I doubt if it is necessary to prune Roses which are on their own roots as hard as those which are on stocks. May I add (although I have already given the information in *The Garden*) that we are now never troubled with mildew, because we always sprinkle the ground with quicklime before the trees come into leaf. It seems possible that mildew spawn lies on the surface of the ground during the winter. On the other hand, this soil is very short of lime, and this extra lime added in this way may be sufficient to make the Roses

grow strong and resist the mildew. There can be no doubt that green-fly cannot live on any plant which is healthy and growing strong. If anyone doubts it, let him try watering with liquid manure a Rose-tree which has greenfly on it, and he will see the fly die in a day or two. I have never known the experiment to fail on this soil, although sometimes more than one dose is needed.—THACKERAY TURNER, *Westbrook, Godalming.*

There is hardly anyone who comes to see my garden who does not say that my success with Roses is all owing to the soil. Some go on putting Roses into the dry, sandy stuff, where they soon perish. Nurserymen who persevere in their ways with Roses and give people no choice, do themselves harm by limiting the uses of the Rose to heavy soils. The Brier is a native of heavy land. Even on such land it often fails, and some Roses will not put up with it, while others, like Rêve d'Or, will live for years. In its case there is some natural relationship, but in the best Rose soils many kinds of Teas and Chinas gradually die back, and people wrongly impute the failure to the climate.

In the face of the present state of things in Rose nurseries, the only way for those with dry soils is to strike the Roses from cuttings. The common idea that it is a slower way is a delusion. If stout cuttings are put in in September, even in the open air, one may often get a strong plant in the course of a year. The poorest sandy soils are amenable to improvement; one may deepen them, but one should never put a Rose on the Brier in them. China Roses are twice as good on their natural roots, which are of quite a different nature from those of the Brier.

W.

NOTES OF THE WEEK.

The Phenomenal Berry, ripe and fit for table, comes from Mr. W. Allan, at Gunton. It has not so much core or pith as the Logan, and, when cooked, is delicious.

Campanula rhomboidea alba is a variety we received from Petrograd. It usually grows about 1 foot high, but is taller this year. It is a fine, long-flowering plant and of robust constitution. Its light green, healthy foliage also adds to its appearance.—J. STORMONTH & SONS, *Kirkbride, Carlisle.*

Apple and Pear crops.—Apples and Pears seem a dead failure this year round about here. I hope, as you have no reference to the subject in your pages, that the failure here is purely local.—J. D. THORBURN, *Upton Cross, Chester.*

Trillium sessile californicum and T. s. c. rubrum.—These two are now nearly over, as they bloom before T. grandiflorum (about a fortnight or three weeks) and yet outlast that variety.

[Very picturesque Trilliums and well worth growing. From Mr. Stormonth, Kirkdale.]

Genista tinctoria mantica.—The Dyer's Greenweed, too common in many fields, has some interesting variations, and among them the above, a handsome plant with downy leaves and stems, and well worth growing. According to W. J. Bean this variety flowers earlier than the ordinary G. tinctoria. From Cleeve House, Wilts.

Roscaea cautioides.—This graceful species is now (beginning of June) in blossom. The flowers remind one strongly of those of an Orchid, and are of a lovely pale yellow colour, carried in bunches of five or six at the end of stiff stalks. It is a native of China, but seems to be pretty hardy if planted with the fleshy roots 4 inches or 5 inches deep in light soil in a sunny, sheltered position.—NORTH LONDON.

Tolmia Menziesii is a strange Heuchera-like plant for any moist spot. Its brown flower-spikes are freely borne and the plant is not liable to die away as does the Heuchera. A curious feature is the young crowns, which are formed at the base of the leaves. Old stems get weighed down as these youngsters develop, until they reach the ground, when they take root.—J. STORMONTH.

Rhododendrons at Terregles, Dumfries.—On a bank by the side of the stream which has been formed into a series of lakes at Terregles, the seat of Mr. C. E. Galbraith, there is a fine collection of hybrid Rhododendrons, which have been very good this season. They were strikingly beautiful viewed from the opposite bank, the reflection of the bright colours in the water below adding to the beauty of the scene.—S. A.

Brugmansia suaveolens.—Few things are more beautiful than this when in bloom. In early May I was charmed with this and Begonia corallina growing side by side in a greenhouse at Hawley Hill.

The two were planted at the foot of the back wall, and when they reached the top of the trellis they were trained down the trellis several feet. In this way the blooms of both hung down, the white flowers of the *Brugmansia* and the bright pink blooms of the *Begonia* making a lovely picture.—WEST SURREY.

The Laburnum in south-west Scotland.—The Laburnum is highly appreciated in the south-west of Scotland, and, especially in the suburbs of the towns, it occupies an important position. It is interesting to note the variety of habit in individual specimens, and a little care in the selection of seedlings would tend to eliminate the less graceful forms. Some of the forms of the alpine Laburnum are very graceful, the pendulous habit rendering still more effective the long racemes of flowers produced by the best varieties.—S. A.

Saponaria ocymoides.—What a lovely trailer this is for a sunny wall. It is just now at its best, and a patch of it over a yard square is so crowded with its bright, rose-pink blossoms as almost to hide the foliage. It is easily raised from seed, but must have plenty of room, as it spreads very fast. As soon as the flowers go off the seed-heads should be cut off, otherwise the plant becomes exhausted and dies. It does splendidly planted in the chinks of a retaining wall, but I do not find it very long-lived. It also grows quite well on the flat if in light, stony soil.—N. L.

Rhododendron Pink Pearl.—Mr. Gomer Waterer must not suppose that I intended to throw any doubt upon the claim of his firm to have raised the original Pink Pearl. I merely repeated a definite statement made to me in Edinburgh upon what I considered good authority, attributing the raising of this fine hybrid to the late Mr. Peter Lawson. If I remember rightly, Mr. Waterer, in his note to the *Field* newspaper, declined, or at all events omitted, to disclose the parentage of Pink Pearl. This he has now done, for which many persons interested in the cultivation of Rhododendrons will be grateful to him. I know nothing about the origin of Alice.—HERBERT MAXWELL, *Monreith*.

The Oriental Poppy (*Papaver orientale*) naturalised.—It has been interesting to observe a large drift of this during the past few years. Naturalised in a sunny meadow, and intermingled with Moon Daisies, Buttercups, Grasses, and various other wild flowers, the plants in early June produce an effect such as would be impossible in the cultivated garden. The flowers, rather too short-lived for the garden borders, often early in the year present a dismal appearance when so employed. Naturalised, they require no attention whatever once they are planted. A beautiful form of the Oriental Poppy, stronger and more erect than the type, is *P. bracteatum*, which produces gorgeous blood-red flowers each 9 inches across, with dark blotches at the base of the petals. This is a splendid flower for indoor decoration, lasting well if cut in early morning just before the buds open.—E. MARKHAM.

The Chilean Fire Lily (*Habranthus pratensis*).—This, referred to on page 294, is not seen in gardens so frequently as it deserves. It is quite hardy if planted 4 inches or 5 inches deep in warm soil in a sunny, sheltered position, though in severe weather it might be safer to mulch with dry leaves or ashes. I have it in a sheltered, sunny pocket of my rock garden, and it is just now a beautiful sight. The flower-stems are each about 1 foot or 18 inches high, and carry from four to seven flowers on each of a brilliant

orange-scarlet colour. I find it is advisable to lift the bulbs every two or three years as soon as the foliage has ripened off, which is about the beginning of July, and divide them, replanting them in soil with a good admixture of sandy leaf-soil incorporated with it.—NORTH LONDON.

Raising Cineraria seedlings in the open air.—I have a gardener friend who raises his principal stock of Cinerarias from seeds in the open air. When his plants have finished flowering he places the pots on a Rose-bed, where the seeds ripen. He allows his seedlings to remain in the beds till they have formed three or four rough leaves, when he lifts them with a little soil adhering to the roots. After lifting, they are grown on in the usual way. He finds this an easy as well as a good method. He has a nice lot of seedlings up now (June 9th).—D. HANNIGAN, *Rockford Gardens, Nenagh, Co. Tipperary*.

The Mountain Avena (*Dryas octopetala*).—This charming little plant has been in bloom for some two or three weeks, its large, white, Anemone-like flowers, rising 2 inches or 3 inches above the mat of crinkled "Oak-leaf" foliage, being always admired. Mr. Farrer speaks of the foliage as evergreen, but with me it is not so, dying off, or nearly so, in the winter. It likes a sunny spot, not too dry, and seems to prefer a little lime in the soil. It is propagated by layers or seeds, the former method being, perhaps, the easier. Though it flowers mostly in the spring, a few blossoms are thrown up now and then all through the summer.—N. L.

Meliosma cuneifolia.—The introduction of several species of *Meliosma* to this country during the present century has made it possible to include amongst our outdoor shrubs representatives of a genus which before had been scarcely known outside botanic gardens. *M. cuneifolia* is a vigorous bush from Western China, where it is said to grow from 12 feet to 20 feet high. Its large, deciduous leaves are up to 7 inches long and 3 inches wide, and distinct by reason of their prominent veins. The chief charm of the plant is found in its large, erect panicles of small, fragrant, cream-coloured flowers, which, as they advance in age, become almost white. On a vigorous specimen these inflorescences may be nearly 1 foot in length, and as they are borne freely have a very imposing effect. It was introduced in 1901, when Mr. E. H. Wilson sent seeds from China to Messrs. Veitch. Plant in rich loamy soil in a position exposed to sun, but sheltered from rough and cold winds. Another interesting species introduced from China by Mr. Wilson about the same time is *M. Veitchiorum*, which can be easily distinguished by its pinnate leaves. It bears even finer inflorescences than *M. cuneifolia*.—D.

Lathyrus rotundifolius.—For beauty this Pea can scarcely be surpassed by any other of its family, embracing, as it does, all the essential qualities of a first-rate, hardy perennial, being vigorous in growth, free-flowering, lasting in bloom for a considerable time, and giving little or no trouble once it has become established. It is one of those fine old plants which are all too frequently missing from good gardens. With me it is growing at the foot of an oak-pale fence in heavy, sticky soil. In this position it is, when in bloom, a magnificent sight, and is admired by all who see it. The healthy, robust growths, each 6 feet in length, throw out branching shoots 2 feet in length from the leaf-axils; also a spray of flowers. These flowers are produced on stems a foot in length. The colour is a lovely orange-red. For cutting,

the flowers are invaluable, as they may be gathered in sprays 3 feet in length, and when used for draping mantel-shelves, window-ledges, or tall furniture their decorative qualities are seen to great advantage. The other day I measured a plant and was surprised to find it was 6 feet high by 9 feet through. Its robust, healthy constitution, earliness to bloom, and graceful habit should recommend it to all who value good, hardy plants. It is easily raised from seed, which ripens freely in favourable seasons.—E. MARKHAM.

Robinia Kelseyi.—This was introduced to English gardens about 1903, a couple of years or so after it was recorded in America. Its origin is somewhat of a mystery, for although first noticed in a nursery in Boston, U.S.A., the proprietor, Mr. Harlan P. Kelsey, could not satisfy himself as to whether it was a natural hybrid or a new species the seed of which had been introduced with something else. Whatever its origin, however, it is an excellent shrub or small tree. Of loose habit with light, elegant leafage, it grows 8 feet or 10 feet high, and during the latter half of May and early June bears freely rather dense clusters of attractive rose-coloured flowers, the blooms being rather smaller than those of the Rose Acacia, but similar in colour. It grows well in loamy soil, but to get it to assume tree-like habit it is necessary to keep the leading shoot clear by cutting back the side branches. Only those plants that are naturally erect and vigorous should be chosen as trees, the others being allowed to develop as bushes. Like the Rose Acacia, its branches are brittle, therefore it should be planted in a sheltered position. Seed-pods covered with stiff, bristly, reddish hairs are produced freely, the shrub differing in this respect from the Rose Acacia, which does not perfect seed-pods.—D.

The English Bluebell.—It is undesirable to pass over without mild protest Mr. G. H. Raynor's note on the Bluebell, because it encourages the promiscuous coining of names for colour-varieties of plants, which is deplored by every experienced botanist. There are far too many names and synonyms already. The Bluebell is a case in point, for after various changes it is now called *Endymion nutans* (Dumort) or *E. non-scriptum*. It is certainly not a *Scilla* any longer. Your correspondent says that "works on English botany seem lamentably deficient in this respect" [the naming of obscure colour-forms which may or may not be constant], "but one gets more help from nurserymen's catalogues." Nurserymen are the chief sinners in this respect, and for obvious reasons, but some are laudably doing their best to prevent further chaos. It is well known that blue flowers are particularly variable in colour in Nature; blue Gentians, Veronicas, *Phyteumas*, Campanulas, and Boraginaceous plants frequently vary in colour from white, through pink and mauve, to deep purple. It is sometimes a question of soil, aspect, or other physical circumstance. But the authors of works on the British flora are not alone in wisely refusing to give varietal names to all these colour-forms. That they may be cultivated, as Mr. Raynor is doing, and carefully watched from year to year is, however, to be encouraged. It may interest some of your readers to know that the Bluebell's place in Switzerland and the whole of eastern France is taken by the bright blue *Scilla bifolia*; but the Bluebell reappears in Piedmont and Lombardy, and gets as far west as Spain and Portugal.—H. S. THOMPSON.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

TYERMANN'S KINGCUP.

ONE of the forms of our great native Kingcup, dwarfed, very compact, and free blooming. It is grown in a tank in a pot and has not therefore a full chance for its roots as it would have in rich soil or mud near water.

HARDY FLOWER NOTES.

GENTIANA IN THE GRASS.—Has Mr. Markham, who writes in a recent issue on spring flowers in the Grass, tried *Gentiana verna* and *G. acaulis*. For years the late Mr. Wilson tried *G. verna* in various positions in a garden that afforded much variety in the matter of soil and position, but he could not induce permanent vigour. The plants did very well for a year or two and gradually declined in health,

home. The soil is of that light, porous character which abounds in Surrey.

SEDUM ANGLICUM.—Beginners in the culture of alpine plants should beware of this. It is just the kind of plant that is calculated to please the inexperienced, being of neat habit and very free-flowering. Whether it seeds very freely or whether tiny pieces become detached I cannot say, but after a time the grower, to his dismay, will find that it proposes to take up its residence in the hearts of his most precious possessions, and, if left alone, chokes them out of existence. The only safe way is to keep it out of the garden altogether. In any case take care that it does not steal a march and make an unexpected appearance in the alpine garden. I have been tormented with this plant for years. To all appearance I have more than once destroyed every vestige of it, but the following season it has sprung up again. When it gets possession of things of a close, tufted habit like *Saxi-*

of *A. Robinsoni* is very welcome. Although the name is misleading, for only by a stretch of imagination can the flowers be termed blue, it is certainly distinct, and there is a refinement in them which is very attractive. I am wondering how this *Anemone* originated. Was it discovered growing wild, or is it a garden variety? I am inclined to think the latter, and it is probably a seedling from *A. Robinsoni*, although I have every now and then information of coloured flowers of the type growing in woods, but too far away, unfortunately, to enable me to visit the localities. J. CORNHILL.

FLOWER GARDENING IN HYDE PARK.

WE notice that the sheep which usually browse in the grassy spaces of the park now lie about and take their ease on the beds which, in other years, were used for displays of annual plants, but now, for reasons of economy, are mere mounds of bare earth. Inasmuch as good comes out of evil sometimes it may be opportune to say that the whole of the vast display of bedding plants along the Park-lane side was never right, and never artistic. There were too many beds; there was not verdure enough between them, nor the relief which shrubs and trees would have supplied. Less than half the number of beds would have been more effective. The devotion of that immense tract to bedding plants alone was a costly and foolish extravagance. Much of the cost that went to this extravagant display, if given to the growth of hardy flowers in the Grass in the vast areas of the London parks would have given us a spring garden safe from any calamity of war or other misfortune. The ground is excellent for the naturalisation of beautiful things like the *Globe-flower*, the *Narcissus*, the *Crocus*, and all the early flowers.

The whole of the Park Lane garden side of the Park should be altogether rearranged by some person of taste and full knowledge of hardy shrubs. Much more should be made of hardy shrubs and trees, instead of eternal efforts for the tender and short-lived things that cannot show their beauty until the summer is well with us.

BEAUTY IN HEDGEROW AND MEADOW.

I READ with much interest and pleasure the note on the above by "E. B. S." (page 297). There is much natural beauty in all our counties, but more of it and in more variety in some than in others. I once saw a grand display of Foxgloves, Thistles, and Ferns on a bank near a wood, with immediately behind the bank Honeysuckle clothing a Fir tree to a height of more than 50 feet on one side, and on the other Honeysuckle furnishing an Oak about 20 feet high. The Honeysuckle depended gracefully from the branches of the Oak and formed a charming object. "E. B. S." says he misses three things in his neighbourhood—namely, Gorse, Heather, and the common Fern. In this district, bordering on and in the New Forest, there are hundreds of acres of each kind in addition to wild flowers in great abundance. I have seen many acres of Bracken growing to a height of 9 feet. There are many acres of low-growing Gorse dotted with huge clumps nearly 20 feet high in sheltered parts; then the Heather follows, forming edgings to the public roads in many parts. There are scores of large dwelling-houses in the neighbourhood placed, as it were, in a setting of Gorse, Heather, and Ferns. The



Part of a group of Tyermann's Kingcup (*Calltha palustris Tyermanni*).

which is what generally happens to this lovely little hardy plant. Then by a happy thought several plants were put into the Grass, and they at once took on that happy appearance which hardy plants only have when everything is to their liking. Readers must not, however, take it for granted that this *Gentian* will thrive in all places under such conditions. In low-lying situations where the Grass is very lush it would be smothered. In what are commonly called upland meadows, where the herbage is finer and where a certain amount of light penetrates and air freely circulates it would probably succeed. The nature of the herbage is determined by the character of the soil and by altitude. The lower down the coarser the Grass, and in this only strong-constituted things can flourish.

EPIGÆA REPENS.—Since writing the notes on this, which appeared in *GARDENING ILLUSTRATED* weeks ago, an amateur informs me that he has it established under Fir-trees. He says that "it is running," a sure sign that it is quite at

fraga oppositifolia the case is hopeless, and nothing but transplanting will avail, and even then tiny bits are apt to remain.

ANEMONE NEMOROSA BLUE BONNET.—Not very plentiful at present, and absent from the majority of trade lists, this *Anemone* is sure to become popular. It has a close family resemblance to *A. Robinsoni*, but differs materially from it. It is curious that it starts into growth much later. It is one of the last of the early spring flowers to make its appearance above ground, and for that reason will, I think, never become so plentiful as *A. Robinsoni*. Although coming into flower so much later, the foliage dies off at about the same time, therefore the season of growth is shortened, and for this reason the rate of increase is necessarily slow. Even when in full growth it is not nearly so vigorous, and seems to require a very free soil, and is not likely to do more than live on from year to year in soil of a rather close, moisture-holding nature. It is, however, a dainty little thing, and coming as it does on the heels

district lacks lime but abounds in iron, and I daresay the iron accounts to a great extent for the richness of the colours of the flowers.

In the New Forest itself, where hundreds of horses and cattle graze, there are extremely handsome specimens of the white and pink-flowered Thorns, and as the cattle eat all the young shoots as high as they can reach, the trees resemble huge bouquets. Honeysuckle is plentiful everywhere; Foxgloves group themselves on banks; the Poppies, too, favour railway banks and cornfields, and the English Orchis stars many commons, fields, and meadows around. BOURNE VALE.

NOTES AND REPLIES.

Planting out Carnations.—I have a large batch of good Carnations of the perpetual or winter-flowering class which will soon be over. If these were cut down, planted in frames, and wintered there, would they be suitable for the borders next summer?—ESSEX.

[The old plants to which you refer would be of little value for the border next year, and would hardly repay you for the attention necessary for the ensuing twelve months or thereabouts. Healthy cuttings from the same plants inserted in July, or in the earliest days of August, and grown steadily on in cold frames, with a couple of stoppings or pinchings before March, 1917, would do you much greater service. Such cuttings would root in a month and could be potted into 3-inch pots without delay. A month later a small shift could be given, to be followed in January next by a final shift into 5-inch pots, from which size, in April, they could be put out into the border. Carnations of the perpetual-flowering class resent transplanting generally, and old plants particularly so. Your only hope with the old plants would be to cut them back after flowering and retain them in their pots, plunging them in a frame, and giving but little water till the planting-out season arrived.]

Herminum pyrenaicum.—As "E. M." says at page 294, this is remarkably easy to grow, and I have never found it give any trouble in sun or shade, in a dry soil, or in one with a considerable amount of moisture. As "E. M." says, it is "not one of the choicest alpine plants," but it is certainly one of the dependable ones. Its principal defect appears to me to be the dullness of the colouring; another is that when the plant becomes large it does not flower very freely. By the way, one seldom finds any mention of the white variety, which never seems to have caught on.—S. ARNOTT.

Aquilegias.—These old-fashioned flowers are very beautiful, and some of the species rank among the choicest of hardy flowers. Even the common forms are pretty, and may be planted freely in the Grass. The rare mountain kinds, of which *A. glandulosa* is a type, are more difficult to grow, but, apart from these kinds, a class of hybrids with long spurs is procurable, these being equal to the best named species, and having the advantage of a constitution as strong as that of the common Columbines. Seeds of these may be sown now in the open ground. The plants need no protection during winter, and will be useful next spring. Some prefer to sow under glass early in the spring, and prick out into pans or boxes, harden off in cold frames, and transplant into the borders in July or August. Seedlings raised by sowing now in the open produce quite as good results, but they take a season longer to attain to flowering size.

Verbascum olympicum.—Although, perhaps, this Mullein is more suited for grouping in shrubberies, yet isolated specimens in a mixed border are effective. Reaching a height of 6 feet and over, branching freely, and covered with multitudes of primrose-yellow blooms, the spikes attract attention just at present

(June 6th) and contrast well with the spikes of *Lupinus polyphyllus*. Its white, woolly massive foliage renders the plant additionally noticeable, and although only of biennial duration, no difficulty is experienced in maintaining a supply of young plants, self-sown seedlings coming up freely.—W. McG., *Balmae*.

The variegated Cocksfoot (*Dactylis glomerata variegata*).—Many do not care for variegated plants, but this variety of Cocksfoot is very useful in beds of summer flowers. It is alike valuable as an edging plant or for mixing with such things as Tufted Pansies. A long narrow border planted with alternate pieces of this *Dactylis* and a pale-blue Pansy, such as, for example, Maggie Mott, may be depended upon to produce a good effect. *D. g. variegata* also looks well when associated with Iceland Poppies; and similar combinations will readily occur to those who use the Cocksfoot. While it will flourish in almost any soil, yet it is liable to assume a rusty appearance in a poor staple.—W. McG.

Violets.—The recent rains have been of much assistance in establishing newly-planted Violet runners. A thin mulch of old Mushroom-bed manure has been given to assist in retaining moisture and encouraging a free growth. When the foliage assumes a yellow tint it is almost a sure indication of the presence of red-spider, and a thorough syringing such as will reach the underpart of the foliage should be given, using a solution of Gishurst compound, repeating the operation at intervals of a day or two until the pest is eradicated. An occasional dusting of well seasoned soot will be of benefit, and the soil between the rows should be hoed frequently.

The Water Avens (*Geum rivale*) **Leonard's variety.**—"N. L." (page 297) is quite right in advocating the claims of Leonard's variety of the Water Avens. It is much brighter than the ordinary one, and, especially by the water side, is quite pretty with its drooping coppery-red flowers. This variety looks especially pleasing when planted at the top of a low retaining wall and just above the level of the eye. When the plant comes between the observer and the sun the colour and habit of the flowers give special pleasure. I believe the variety was found by the late Mr. H. Selfe-Leonard, of Guildford, in Norway.—S. ARNOTT.

Morina longifolia.—Morinas are distinct border plants in their season, and help to give character to the garden. Of the few species in cultivation *M. longifolia* is the best known and most easily procurable. It forms a rosette of long, ornamental, prickly, Thistle-like leaves, from amid which rise long, handsome spikes each 2 feet or 18 inches high, bearing long-tubed white and rose flowers. *M. longifolia* is not always long-lived, and in some places it is necessary to treat it as a biennial. In good, not too heavy, soil it is sometimes a true perennial.—S. ARNOTT.

The Snowdrop Windflower (*Anemone sylvestris*).—This has been very good with me this year, both the single and double forms having bloomed very freely. It seems to like an open, sunny position, and to be quite indifferent as to soil, provided it is well drained. It spreads quickly, and a good stock can soon be obtained by dividing the clumps. The single form is very like a miniature *Anemone japonica*. It flowers in May and sometimes throws up a few blooms in the autumn too.—N. L.

Perennial Candytufts.—These are valuable for the enduring nature of the bloom. A patch in my garden this year has been in flower for five weeks, and now, in the second week in June, is almost as full of bloom as it has ever been. There are many kinds, but I doubt if any can surpass *coreaefolia*. The new Snowflake is good. Where shelter can be given, or grown in a cold house or frame, *I. gibraltarica* is lovely.—J. CROOK.

Cheiranthus Marshalli from seed.—This is the most distinct and beautiful Wallflower we have. During May it was lovely in my garden mingled with Forget-me-not. This Wallflower was raised from seed, and when the plants were strong enough they were planted among the self-sown *Myosotis*. In my young days this Wallflower was increased from cuttings, but seedlings are far more vigorous.—DORSET.

INDOOR PLANTS.

HIPPEASTRUMS.

THE different garden varieties of *Hippeastrum* made a goodly show at the recent Chelsea exhibition. The display set up by different exhibitors served to emphasise their value for decoration at this season, as their large, gorgeous blossoms stand out from those of any of their associates. One thing that militates against the more general cultivation of *Hippeastrums* is the widespread idea that a considerable amount of heat is necessary for their successful culture; indeed, they are often looked upon as requiring a stove temperature at some period of their growth. This is far from the case, as they can be grown in a greenhouse where a winter temperature of 45 degs. to 55 degs. is maintained. When the flowers are over the plants should be encouraged to make good growth by keeping them well supplied with water, and giving them an occasional stimulant. Liquid manure and soot-water combined are very good for the purpose, but, failing this, one of the many concentrated plant foods now on the market may be used. Care must, however, be taken that it is not given them too strong. During the summer *Hippeastrums* may be readily grown in frames out of doors, shading them a little at first, and inuring them to the full rays of the sun towards the end of the season. As the leaves turn yellow the water supply must be lessened, and finally in the depth of winter it may be discontinued altogether. Care must be taken to remove the plants to the greenhouse before frost sets in. Being dormant, they are by some stood underneath the stage, but such treatment cannot be recommended, as the drip from the plants above may soon do a deal of harm. By February the plants can be lightly watered, taking care that it does not enter the crown of the bulb, but is just sufficient to moisten the soil. At one time the bulbs were annually repotted in January or February, but such treatment is now not considered necessary. Provided the roots are in good condition the necessary stimulus may be given in the shape of liquid manure.

REPOTTING.—There are differences of opinion as to the time to repot, for while many do this when the bulbs are dormant, others prefer to carry out the work directly the flowers are over. This cannot be then done if the plants are carrying seed-pods, while if the roots are not in good condition repotting early in the year is the better way. If the flowers have been fertilised it will be found that the seed-pods quickly develop, so that, as a rule, by July they will turn yellow and split, thus exposing the black-winged seeds.

RAISING FROM SEED.—Where there is a structure in which a temperature of 50 degs. to 60 degs. is maintained during the winter the seed may be sown at once. At this season the young plants quickly make their appearance, and if potted off when sufficiently advanced they will become established in small pots before winter. The first season they must be kept growing; in fact, it is better not to dry them off during the second winter. In two and a half years from the time of sowing some of them will bloom, but it will take another year before their merits are fully tested. In the production of the garden varieties of the present day several species have played a part. It has often been a matter of surprise to me that the brightly-coloured *Hippeastrum pratense*, often known as *Habranthus pratensis*, does not

appear to have been tried by the hybridist. The fact that the flowers are smaller than those of most *Hippeastrums* is, perhaps, the reason that we do not see any of its progeny. K. R. W.

EUPATORIUM RAFFILI.

This *Eupatorium* requires indoor culture. There is some mystery attached to its origin, for it was grown at Birmingham Botanic Garden for some years as *E. ianthinum*. Specimens were obtained for Kew, where Mr. Raffil, whose name it bears, noticed differences between it and *E. ianthinum*, and it was eventually described and figured in the *Botanical Magazine* under the above name. It grows

CAMPANULAS IN POTS.

ALTHOUGH the Canterbury Bell is prized by many professional gardeners for pot culture, I doubt if amateurs generally are aware of its value. The first time I saw it blooming, quite early in the year, under glass, I was as much pleased as I was surprised. This *Campanula* is of much service for cutting, as the flower-stems are very stiff and the individual blooms have much lasting power. The seed is sown at the usual time, the only difference being that the young plants are grown on in pots throughout the summer instead of being planted out, so that they come into 6-inch pots by the middle of July, which gives time for the pots to become well filled

being the same as for the Canterbury Bell. There is, however, a great difference between plants that have had high-class culture and those that have been treated in a happy-go-lucky way. This *Campanula* needs a rich soil and strict attention from the time the young plants appear. If not repotted at the right time, but allowed to stand about for a week or two in a semi-starved condition, there will be disappointment, the fine proportions which characterise this Bellflower will be absent, and in this condition it is not worth growing in pots. The varieties of *C. persicifolia* are certainly well worthy of the care involved in pot culture. The double-white is a fine thing, and in a general way cannot be relied on in the open ground; the strain of producing a mass of double flowers seems too great for the constitution of the plant, and in the course of a year or two it dies away. In pots it is otherwise, the watering, feeding, and annual repotting maintaining healthful vigour. Not only is this the case, but the flowers are sheltered from weather extremes which much affect them in the open. I strongly advise your readers to try this beautiful Bellflower in pots; the flowers are as double and finely formed as those of the *Camellia*, and not coarse. Grow the plants in the open air and bring them in for blooming. *C. muralis*, *C. pusilla*, and its white variety are excellent for pots, and may be used where there are window ledges to furnish. They are so hardy that weather changes do not affect them, and they may be kept in the same pots without change of soil for several years. J. CORNHILL.

NOTES AND REPLIES.

Leschenaultia biloba major. — Since Messrs. Balchin gave up their nursery at Hassocks, where they grew this *Leschenaultia* so successfully, it seems to have almost dropped out of cultivation. This is a pity, for the charming blue of its flowers is always admired. The scarlet-flowered *Leschenaultia formosa* seems to have quite disappeared. It was familiar as a specimen plant in days gone by, and was always considered a good test of the cultivator's skill, even more so than its blue-flowered relative, which is by no means the only plant that we miss since the collection at Hassocks was dispersed, for though *Boronia megastigma* and *B. heterophylla* are still grown in considerable numbers, *B. serrulata*, which they used to do so well, is very rarely seen. During a few visits that I paid to the nursery I was very much struck with the richness of colouring to be found in flowers that had developed in the clear, pure atmosphere of the South Downs, compared with those on plants grown a few miles from London. This applied not only to flowers, but to fine-foliaged plants, of which the tricolor *Pelargoniums* and *Acalyphas* were particularly noticeable. — W. T.

Calceolaria Clibrani. — An objection frequently urged against the herbaceous *Calceolarias* is their lumpy and inelegant habit of growth. This cannot be said of *Calceolaria Clibrani*, for it may, I think, be claimed as being the most elegant of all the garden varieties of the genus. It is of a freely-branched habit of growth, and the gracefully-disposed growths are, when at their best, freely laden with soft, yellow blossoms. Another noticeable feature is that in this variety the pouch is more elongated than in most of the other *Calceolarias*, and this, of course, takes off the lumpy character. This *Calceolaria* is readily propagated from cuttings or seeds, and it will grow freely with ordinary



Eupatorium Raffili. From a photograph in the Royal Gardens, Kew.

1½ feet to 3 feet high, and is conspicuous by reason of its handsome foliage and reddish-brown stems. The flower-stalks are reddish-brown and the flowers are lilac. The best results are obtained by cultivating it in a tropical house, but it also succeeds in a warm greenhouse. Cuttings rooted during spring or early summer grow rapidly and form fine plants carrying several large heads of flowers by the following spring, the flowering season being from March to June, although it varies a good deal according to the conditions under which the plants are grown. A good compost consists of three parts loam to one part of leaf-mould or well-rotted manure and one part coarse sand. K.

with roots by the end of the growing time. They should have good loamy soil with a liberal addition of rotten dung or artificial manure of some kind. Keep them in the open until November. A frost or two will do no harm. On the contrary, it will bring them into a state of complete rest. A cool house or frame is the place for them until February, when they may be brought into gentle warmth or be allowed to come on naturally in a cool greenhouse. Plenty of water is needed when they are in full growth, with a dose of liquid manure now and then.

The value of *C. pyramidalis*, the Chimney *Campanula*, has been fully recognised for many years. It is a fine thing either in pots or in the open ground, the treatment

treatment. It is of considerable value for grouping in the greenhouse or conservatory. Its value for this purpose was well shown in some of the groups at the recent Chelsea Show. Beside the name of *Clibranii* it is also known as *C. profusa*. I am not aware of the origin of this distinct and pretty *Calceolaria*, and should be interested to learn it.—W. T.

Tuberose.—These are by many highly esteemed, although some object to their rather over-powering perfume. If potted during May and given a little bottom-heat until top-growth begins the tubers will bloom in August and September. After potting no water ought to be given until growth is visible, but afterwards plenty of moisture is necessary, and as the foliage is liable to be attacked by red-spider and aphids, occasional syringing is needed. After flowering, the tubers are of no further use, and may be thrown away.—KIRK.

VEGETABLES.

NOTES AND REPLIES.

Growing Belgian Chicory (Witloof).—Will you kindly give me some information as to the proper cultivation of Belgian Chicory?—H. E. T. C.

[The Witloof, or Belgian Chicory, succeeds best on ground that has been manured for a previous crop, as contact with fresh manure causes the roots to become forked. The best time to sow is early in May. This should be done in precisely the same manner as Carrots or Beet. The seed germinates very freely, therefore it is best to sow thinly, and so avoid having drawn, spindly plants. Thin out to 9 inches or 1 foot apart as soon as the seedlings have developed a few leaves, and keep them free from weeds afterwards by frequent hoeing. The roots become full grown about the end of October, when they may either be left in the ground and lifted as wanted or be taken up and partly buried in some convenient spot where they will be easily got at during the winter. We favour the latter plan, and lift the whole lot during November. The green tops are twisted, not cut off, and the roots buried just deep enough to cover the crown and no more. As the Witloof is perfectly hardy the roots require no protection beyond that afforded by the soil, only when severe weather seems imminent a little litter shaken over a portion of them will enable them to be got out more readily. Forcing is best done in a Mushroom-house, or any dark place with a temperature ranging between 55 degs. and 60 degs. Strong heat causes the tops to grow more quickly, but they are then not nearly so crisp eating. By keeping the roots buried up outdoors, as indicated, there is no difficulty in keeping up the supply till spring, provided a sufficient quantity of roots is grown with that end in view.]

Cauliflowers.—Continue to plant out for late supplies. Those already planted should be examined, and any failures made good. The hoe must be used frequently between the rows, and they must never be allowed to suffer from want of moisture. Plants that are maturing the curds should have the leaves drawn up and tied over the flowers to exclude light. When large enough, if not required for immediate consumption, the plants may be pulled up and suspended head downwards in a cool shed, where the heads will keep in good condition for several days.

Globe Artichokes.—Where practicable, these should be afforded a copious watering of liquid-manure. A covering of litter may afterwards be placed over the bed in order to retain the moisture for as long as possible. As soon as the Artichokes have been cut, the stems should be removed and the side shoots encouraged to produce crowns later in the season.

GARDEN FOOD.

NOTES AND REPLIES.

Good old fruits.—We notice in the country shops even some old English fruits which colonial people take notice of and esteem, as, for example, the Sturmer and French Crab Apples, and that fine Pear *Bonne de Malines*. We fear our own people sometimes forget these good things in favour of novelties of less value.

The use of salt and sugar.—Not only must we teach children to do with much less sugar, but we must learn to do with much less salt. We add it to nearly all our savoury vegetable food in the cooking, and over and above that, we add still more at the time of eating. No dinner-table is considered complete without one or more salt-cellars; some people take as much as $\frac{3}{4}$ oz. or even 1 oz. a day. It is only those who have discontinued the use of added salt for a time who know how delicious vegetables and other foods can be without it. Even those vegetables that were thought to be almost tasteless unless seasoned are found to have very distinct flavours. People mostly urge that condiments are necessary to stimulate digestion, but, on the contrary, I think they will be found to cause much over-eating. If food cannot be taken without them it is generally a sign that there is something wrong with the digestive system, and so it is better to abstain from food until a natural and healthy appetite is felt. An excess of salt means a great deal more work for the kidneys in separating it from the blood prior to its expulsion. Indeed, it is sometimes thought that some cases of inflammation of the kidneys originate from the excessive use of salt, and what has certainly been proved is that patients suffering from this illness very soon improve if they are placed on a dietary free from added salt.—FLORENCE PETTY.

Rosette Colewort.—A good sowing of this type of Cabbage should be made without further delay. That the plants may be robust and ready for setting out quickly, the seed should be sown on a piece of well-manured ground, and care taken to assist the germination and subsequent growth of the plants by watering whenever it is required. For convenience when drawing the plants, the seed should be sown in drills 9 inches apart. Coleworts are useful for planting after early and second early Potatoes, and may where space is restricted be put out 1 foot apart each way.—A. W.

SOME OF MRS. EARLE'S RECIPES.

NUT CUTLETS.—Boil 2 ozs. butter in rather less than $\frac{1}{2}$ pint of milk. Add 3 ozs. of dried bread-crumbs (or brown bread-crumbs). Cook till it does not stick to the pan. When cool add 2 ozs. ground Walnuts, Almonds, or Barcelona Nuts, seasoning to taste, and a little chopped Onion or Chives. Mix thoroughly and shape into cutlets or balls. Roll in flour, or in egg and bread-crumbs, and fry in butter or bake. Serve with Tomato sauce, Walnut gravy, or, for children, with bread sauce. If the same dish is prepared with white bread-crumbs, and a little good melted butter sauce used for mixing, it looks and tastes very like chicken croquettes.

MACARONI AND CHEESE PATTIES.—Take 1 oz. macaroni well boiled, cut very small, and add one large tablespoonful of grated cheese and the same of cream or Nut butter. Season with salt, pepper, and mustard if liked. Make some short paste; roll out thin and line patty pans. Fill with the mixture and cover with paste. Bake a light brown. Instead of patty pans, the paste can be doubled over the mixture and fried as fritters if preferred. Butter and milk can be substituted for cream, and it is quite good without either. But in that case the macaroni should be rather moist and the cheese fresh and soft.

BRAISED ONIONS.—Peel large or medium sized Onions in warm water to prevent the volatile oil from affecting the eyes; place them in a baking dish with butter enough to baste them well, and bake 3 hours, when they will be brown and tender. Remove them on to a serving dish, pour hot water into the baking tin, and with a wooden spoon rub off all the dark-brown baked juice, thickening, if liked, with a little flour, in which case the tin must be placed over heat enough to boil the gravy and cook the flour. Pour over the Onions and serve. This is a delicious dish which puzzles meat-eaters, as they think they are eating a rich meat sauce.

AN EXCELLENT VEGETABLE SOUP.—Take 2 Carrots, 2 Onions, 2 Turnips, a little Spinach, Lettuce, Endive, and Sorrel. Tie up together a sprig of every sort of herb you have in the garden. Boil all in water. When the hard vegetables are cooked, take out the sweet herbs, rub the whole through a fine sieve, make it not too thick by adding the water the vegetables were boiled in, add a little butter, pepper, and salt, and serve hot.

CHOU BRAISE.—Take a nice spring Cabbage, split it, and wash in salt and water, put it in a saucepan of boiling water for ten minutes. Take it up, drain well on a sieve, put it into a casserole pot for one hour to braise with a little butter, and pepper and salt to taste, but no stock or water.

CLEAR STOCK.—This is made of the water in which vegetables, macaroni or Spaghetti have been boiled—about 2 quarts. Early in the morning cut up, rather small, all kinds of vegetables (except Potatoes and Cabbage) in season; the stalks, outside leaves, and peelings may all be used. Let these boil slowly all day in a 2-quart saucepan, adding a little more of the cold vegetable or macaroni water to make up the necessary amount. Skim every 20 minutes for about 2 hours. About 1½ hours before dinner strain the soup through a fine sieve, and leave it to cool. If too light in colour add a little Onion juice fried in butter; this stock is a good foundation for all sauces, and the greatest improvement to many dishes. It is the French *Pot-au-Feu* without the meat.

VEGETABLE POT-AU-FEU.—Cut up into small pieces as many vegetables as you have—Carrots, Celery, Turnips, Cauliflowers, Onions, or any other vegetable. Fry them in butter till browned. Put in a saucepan with water. Add a handful of tapioca, and let it simmer gently all day. Skim occasionally; strain and serve with sippets of toast.

STOVED POTATOES.—Peel the Potatoes and cut into medium slices. Heap up a quart saucepan with them. Put in salt and pepper to taste. Cut the Onions and put into the saucepan pouring over all a gill of cream. Put lid on tight and cook on slow fire 20 to 30 minutes, or till Onions and Potatoes are quite done and cream nearly all boiled up.

DATE PUDDING.—Wash dates quickly in hot water; dry, stone, and chop them; mix with double their weight of bread-crumbs, and a little sugar. Add skim milk or weak Plasmon solution till of pudding consistency, steam 2 hours in buttered basin. Ground Nuts and grated Lemon peel may be added, if liked, or raw coarse oatmeal, and soaked tapioca, with a little flour, may be used instead of the bread-crumbs.

STEWED CHESTNUTS.—Slit the skins of the Chestnuts, and put them into cold water. Bring to the boil, keeping lid tight, and cook about ten minutes. Lift out a few at a time and remove both outer and inner skins. When all are done put them into a clean saucepan, and cover with milk or milk and water. Stew slowly till the Nuts break and are coated in a smooth creamy sauce. Time 1 to 2 hours. An old saucepan used for nothing else should be kept for blanching them, as Chestnut skins discolor badly.

POTATO SALAD.—Boil the Potatoes in their skins at least 2 hours before dinner. Cut them in slices $\frac{1}{4}$ inch thick; put in a china bowl with 1 to 2 soup ladles of hot broth or vegetable stock, and let them soak and remain tepid till dinner-time. They should so absorb the broth that they look dry. When served mix with a thin mayonnaise sauce, and surround with young Lettuces previously dressed with oil and vinegar. They can be dressed with Beetroot, Cucumber, or Tomatoes.

TREES AND SHRUBS.

THE PEARL BUSHES.

(EXOCHORDA.)

THE Exochordas are old world shrubs belonging to the Rose family, and closely related to the Spiræas. They are few in number, but all are attractive, and as they are easily grown they should be represented in every collection of shrubs. All are white-flowered and bloom in May or early June, the flowers, as shown in the accompanying illustration, being much larger than those of any of the Spiræas. A sunny position is desirable, and the most suitable soil is well-drained loam. Propagation can be effected in summer by means of cuttings of half-ripe shoots inserted in sandy soil in a close frame, whilst regular pruning is not required. The two best known species are E.

It promises to be an improvement on E. macrantha, for its flowers are each about 2 inches across and the racemes large.

E. MACRANTHA, the subject of the accompanying illustration, is a hybrid raised by the late M. Lemoine, of Nancy, between E. Alberti and E. grandiflora, and in point of free flowering qualities it is superior to either parent. In fact if one kind only is required there should be no hesitation in selecting the hybrid. Its hybrid parentage is noticeable in the stamens, for the numbers are unequal and the groups of stamens in different flowers are of unequal number. D.

THE MOCK ORANGES.

(PHILADELPHUS.)

THE Mock Oranges, or Philadelphuses, blossom after the bulk of the spring-flowering shrubs is over, and may be considered as the forerunners of the

Lemoine, of Nancy, a typical one being P. Lemoinei.

The Mock Oranges thrive in ordinary garden soil, but show a partiality for good loam. They are gross feeders, and where the soil is poor it is a good plan to apply a good surface dressing of well-decayed manure now and then. Although they will grow in semi-shade, an open position is desirable, and it is advisable to so arrange their planting that the roots of vigorous-growing trees are not likely to interfere with them. The strong-growing species rarely need pruning, while the dwarf P. microphyllus can also be left unpruned for years, but the hybrids, of which P. Lemoinei is an example, give the best results if pruned annually. This pruning should be carried out as soon as the blooms fade, and the old flowering wood should be cut away to where vigorous young shoots are being formed. In many



Flowering shoots of Exochorda macrantha.

Alberti and E. grandiflora, which have much in common and are rather difficult to tell apart when out of flower. When in flower, however, their identity is easily established by means of the stamens, for whilst E. Alberti has twenty-five stamens in groups of five each, E. grandiflora has fifteen stamens in groups of three each.

E. ALBERTI is a native of Turkestan and is sometimes met with under the name of E. Korolkowi. It grows up to 15 feet high and produces racemes of flowers 3 inches or so long.

E. GRANDIFLORA grows almost as tall, and blooms more freely, both individual flowers and racemes being larger than those of E. Alberti. It is from Northern China and has been in cultivation since 1849.

E. GIRALDI is quite new to cultivation in this country, for it was only introduced from China about seven or eight years ago.

smaller, summer-flowering set. Moreover, they are very beautiful when in bloom, and the majority are fragrant, whilst there are few gardens where one or more species or hybrids cannot be grown. In most cases the flowers are white, but in one or two instances the petals have purple blotches at the base. A good deal of variation in habit is noticeable, for there are bushes of all sizes, from the large-growing P. grandiflorus, which sometimes grows 18 feet or more high, to the dwarf P. microphyllus, which is sometimes fully developed at a height of 2 feet. They are natives of S.E. Europe, Asia Minor, China, and the United States of America. Some have been introduced many years, while a few have made their appearance during the present century or last decade of last century. In addition to the species there is a very beautiful series of hybrids raised by the late M.

instances they can be removed to the ground line. Their removal allows the full energy of the plant to be concentrated upon the production of vigorous young shoots, which, in the course of the summer, grow from 2 feet to 3 feet long, and bloom from end to end the following June. Propagation is easily carried out by means of young shoots 4 inches or 5 inches long inserted in sandy soil in a close frame during June and July. The commonest species is

P. CORONARIUS, the Mock Orange or Syringa of gardens. The latter name, by the way, is unfortunate, for it is also the scientific generic name of the Lilac, and it frequently leads to confusion amongst people who are not conversant with the peculiarities of plant names. P. coronarius is a very free-flowering bush, sometimes more than 12 feet high, with a considerable spread, its fragrant,

creamy-white flowers being each over 1 inch across, and borne in good-sized racemes in June. It is a native of S.E. Europe and Asia Minor, and appears to have been grown in England since the earliest recorded days of horticulture. There are several varieties, some with double flowers, some with variegated leaves, and one of dwarf habit, but all are inferior to the type.

P. GRANDIFLORUS, a vigorous shrub introduced from the United States upwards of a century ago, is also a desirable bush. Sometimes over 18 feet high, it grows into a large, wide-spreading bush, and bears pure white flowers, which are each over 2 inches across. Those who find the scent of the common Mock Orange too powerful should plant *P. grandiflorus*, for its flowers are almost, if not quite, scentless. The variety *laxus* is a peculiarly free-flowering variety, the blooms rather smaller than those of the type and the branch system looser.

P. FALCONERI is another large-growing bush, and very beautiful when at its best, but, unfortunately, it cannot be relied upon to bloom so freely as the others already mentioned. Its pure white flowers are each about 1½ inches across, and less strongly scented than those of *P. coronarius*.

P. LATIFOLIUS is another strong-growing species of the *P. grandiflorus* type, in fact it is sometimes called *P. grandiflorus* var. *floribundus*. It grows quite as tall as *P. grandiflorus*, and its pure white flowers are very similar in appearance. It, however, blossoms even more freely than that species, and is well worth planting as an isolated bush.

P. MAGDALENÆ grows about 6 feet high and forms a rather dense mass of slender branches. It is a native of W. China and was introduced to France about 1895. The flowers are white and each about ¾ inch across.

P. MICROPHYLLUS is a dense bush from 2 feet to 4 feet high, with small, twiggy branches, tiny grey-green leaves, and powerfully fragrant white flowers. It is an excellent little bush and was used by M. Lemoine as a parent for some of his best hybrids. *P. microphyllus* is a native of W. North America.

P. MEXICANUS is a rather tender species from Mexico, suitable for the south-west counties, but not hardy about London. It grows 6 feet or 8 feet high and bears large, handsome, fragrant flowers, each about 2 inches across. In the variety *Coulteri* the petals are blotched with purple, and by using it as a parent a hybrid with purple-blotched flowers has been raised. This is called *purpureo-maculatus*. It resembles the *Lemoinei* group in habit and in size of flowers, but is rather less hardy than

P. LEMOINEI, which, when left unpruned, grows about 4 feet high, but plants pruned annually are usually about 3 feet in height, the majority of the hybrids being of similar growth. *P. Lemoinei* is very free flowering, and its variety *erectus* may be included as one of the most useful twelve flowering shrubs. Other useful hybrids are *Avalanche* (very large pure white blossoms), *Fantasie* (also with very fine white flowers), *Boule d'Argent* (double white), *Pavillon blanc* (flowers white and large), *Rosace* (flowers semi-double, each 2 inches to 3 inches across), and *Virginal*, with double flowers. The hybrids are usually seen at their best when planted in groups and pruned annually. In unpruned plants the branch system is inclined to become very dense and the flowering branches short, the graceful habit which is such a charm of pruned plants being thus lost. D.

GARDEN PESTS AND FRIENDS.

FRUIT-TREE PESTS IN JUNE.

CATERPILLARS of the winter moth type, larvæ of the codlin moth, and those of various sawflies are amongst the destructive visitants of June and July. Parasitic fungi, too, like those that cause scab in Apples and Pears, as well as numerous mildews, are often aided by weather conditions until quite late in the season, so that no relaxation of vigilance is safe during the whole of the summer. The application of poisonous compounds to foliage attacked by caterpillars has proved to be an efficient means of destroying the pests, and provided ample time is allowed before the fruit is to be used there is no danger to the consumer. Foremost amongst the substances employed is

PARIS GREEN, an aceto-arsenite of copper, obtainable both as a powder and a paste, the latter being preferable in many respects. Special preparations are now sold by reliable firms that can be used with greater safety as regards the operator, and with little risk of leaf scorching. The addition of lime is also found to decrease the latter danger, and a well-proved formula is 1 oz. each of Paris paste and lime to 10 gallons of water, mixed gradually and thoroughly in a wooden cask or tub. A good spraying apparatus must be employed to ensure the constant agitation of the liquid while being distributed on the foliage. Another substance which has given good results with little leaf injury is

LEAD ARSENATE, and this also can be had as a paste. Directions are sometimes given to growers to save expense by making the arsenate themselves from acetate of lead and arsenate of soda, but this is not advisable, as many cases of serious leaf scorching have been due to such amateur attempts, and an otherwise useful compound has been unfairly condemned. Double the quantity of the lead arsenate paste can be used as compared with Paris green, and even larger proportions have been employed, but 2 ozs. to 3 ozs. to each 10 gallons of water generally suffice. Both these substances are of especial value against caterpillars of all kinds.

PARAFFIN EMULSION when carefully prepared has been found a useful summer application for pest-troubled fruit-trees, particularly against aphides, American blight, sawfly larvæ, and the smaller caterpillars or grubs. The best qualities of lighting paraffin should only be used, and soft soap is the safest substance to use with it. A good dressing can be made with 1 lb. of soft soap and ½ pint of paraffin to 5 gallons of water. Dissolve the soap in hot water, gradually add the paraffin, constantly stirring, and then mix with the full quantity of soft water. When mildew is also present the addition of 2 ozs. of potassium sulphide is helpful.

TOBACCO in many forms is most effective against aphides and similar enemies, and such preparations have the advantage that they cause no leaf injury. Nicotine itself, though costly, is preferred by many experienced men, such a small quantity of the pure extract being needed that the expense is not great. About 1 oz. to 10 gallons of water is usually sufficient, but repeated dressings may be required.

QUASSIA EXTRACT is a safe and useful dressing, especially with the addition of soft soap at the rate of 4 ozs. to 6 ozs. to each gallon. Few care for the trouble of boiling Quassia chips when the extract can be purchased ready for use. While destructive to aphides and small caterpillars, this also prevents sawfly attacks,

especially when ½ pint of paraffin is added to each gallon.

HELLEBORE POWDER is still preferred by many against Gooseberry caterpillars, and if dusted over the bushes freely in early morning it effectually checks an early attack. As a fungicide for ordinary use nothing more efficient can be recommended than the best

BORDEAUX PASTE, a preparation of Bordeaux mixture especially suited for summer spraying of fruit-trees, and it can be proportioned in strength to the hardness or delicacy of the foliage of different kinds.

POTASSIUM SULPHIDE is employed for mildew attacks, but alone it is rather uncertain, and it is wise not to exceed ½ oz. to each gallon of water.

All spraying is best done early in the morning or late in the evening, the latter being preferable. Calm weather should be chosen, both to ensure efficiency and to avoid waste of the washes used. In most cases also it is advisable to give at least two sprayings at intervals of two days, and this gives the chance to increase the strength of the application if necessary. The best form of knapsack sprayers should be used for all small trees and bushes, seeing that the machines are kept in good working order.—R. L. C. in *The Field*.

NOTES AND REPLIES.

Red-spider on Gooseberry-bushes.—I enclose some leaves from a Gooseberry bush. Would you kindly say whether there is evidence of some disease, and, if there is, how it can be cured? Also, can you tell me if there is any strong-smelling liquid that can be used to keep birds from fruit, and, if so, what and how applied?—W. E. P.

[Your Gooseberry bushes have been attacked by red-spider. Spray them with a solution of paraffin emulsion, to every three gallons of which add 1 oz. of sulphide of potassium (liver of sulphur), and be sure that the undersides of the leaves are sprayed, as it is there that the red-spider is. Merely wetting the upper sides of the leaves will be of no avail. The only way to save your fruit from the attacks of birds is to net the bushes.]

FERNS.

REPOTTING FERNS.

I do not know who is your Fern authority, but recently I notice that his remarks in some cases betray a lamentable ignorance of practical facts. Last week, for instance, he stated that to obtain symmetrical, handsome growth, Ferns in pots should be turned about so as to prevent them growing towards the light, etc. This week he says that "Ferns should never be disturbed while in a dormant state; it is much better to wait until they have started into active growth." The fact is that as the fronds during growth will grow in such a way as to expose their fronds to the best advantage as regards exposure to light, unless the light be an absolute top-light, any shifting results in a few hours in a readjustment of the growing portions, which means unnatural curvature of main and secondary stems and distorted growth generally. I therefore have always advised the insertion of a label or other indication, so that if for any purpose the Fern is shifted it may be replaced in its former position and aspect as regards the light. In the second case, absolutely the very best time to divide and deal with Ferns generally is towards the end of the dormant period, but well before actual growth begins, since after the rest their constitutions are invigorated and there is no risk of damaging the rising

fronds or incipient roots. I speak, as you probably know, from long experience, and because I think it a pity that precisely opposite instructions should, as in this case, be given by presumed authorities.
CHAS. T. DRUERY.

[We have always been taught that the best time to repot Ferns is just as they are well on the move. This is the plan we have always followed, and have had no reason to change it. It stands to reason that when a plant, be what it may, is repotted, it should be starting into free growth for the reason that if shifted when dormant the roots are inactive, and it is more than likely that owing to this inactivity the soil will, especially if over-watered, become sodden and thus imperil the health of the plant. If the plant is in active growth the roots, if care as to watering is taken, very soon permeate the fresh material.]

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

THE ALPINE FLAX.

I AM a great lover of the blue Flax. I forgot to grow this little alpine Flax,



The Alpine Flax (Linum alpinum).

which is free in habit, though dwarf, and delicate in colour. A gem among rock plants I call it, and it appears to be easily grown. Native of Austria. W.

Calceolaria polyrrhiza.—This likes a shady situation, not too dry, and when in congenial quarters spreads quickly by means of underground stems into a large clump. I grow it low down in the rock garden under the shelter of a big rock, where it gets the early morning sun and is shaded for the rest of the day. It does very well in a light sandy soil with a fair proportion of lime in it. The flowers, borne profusely, are of a deep yellow with little brown dots over them, and are carried singly on stems about 5 inches or 6 inches high. It seems quite hardy.—N. L.

Erodium corsicum.—I think this is one of the best of the genus. It is of a dwarf, compact habit, with soft green, rounded leaves, and neat flowers of a pleasing shade of deep pink beautifully veined. Like most of its relatives, a hot, dry position seems to suit it best, in sandy, limy soil.—W. O. C.

Erodium trichomanefolium.—I am not very fond of the Erodiums, but they are useful for a hot, dry situation, and this species has very pretty, finely-cut foliage. It blooms freely, and the flowers are beautifully veined, but of a rather hard shade of pink. It seeds freely and can easily be raised in this way.—W. O.

FRUIT.

EARLY PEACHES.

The fine, sunny weather of the past week has been welcomed in these times, when it is imperative to economise—particularly in regard to fuel—by all fruit growers, as not only can the structures be liberally ventilated and suitable temperatures maintained, but sufficient sun-heat can be bottled up, so to speak, in the afternoon to render the employment of fire-heat during the night superfluous. If the temperature should fall lower than is perhaps desirable, at night or early morning, such leeway can always be made good in the day-time by keeping the temperature ranging between 80 degs. and 85 degs. and closing in time to ensure a rise of 3 degs. to 5 degs. more. Accompanied by a liberal syringing, the fruits, when this method of treatment is pursued, swell rapidly and soon reach the ripening stage, indication of which is given by the skins of the fully-exposed fruits beginning to put on colour. When this becomes general a gradual modification of treatment is necessary. Overhead syringing has first to be dis-

effected. Pegs made from the twigs of worn-out Birch brooms, or Bracken, or galvanised wire for holding the runners in position until rooted should, to the required number, be made ready beforehand. When young plants are not set out purposely for supplying runners, the needful quantity should be obtained from the youngest, preferably those set out last autumn, of the fruiting plants.—G. P. K.

FRUIT TREES FOR NORTH WALLS.

Will you be good enough to let me know what fruit-trees, apart from the Morello Cherry, are best for a north wall?—A. S. E. SEDGWICK.

[In most gardens walls having a northern aspect are used for the cultivation of the Morello Cherry, which, we think, is a pity, as in many parts of the country other fruit trees, such, for instance, as choice, late dessert Plums, succeed admirably on north walls, to say nothing about Red and White Currants and dessert Gooseberries. Where Morellos are in demand as late as they can be had, it is then necessary to accord the trees a position where they will be shaded from the sun during the hottest part of the day, and such a position with the necessary amount of shade they experience when grown on a north wall. For the earlier supply, Morellos may just as well be grown as bushes as not, for they bear heavy crops grown in this form, while the individual fruits are quite as large, and they hang for a long time if netted over. If this is done, the space they would otherwise occupy on the walls can be utilised for the growing of Plums as indicated above. Those who have to provide a large and varied dessert through the autumn months know full well the value of having a few trees of choice kinds of dessert Plums to fall back on when indoor fruits other than Grapes begin to become scarce. Such kinds as Coe's Golden Drop, Jefferson's, and Ickworth Impératrice will hang in good condition quite as long as the Cherries if covered with coarse muslin or very thin tiffany as a protection against birds, wasps, and flies while they are ripening.

No special culture is needed for growing Plums on such a position, and, as a rule, owing to their flowering later than those out in the open and those on walls having warmer aspects, they escape the spring frosts and invariably set good crops of fruit. Where north walls are of considerable extent, and the climate suitable, we would strongly recommend that a portion of the same be devoted to the growing of dessert Plums for late autumn supply. Gooseberries are also a very profitable crop when grown on north walls, and the fruit may be had much later than when grown on bushes. The best way to grow these is as cordons with from three to five branches, which should be trained perpendicularly in the same manner as upright cordon Pears or Plums. Currants of both Red and White varieties bear most profusely grown in the same way, and come in useful after the fruit on the bushes out in the open garden has been gathered. Where autumn-fruiting Raspberries are grown, these late Currants are doubly useful, as they can then be utilised for tart-making in addition to being useful as an adjunct to the dessert. We do not reply to queries by post.]

Summer pruning.—Continue summer pruning at short intervals, pinching some shoots, and tying in others to the trees, to replace worn-out branches. On no account retain superfluous shoots to the detriment of those intended to bear fruit next season. Some shoots almost invariably take an undue share of the sap, but by timely pinching with the finger and thumb the proper balance may be maintained.

pensed with, the requisite amount of moisture being obtained by the damping of the paths and surface of the borders. This, in turn, must be reduced to a minimum as the maturation of the fruits progresses, and finally withheld when an aroma is given off, which indicates that the finishing stage has been reached. Warm, dry air is essential for both finish and flavour to be satisfactory, and a chink of air should be left on at the top of the house throughout the night. The approach of the colouring stage is the signal to give the last stimulative watering. After this, plain water, if a further supply is needed, is given. For home consumption the fruits should be allowed to become ripe, not dead ripe, before gathering them. A. W.

Layering Strawberries.—Preparation for layering the required number of runners for forcing and for making new plantations should now be made. Layering into 60-sized pots filled with loamy compost which has been enriched with spent Mushroom dung or well-rotted manure is really the best method. The pots can be prepared on wet days, and when the runners are sufficiently advanced in growth the layering can be quickly

THE WEEK'S WORK.

SOUTHERN COUNTIES.

Tomatoes.—These have made a good start and require all side growths pinching back close to the stems. Now that new roots are pushing out in all directions a little liquid manure will be added to the water to stimulate and tide the plants over the next week or two while chilly nights are likely to be encountered.

Autumn Cauliflowers and Broccoli.—Advantage should be taken of the ground being moist to get both of the foregoing planted. Ground in good heart is necessary, particularly for the first-named, and good heads must not be expected from poor soil. If liquid is plentiful, amends can be made in the latter case by a free use of it after the plants start growing. From 2½ feet to 3 feet is none too great a distance for the rows of Cauliflowers to stand asunder, and the plants may be from 2 feet to 2½ feet apart in the rows, according to the fertility of the soil. Broccoli may be planted from 2 feet to 2½ feet apart each way.

Cabbage.—Plants to supply heads for cutting at the end of the summer should at once be planted. Any of the main crop sorts answer for planting at this date, Enfield Market being a good one if good-sized hearts are required. The plants should be set out at least not nearer than 18 inches each way.

Savoy.—Some do not care for Savoy Cabbage until the heads have been subjected to the influence of frost, but the small-hearted early varieties form a welcome change in late autumn, and are by many much appreciated. They do best on firm, heavy ground, and these early sorts can be planted from 15 inches to 18 inches apart all ways.

Early Cauliflowers.—These are now turning in. As soon as the crop is cleared, the site, if lightly dug with a fork, will do for Celeriac without any further preparation. Celeriac, unlike Celery, is planted on the surface. Lifting with a good ball is essential, and a good soaking of water should be given prior to lifting, and again when planting is completed. Afterwards water must be applied unstintingly during dry weather. A surface mulch of some description, though not imperative, lessens the need for watering frequently.

Endive.—Seed of both the Green Curled and Broad-leaved Batavian varieties should now be sown in the same way as for Lettuces. Both are in much request for salad-making in autumn.

Flower beds.—The hoe should be run through the surface of the soil both to aerate it and to destroy weeds in an incipient stage. Owing to the heavy showers of rain there has been no necessity for artificial watering, and the plants, as a result, will start away all the quicker. Unless necessary to have plants in bloom as early as may be, all flowers for the present should be picked, which will strengthen and induce them to grow more strongly. Heliotropes, Petunias, Verbenas, etc., should be pegged down at once, so as to cover all bare spaces.

Specimen plants for lawns.—These, having been thoroughly hardened off, will now be stood in the positions they are to occupy during the summer. When arranged, the surface of the soil will be mulched with old Mushroom dung after it has been passed through a ½-inch sieve. To maintain the plants in a free-flowering condition judicious feeding is necessary, liquid manure and Clay's fertiliser being two excellent stimulants for the purpose. In hot weather watering needs to have attention daily—i.e., in the morning and late afternoon.

Herbaceous borders.—These require looking to frequently, otherwise wind and rain soon spoil their appearance. Spray saved when trimming Pea sticks will be used as far as possible for supporting all subjects for which it is suitable, as a much more natural appearance results than when a quantity of stakes is used. If carefully worked in among the plants, it is quite unobtrusive, and forms a most effectual support. All bare spaces should

be well hoed and the roots kept well supplied with water in dry weather. Single Asters are most effective in autumn, and look best when planted in a border by themselves, arranging the colours so that a harmonious whole is secured.

Border Chrysanthemums.—These are growing vigorously, and promise to make very fine plants by the end of summer. Their chief requirements for the present are to keep the soil frequently stirred and not to let the roots feel the want of water.

Michaelmas Daisies must now be looked over, when the weakest and surplus shoots should be pulled out, as it is a mistake to allow all growths which push up to develop.

Show and fancy Pelargoniums.—As these pass out of flower the plants should be stood outdoors in full sun for the wood to become thoroughly ripened. When this has taken place, propagation can then be effected by cuttings made from the best ripened growths. These should be potted singly into thumb pots, using a sandy compost and placing a dash of sand at the base of the cuttings. They strike quickly in a Cucumber frame. When a sufficiency of cuttings has been secured, the plants should be pruned back, placed in a cold frame, and kept on the dry side until they begin to break freely, after which they should be shaken out and put into pots one or two sizes smaller. To enable this to be done a certain amount of root reduction is necessary. A later batch now in bloom requires careful attention in regard to watering, in keeping the house cool, and the flowers shaded from direct sunlight.

Indian Azaleas.—These, having completed their growth and set their buds, will now be moved outdoors and plunged in a bed of ashes, which is partially shaded from the mid-day sun by a wall some 10 feet in height. However carefully the syringing may be done, some few thrips are almost sure to be present, and these are best dealt with when the plants are moved to the open. For this reason their presence was no longer desirable in the vinery, where they were put to complete their growth. A. W.

MIDLAND COUNTIES.

Apricots.—Chiefly owing to the inclemency of the weather while the trees were in bloom the Apricot crop in these gardens is a very thin one. This condition of the trees is accompanied by a stronger wood growth than usual, which is not favourable for the prospects of a good crop next season. All strong shoots, especially those which form a right angle with the wall, are pinched at the fourth leaf from the base, and such of the strong shoots as it is necessary to retain are pinched at the point in order to check development. All superfluous ones are removed entirely, leaving only those for which there is space—at 4 inches to 6 inches apart. An occasional syringing with clear water in the early morning or evening will keep the trees in good order. Where a good crop of fruit has been secured the final thinning should now take place.

Peaches and Nectarines opened their flowers later than those of the Apricot, and thus escaped the severe weather, and the trees are carrying a bountiful crop. The final thinning of the fruits will shortly be carried out. Tie in and regulate the shoots as they increase in length and pinch the laterals. The trees have been afforded a copious watering. Poorness of the soil and dryness at the roots are often the cause of the trees being badly attacked by insects or causing them to be unhealthy.

Fig-trees on a south wall will now be freely disbudded to prevent the shoots becoming overcrowded, and in order that the fruits may be fully exposed to the light and air. Remove the extra strong shoots and retain those that are short-jointed, as these will ripen better and prove most fruitful. Remove sucker growths from old trees and thin the fruits if necessary, but do not stop the shoots. Fig-trees out-of-doors require very little, if any, syringing.

Early Peach-trees.—As soon as all the fruits are gathered the trees will be relieved of

useless wood by cutting away such as has produced fruit and can be replaced by young shoots. By so doing the wood retained for next season's crop is given a better chance to develop and ripen. Give the trees a thorough soaking of clear water, also well wash the foliage every afternoon with the hose-pipe or garden engine to keep it clean. If the trees are badly affected by red-spider, syringe them two or three times with an approved insecticide. It is essential to keep the foliage healthy as long as possible. All ventilation possible should be admitted night and day. Trees in successional houses where the fruit is swelling must be well supplied with water, and where the trees are carrying a heavy crop give liquid-manure. Make free use of the syringe as long as possible to keep down red-spider. As the fruits approach ripeness, ventilate freely, leaving the top ventilators open a little all night.

Early Vinery.—All the Grapes having been cut, the border, if dry, should be given a thorough watering and the foliage should be syringed two or three times a week with clear water. Should red-spider be present on the leaves, spray with insecticide late in the afternoon. Early Muscat Vines on which the fruit is ripening require a good amount of fire-heat on dull, cold days. Attacks of red-spider must be checked, but insecticides must be used with great care as the foliage of Muscats is more easily injured than that of other Vines. The leaves are also subject to scorching after a period of dull weather. The glass may be shaded by spraying a little whiting over the roof. The inside border must be watered if necessary, but extremes of either wetness or dryness must be avoided, especially at the present stage when a check would be highly injurious to the crop.

Dianthus, for a display next summer, should be sown now in an open situation, covering the seeds lightly and shading till the seedlings appear.

Gladioli are apt to get injured by rough winds. When the growths are about a foot high staking must be attended to. When planted in groups on the borders it is best to give each a separate stake, but if planted in rows a stake placed at each end with two rows of soft twine carried across, to which the flower-spikes may be secured, will be sufficient.

Early-flowering Chrysanthemums.—Plants which were put out in May are growing freely. The roots are kept well supplied with water, and a mulch of short manure afforded. A vigorous syringing occasionally with clear water encourages strong, clean growth. Should aphides appear on the plants they must be syringed with an insecticide. I spray the plants at regular intervals with Quassia extract as a preventive of this pest.

Broad Windsor Beans.—Late sowings should be heavily mulched and kept well supplied with water or the yield will be poor. Stop the growths of mid-season sowings immediately a fair amount of bloom can be seen, as the majority of the flowers will fail to set if the shoots are not stopped.

Beetroot.—The main crop should be thinned to 9 inches apart. Hoe the ground frequently between the rows, taking care not to injure the roots. A sowing of Egyptian Beet made now will provide good-sized roots for use during the winter and spring.

Endive.—Seedlings from the first sowing will be transplanted into rows, and another sowing made. If the ground is dry give the drills a good soaking of water before sowing the seed.

Lettuce.—Tie up the varieties of Cos Lettuce as they become fit, as this will greatly improve the hearts. Continue to plant out at intervals for succession. Mustard and Cress are sown every week or ten days in a shady place, covering the seeds with a double thickness of mats until they have germinated.

F. W. GALLOP.

SCOTLAND.

Flues, etc.—Following the usual custom now that fires are not wanted, all the heating apparatus has been examined. It always pays to overhaul the boilers, etc., at this time, as any deficiencies can much more readily be detected and put right than when the fires are

kept on. All flues, soot-boxes, valves, and so forth were seen to, the water run off, and the boilers refilled. Afterwards, towards night, the fires were lit, and the water driven fairly rapidly through the pipes in order to ascertain that everything was in proper working order and ready for immediate use when required. One detail is at times overlooked. I refer to the chimney cans, which are sometimes almost closed up with sooty deposits. If these are scraped off a good draught is ensured, and there is no danger of back draughts.

Hard-wooded plants.—The time has now arrived when hard-wooded plants—not now so popular as their merits deserve—can be safely removed to the open air to mature their growth. Naturally, they ought to be placed in a sheltered and sunny spot, protected from winds which might yet do damage. If possible, these plants should be assembled in one place, and, if the watering is in reliable hands, there is no reason why they should not be partly plunged. Should any of the plants need repotting, now is the time to attend to it. These plants, however, after having been repotted may with advantage be put for a time into a cool house or pit until the roots get to work. Any pinching or pruning necessary to aid or to induce symmetrical form can now be attended to as required. Keep the syringe at work among Azaleas, as the leaves are apt to suffer from the attacks of thrips.

Roses.—A look round was given to all Roses in the course of the week. Although the spring was cold and inclement, yet the recent weather conditions have evidently suited Roses, the growths being exceptionally clean, healthy, and vigorous. The surface of beds and borders, rather beaten down by the recent rains, was again stirred up with the hoe. Previously the soil received a dressing of bone-meal, superphosphate of lime, and sulphate of ammonia, the last being added at the rate of one part to two parts of the others. This makes a very useful mixture. Roses on south walls are numerous, these being chiefly Gloire de Dijon, Rêve d'Or, and Mme. Berard. A number of young plants of Thalia, Dorothy Perkins, and Hiawatha intended for forcing next spring have been attended to. These are very useful varieties for the purpose mentioned, and they can be well done in 6-inch pots.

Planting out.—After the bulk of planting out has been done there usually remain a few odds and ends which require places. Such things as *Aloysia citriodora*, the Apple-scented Sage (*Salvia rutilans*), and similar things may now be put into their summer quarters. Fortunately, owing to the dripping weather lately experienced, there has been no need for artificial watering.

Cucumbers.—In whatever manner Cucumbers are grown—in houses, pits, or frames—abundant ventilation will be necessary. It is quite safe to allow the thermometer to run up to 100 degs., but copious damping down must be allowed when this temperature is reached. The moisture so obtained, combined with the heat, results in rapid growth, and, apart from that, it keeps down insect pests.

Stove.—One of the most charming things for winter flowering is *Gesnera cinnabarina*, and some of its varieties. If not already attended to, let the corms be shaken out, repotted, and started. It is usually understood that peat is needed to ensure the successful cultivation of the *Gesnerads* generally. It is a wrong theory, as I have grown them all well without peat. My compost is loam, well rotted leaf-mould, and well-decayed Mushroom-bed manure in equal proportions, with sufficient sea-sand to make the whole porous. The occasionally trying *Saintpaulia ionantha* succeeds well in that mixture. Cuttings of *Poinsettias* can be taken as they become available. I may, of course, be wrong, but I think that *Poinsettias* are not at all worth the trouble which they entail. Fires are now stopped, early closing being resorted to in order that the heat may be conserved as far as possible.

Tomatoes, now making rapid progress, are being attended to from day to day. Artificial fertilisation is being given to the later plants in bloom under glass. The earlier lots have been top-dressed with a mixture of loam, bone-

meal, and superphosphate of lime in equal proportions, with the addition of a little soot.

Orchard-house.—The trees must be well nourished. Any niggardly feeding now may result in an unsatisfactory crop, not only in bulk, but in finish. The syringe is indispensable, and if, as will happen, aphids appear, I find nothing more useful than Tobacco powder. Ventilate freely both by day and by night.

Cold frames.—Where these can be moved they may now with advantage be turned so that they will face the north. Such a position will be found useful for *Cyclamens* and *Primulas* especially. Ferns of the *Pteris* family are at home under such conditions, and *Cinerarias* will appreciate such a situation.

Hardy fruit.—Occasionally, black aphid attacks Morello Cherries, and in such a case no delay ought to occur in disposing of the pest. When such an outbreak occurs in normal times, I believe in douches of clear water through the syringe, but when, as at present, labour is scarce—skilled labour, that is—I find that a mixture of Fowler's nicotine and carbolic soap, with the addition of a small proportion of flowers of sulphur, acts well. The same formula will dispose of pests on Peaches, Plums, or Nectarines. Blister on the last-named is more than ordinarily prevalent.

Standard Pears.—A look round the old standard Pears in the grounds—planted chiefly for their effect when in bloom—shows that the set is very heavy—beating, indeed, that of the finer varieties on the walls. One in particular which shows up well is the old Moor Fowl's Egg, the crop of which will be very heavy. All trees which promise a good return are being mulched in order to give the young fruit a fillip.

Melons and Cucumbers.—The final planting of these has been made on specially prepared hotbeds. The material was not all that could have been desired, but, as there are hot-water pipes in the pits, no misgivings are felt as to the ultimate success. W. McGurrog.

Balmæ Gardens, Kircudbright.

ROYAL HORTICULTURAL SOCIETY.

JUNE 20TH, 1916.

HARDY flowers dominated the fortnightly meeting held on the above-named date. The *Pæonies* from Somerset have probably never been surpassed for fine quality or richness of colouring, the flower being also worthily represented from many other sources. The *Delphinium* was also in considerable force, though this fine border flower had not attained its best. Pinks, too, were charming, and for their fragrance alone are worthy of far more attention. The hybrid *Primulas* from Messrs. Bees attracted everybody, and demonstrated great progress as well. The finest thing among *Roses* was the brilliant *R. Moyesi*. It is a great gain. Neither greenhouse flowers nor *Orchids* were present on a large scale. Several important novelties received recognition.

HARDY FLOWERS.

The most imposing exhibit of these was that of *Pæonies* and *Delphiniums* from Messrs. Kelway and Sons, Langport, Somerset, the whole occupying two entire oppositely-placed tables. The *Pæonies* were much the best, and rarely have these sumptuous June border flowers been more finely displayed. Single-flowered and semi-double flowered varieties were very good, and of these we select *Mafeking* (crimson), *Queen Alexandra* (white, lemon centre)—of this there was an exceptional display—*Columbus*, and *Countess S. Palle* (pink shades). The finest of all, however, was *King of England* (satiny-rose with a mass of scarlet and gold petaloids in the centre). Of *Delphiniums*, *Rev. E. Lascelles* occupies a pedestal of its own, a fine contrast in rich purple and white. Other good ones were *Effective* (sky-blue), *Lovely* (of the same tone with bronzy

tinting), *Dorothy Daniels* (rich blue, white centre), *Opal*, and *Zinfandel* (imperial purple).

Messrs. Bunyard and Co., Maidstone, showed many good *Pæonies*, the finer and more distinct being *La Perle* and *Mme. Roussilon*, both of pink shade and double flowered. Of *Delphiniums*, *Queen Mary* (lovely sky-blue with white centre) and *Rev. E. Lascelles* were the best. *Iris intermedia* was a notable plant here. It is of the *I. ochroleuca* set, not far removed, probably, from *I. ochraurea*, and very handsomely proportioned. It is ivory-white and yellow. The bank of hybrid *Primulas* from

Messrs. Bees, Limited, Liverpool, was something to remember. Hybrids chiefly of *Beesiana* and *Bulleyana*, and possessing the fine vigour and garden value of both parents, they embrace every conceivable shade of orange, orange-scarlet, flame-red of many shades, and not least, delicate lilac tints on the border line of mauve that are quite new among hardy *Primulas*. The beauty of the whole, and their exceptional vigour, appealed strongly to hardy plant lovers.

Mr. G. W. Miller, Clarkson Nurseries, Wisbech, arranged a considerable variety of hardy flowers. Largely of *Delphiniums*, the group contained *Campanulas*, double white *Rockets*, *Heuchera*, *Pæonies*, *Potentillas*, and much besides. *Pæonies* were the chief of a large exhibit from

Messrs. T. S. Ware, Limited, Feltham, many of the best garden and commercial sorts being staged. *Duchess de Nemours* (a magnificent double white), *Alba sulphurea*, *Charles Leveque* (beautiful pink), *W. T. Ware* (soft pink), and *Water Lily* (blush-pink) were some of the best. The single crimson, *P. lobata*, was also on view.

Messrs. Dobbie and Co., Edinburgh, showed a remarkably good lot of *Canterbury Bells*, more particularly of the cup and saucer forms, which doubtless are the more showy and popular. These were in pink, blue of several shades, and pure white, similar colour shades being staged of the single varieties. Obviously a strain of much excellence was represented.

Messrs. R. H. Bath, Limited, Wisbech, filled a double, low-placed table with the choicest *Pæonies*, *Spanish Irises*, and *Delphiniums*. Of the *Pæonies*, *Marshal Oyama* (rose-coloured guard petals and gold and scarlet petaloids) was of outstanding merit. *Solfaterre* (creamy-white), *Philomele* (rose), *Mme. Charles Leveque* (soft pink), *Zarina*, and *Duchess de Nemours* (an indispensable among double whites) were among the best.

Mr. Amos Perry, Enfield, contributed a group in which *Pæonies*, *Irises*, and *Delphiniums* played a part. *Pæonia* *Duchess de Nemours*, *Iris Richard II.* (*Award of Merit*) (a fine contrast of white and purple), *I. Snow Queen* (an indispensable of the *I. orientalis* set), and *I. Caterina* were notable things. Most attractive, too, was a mass of the sky-blue *Delphinium Belladonna* semi-plenum, a lovely plant of 2½ feet high.

Mr. G. Reuthe, Keston, showed many alpine and choice shrubs, chiefly rare *Rhododendrons*, *Ozothamnus rosmarinifolius* (a mass of white blossoms), the brilliant *Erica cinerea pygmaea*, *Olearia dentata vera*, and *Coronilla cappadocica* (yellow) being some among them. An inflorescence of *Gentiana lutea*, 3½ feet high, was also remarked.

Messrs. Barr and Sons, Covent Garden, W.C., staged some good *Irises*, notably *I. ochroleuca Innocence*, the royal purple-coloured *I. chrysographes*, and *I. fulva* being of the number. Of *Spanish Irises*,

Twilight (light blue and buff) is one of the most distinct we have seen. Garden Pinks constituted the chief of an exhibit from

Mr. B. Ladhams, Shirley, Southampton, a considerable collection being staged. Elsie and Nellie are of rose colour, very striking and distinct; Inchmery (pale pink), Mrs. Pryor (white, crimson base), Aurora, and Salmon Queen being others of note. Handsome vases of cut sprays of *Abutilon vitifolium album* and *Carpen-teria californica* were also on view.

ROSES.

Much the most interesting item in this section was the striking group of *Rosa Moyesi* staged by Mr. J. C. Allgrove, Middle Green, Langley, Slough. This remarkable species was found in Western China by Mr. Wilson. Gaining an Award of Merit eight years ago, the higher award of a First-class Certificate was now granted it. Single-flowered, the coppery-crimson colour produces a most brilliant effect in the sunlight, and with golden anthers and elegant leafage the picture is complete.

Messrs. Chaplin Brothers, Waltham Cross, staged the H.T. Rose Mrs. A. W. Atkinson, one of the certificated varieties at this meeting. The colour is a fine ivory-white, the full, handsome flowers lightly perfumed. Old Gold in the bud state was lovely. Lord Kitchener, a new, highly-fragrant red, was very fine. Mrs. C. E. Pearson was also good.

Messrs. W. Paul and Son, Waltham Cross, had a capital exhibit of Paul's Scarlet Climber, also Cordelia (a large white-flowered seedling climber which is full of promise).

Messrs. B. R. Cant and Sons, Colchester, had several good single Roses, Cupid, Irish Glory, and Una, the last named not strictly single flowered. Lady Hillingdon, very rich in colour, was also on view. The new climbing *Wichuraiana Rose*, Nancy Williams, was shown by

Dr. Williams, Harrow-on-the-Hill. It is of rosy-peach colour, flowers large, and said to be a most vigorous grower.

GREENHOUSE PLANTS.

Nothing new was observed among these plants. *Streptocarpus*, of an excellent strain in the cut state, were daintily set up by

Mr. E. Beckett (gardener to Hon. Vicary Gibbs), Aldenham House, Elstree. White, pink, blue, violet, and other shades were observed. A group of growing plants of these and *Gloxinias* was staged by Messrs. John Peed and Sons, West Norwood, S.E., the latter particularly good. Messrs. W. Cutbush and Son had a group of the recently introduced Ivy-leaved *Pelargonium Radiaunce*. It is of a distinct scarlet shade.

Messrs. H. B. May and Sons, Edmonton, filled a table with groups of *Verbenas*, *Hydrangeas*, and an interesting variety of *Ferns*. *Fuchsias*, *Heliotropes*, Ivy-leaved *Pelargoniums*, and *Lantanas*, standard-grown all, were arranged throughout the group. Mr. J. C. Jenner, Rayleigh, Essex, and Messrs. Stuart Low and Co., Enfield, were the only exhibitors of *Carnations*, the latter showing well of *Princess of Wales* (pink), *Nell Gwynne* (white), and the Hon. Charlotte Knollys (scarlet) of the *Malmaison* section.

SIRUBS.

The Donard Nursery Co., Newcastle, Co. Down, showed *Tricuspidaria lanceolata* (*Crinodendron Hookeri*), the same firm showing the *New Zealand Olearia semidentata*, a lovely plant with bluish-lilac florets and purple disc.

Messrs. Paul and Son, Old Nurseries,

Cheshunt, received an Award of Merit for *Deutzia crenata magnifica*, the best of its class, the snow white, semi-double flowers being most effective.

Messrs. J. Cheal and Sons had, among others, bunches of *Abutilon vitifolium*, *Cistus salviifolius corbariensis* (very pure white), and *Philadelphus Bouquet Blanc*.

ORCHIDS.

Messrs. Sander and Sons, St. Albans, received a cultural commendation for a finely-grown example of *Laelio-Cattleya Gottoiana*, var. *Imperator*. L.-C. *Aphrodite albens* and L.-C. *Martini* were also remarked.

Messrs. Flory and Black, Slough, showed a pretty group of *Disas*, D. Blacki, D. B. Langley variety, and D. Luna being the chief. In shades of rosy-scarlet they were very fine. *Miltonias* were a feature in the group from

Messrs. Charlesworth and Co., Haywards Heath, the more conspicuous being M. *Charlesworthii* and M. *vexillaria Lyoth*. There were also good *Cattleyas*, *Odontiodas*, and *Odontoglossums*.

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Soil for Cyclamens (*Essex*).—A good potting soil for *Cyclamens* is two-thirds loam, one-third leaf-mould, with a little mortar rubble and silver sand. In winter they should have a temperature of from 50 degs. to 60 degs.

Roses with green centres (*Fred Freeman*).—The green centres in the *Roses* you send are usually caused by a check of some kind, such, for instance, as a spring frost. Where it is possible to detect these malformed blooms it is a good plan to remove them early and so encourage the smaller buds. Another cause may be that the soil is exhausted, in which case a mulch of rotten manure and frequent heavy waterings would do much good. Some *Roses* are liable to suffer in this way more than others, and all such should be discarded.

Scale on Ferns (*One in Difficulty*).—The fronds of *Nephrolepis* you send have been so badly attacked by brown-scale that the best thing you can do is to cut off all the fronds and at once burn them. Encourage the plants to start afresh, and watch closely for any scale on the new fronds. If any appear, lay the plant on its side on a table, then well wash each frond and stem with soapy water, using a soft brush, taking care that the scale is removed. Afterwards syringe well with clear water. This pest can only be kept in check by constant cleansing in the way advised. There is also white-fly on the fronds, but the cutting off of the fronds and burning them will clear this off.

TREES AND SHRUBS.

Cutting down Rhododendrons (*Mrs. F. Otway Johnson*).—As the *Rhododendrons* are so old there is considerable risk if they are cut back into the hard wood of their not breaking out in a satisfactory manner. Without seeing them it is difficult to advise as to how far they should be cut, and we can only say, do not cut them back farther than is necessary to ensure a shapely plant. The first half of the month of April is a very good time to carry this out. When cut back and the spaces between the plants are clear, after having given them a good soaking of water, lightly fork in a liberal top-dressing of leaf-mould or peat, as this will not only afford fresh rooting material for the active surface-roots, but also act as a mulch during dry weather. Young *Rhododendrons* may be planted at any time during mild weather from October to April.

VEGETABLES.

Manuring Asparagus beds (*A Grower*).—Salt is all very well as a manure, but it should be used very sparingly. A light dressing of 3 lb. to the rod is ample if strewn amongst the

stems a little later. If sown on the ground too early it makes the ground cold, and, should frost come late, may do much harm. We prefer an occasional dressing of sulphate of ammonia, given about twice during the season, and even one good dressing of soot. Guano, also, is helpful if well washed in. The great object of these dressings must be to promote strong summer growth, as the stronger this is the finer will be the crowns and stems the following spring. You must leave your beds to perfect all their stems or growths this season, then next spring you may cut some of the earliest heads for about a month. Then in succeeding years you may cut up to the end of June at least. Do not touch the *Asparagus* growths to cut them down until late in the autumn, when they have turned quite brown.

SHORT REPLIES.

Novice.—The best way would be to burn them, unless you are trenching the ground deeply and can bury them in the bottom of each trench as the work goes on.—*Miss J. R. Fraser.*—Your Sweet Peas have been evidently sown far too thickly, while their poor condition also shows that the plants have been dry at the roots. Give the row a good soaking or two of water and apply a mulch of rotten manure.—*R. Owens.*—Let the *Gladioli* remain in the soil until the foliage has ripened off properly, then they may be lifted and hung up to dry. When the foliage has decayed remove it and store the corms until planting time again comes round. Yes; the *Violas* may be propagated at the time you mention, but be careful not to use the flowering shoots. Only those that spring from the base of the plant are of any value as cuttings.

—*F. Otway Johnson.*—The phenomenal *Loganberry* resembles the ordinary *Loganberry*. The common *Loganberry* should succeed in a cool house if given the treatment detailed by Mr. W. Allen in our issue of June 17th, page 293.—*Glemsford.*—The empty chrysalis of green-fly.—*J. C. Rags.*—Are you quite sure that the woodlice are the cause of your *Cucumber* plants failing? From what you say, we are inclined to think that the plants have been attacked by gangrene. If you would kindly send a complete plant, then we could probably help you.—*B. J. D.*—Without seeing your plants, it is very difficult to say what is the cause, but we should, from what you say, imagine that dryness at the roots is the cause. Did you prepare the ground for the plants by deep trenching and mixing some lighter soil with the staple?—*Mrs. Allgate.*—We should say that *Hobday's "Villa Gardening,"* from this office, price 2s. 6d. net, would answer your purpose.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*Thos M. Skinner.*—1, *Erigeron speciosus*; 2, *E. Roylei* probably, specimen not in good condition; 3, *E. Coulteri*; 4, *E. philadelphicus*.—*A. M. L.*—A, *Veronica spicata*; B, *V. Teucrium*, var. *dubia*; C, *V. prostrata*. Only three specimens came to hand.—*R. Fieldhouse.*—*Rosa rugosa* blanc double de Coubert.—*Glemsford.*—*Syringa Emodi.*—*J. Mann, Symington.*—1, *Coronilla Emerus*; 2, *Spiraea flagelliformis*.—*Fernside.*—1, *Saxifraga umbrosa serratifolia*; 2, *Lychnis Viscaria flore-pleno*; 3, *Helianthemum coccineum flore-pleno*; 4, *Helianthemum vulgare album*.—*S.*—Please send better specimens, as all the blooms had fallen.

The National Rose Society.—The great summer show of the National Rose Society is to be held in the Royal Botanic Gardens, Regent's Park, on Friday, June 30th, and the takings at the gate on that occasion will go to the funds of the British Red Cross Society. A large attendance is anticipated, and the Society hopes that a very substantial sum will be secured for this excellent object which appeals to all at the present time.

National Sweet Pea Society.

GREAT EXHIBITION

at Royal Horticultural Hall, Westminster, Tuesday, July 11th, 1916.

Join Now. Minimum Annual Subscription 5s. Schedules on application to the Secretary, H. D. TROWELL, Greenford, Middlesex. Entries close July 4th, 1916.

GARDENING ILLUSTRATED.

No. 1948.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

JULY 8, 1916.

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THE WILD GARDEN AT MIDSUMMER.

It is forty years since Colonel Baskerville, then a young officer, began a modest trial of a wild garden. Now, after forty years, I have had the pleasure of seeing the result. As at close upon the longest day the early spring flowers had all passed away—Crocus, Grape Hyacinth, Daffodil, and many welcome spring flowers—and with them the great flush of spring beauty, I saw the summer flowers only. Best of these was the beautiful display of the old Lupins so common in borders. For many years one has known this plant in mixed borders, but its flowering season was so short that it became a nuisance there, whereas scattered in the wild garden in large groups under trees the beauty of it is extraordinary. There is much variety in the flowers, the bi-coloured forms and different shades. The plant could not have looked better in its native home. The effect of these plants as seen between and under the trees was heightened.

In the same way the Oriental Poppies were at their best. These plants are so strong in growth that they take up much room in mixed borders and when their short bloom is over are in the way there, but in woodland their effect is splendid; when they pass out of bloom they are not missed among the other vegetation.

The ground occupied by this wild garden was not the result of any set or paper design, simply of making use of some woody places. In many country seats where the woodland comes near the house we often see Brambles and other weeds forming an undergrowth, when, by making a wild garden, we might get a fine growth of handsome plants and at the same time effects not to be got with the ordinary border or garden. No design is needed, it is merely a case of taking advantage of a likely place. Easy turf walks run through the wild garden, and plants of climbing habit like single Roses and Clematis have their full sway. In these days, when labour can hardly be spared for the garden, this aspect of gardening deserves attention. There is little labour required besides the first planting. This year tall Grasses and weeds have had their own way, and, to my mind, the beauty is all the greater for it.

W. R.

NOTES OF THE WEEK.

A giant Poppy.—A giant *Papaver nudicaule* is flowering here. The stems are just over 3 feet 3 inches in height, and the flowers over 3 inches across.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed*.

A graceful yellow Honeysuckle (*Lonicera villosa*).—The best yellow Honeysuckle I have seen, pretty soft yellow buds and blooms, with soft velvety leaves. A free grower on pergola at Friar Park.—W.

Blue flowers.—You write about blue flowers. I rejoice every year in the wonderful liquid blue of *Phacelia*, which does very well here. Sometimes we have had a second bloom in the autumn from self-sown plants. Our great *Wistaria* has flowered splendidly, and in spite of the inclement weather many things in the spring garden have done remarkably well.—A. F. KIRKPATRICK, *The Deanery, Ely*.

The war and the garden.—Labour, especially in some districts where vast munition works are in progress, is practically unobtainable, and many things are being perforce left undone in the garden. It is strange in large gardens to see beds and borders which for long years have been brilliant with summer flowers now devoted to Potatoes and other vegetables to serve a double purpose—food production and labour economy.—S. M. D.

Habranthus pratensis in the west of Scotland.—*Habranthus pratensis* has been grown for years in one of the borders in the garden of the Marquis of Ailsa at Culzean Castle, Ayrshire, where it is hardy and flowers annually. The flowers are bright and effective in their season, and quite as brilliant as any grown in the south. It has not yet been extensively tried in the south of Scotland, but evidently prefers—indeed requires—specially favoured gardens.—S. ARNOTT.

Clantheus puniceus in Sussex.—This climber has (until heavy thunder showers damaged the blossoms) been a mass of bloom on the south wall of this house. It has passed through two winters protected only by a mulching of stable manure over the roots. The border is very dry. I note your correspondent Mr. H. H. Worthington mentions his plant as being in "sandy soil." Probably the failures in Sussex have been caused by the cold, damp nature of the subsoil in so many parts of the county.—M. W., *Fir Tree End, Haywards Heath*.

Geranium anemonæfolium Lowei.—A vigorous, tall *Geranium*; rosy-purple flower; a good rock and border plant. In the same garden I saw a little *Geranium* named *Traversi*, a distinct kind with leaves like those of a little Mallow. Very dwarf plant with pretty rosy flowers. Rock garden, Friar Park.—W.

Pentstemon heterophyllus.—This, with its Gentian-like hue, is the most attractive of those American plants which we have. The plant varies a little from seed, and the finest form we have seen is in the rock garden at Friar Park, a large colony well set in rocks, as it might be in its native mountains. The plant is so distinct as well as beautiful that it deserves to get a good place in the flower garden. Where of doubtful hardiness it should be raised every year.

The Spanish Furze (*Genista hispanica*).—Set well up among other dwarf shrubs on the elevated parts of the rock garden, this, when one is a little away, looks like a ball of gold. Only once, in a winter of almost arctic severity, a number of years ago, has it been much injured by frost. Then it was cut to the ground, but sprung again from the base, and in a year or two was as fine as ever. The flowering shoots are unarmed, but lower down, the branches are covered thickly with sharp spines. So freely covered is the bush with bloom that in many years no green is visible on the top of the plant. In gardening books its height is given as 1 foot, but under favourable conditions it grows higher. *G. hispanica* may be kept in bounds by cutting it hard back after the flowering is over.—S. A.

Habranthus pratensis.—I was pleased to see Mr. Allan's note about this fine *Amaryllid*, which is not admitted to the "Kew Hand List" of 1902. I believe it is now classed in the genus *Hippeastrum*. Like so many Chilean herbs and shrubs, it agrees well with the climate of the west coast. One should plant it thoughtfully as regards its neighbours, for the vermilion blossoms are of so vehement a tone as to accord ill with most other flowers. When it first came here I happened to plant the bulbs next to an Austrian Copper Briar, whereof the rich hue was made to appear dingy alongside of the newcomer. But I have now hit upon a perfect companion for the *Habranthus* in the shape of *Pan-cratiium illyricum*, which, flowering simultaneously, and with an equal relish for a sunny exposure, affords a grateful contrast with its snowy bloom to the volcanic

flames of the other. A few seeds of *Nemophila insignis* scattered round the place provide a suitable carpet. — HERBERT MAXWELL, *Monreith*.

The Bladder Pod (*Vesicaria utriculata*) is flowering well this season from plants now in their second blooming season, while many self-sown seedlings show how readily it comes from seeds. The yellow flowers, borne on rather arching heads, last for a long time. Plants after a few years become bare towards the base, so that it is as well to replace them with younger stuff. Cuttings may be struck or old plants cut back after flowering, but seedlings are more vigorous and are really best. — S. ARNOTT.

Antirrhinum Asarina.—I saw three distinct plants under this name, all with large flowers of the Snapdragon form, each beautiful; two kinds with narrow leaves and one with roundish, heart-shaped leaves. Falling over rocks, each gives a good effect, and they deserve the attention of a man with a botanical turn of mind, who would determine the names of the three which seem to me to be distinct. All three were seedlings from the same plant. At Friar Park (mid-June). — W.

The weather in June.—June weather has been the most severe experienced in the Sheffield district for thirty-one years. Six degrees of frost were registered at High Green on Saturday, the 17th, and the lakes were frozen over with ice half an inch thick. In the agricultural areas scores of acres of early Potatoes were cut down by the frost, and farmers have no option but to plough them up and replant the ground with vegetables. Enormous damage has been done. A violent north-easterly wind and spells of frost in the Lothians during the last few days have caused enormous damage to fruit gardens and vegetation as a whole. Crops which at one time promised well have been seriously affected.

Tree Lupins.—In the north of England Tree Lupins do not seem to do well, but they revel in the soil of this district. They do not mind however dry they get, and grow very quickly into large bushes, which are, at the time of writing (June 14th), covered with bloom. Down here the soil is warm and sandy; indeed, an outlier of so-called "green-sand" caps the clay on this hill, and as the outlier is as much as 40 feet thick, water drains away very quickly, making some of the beds extremely dry. Tree Lupins stand the winter here, but in Sheffield they invariably die. I have tried them many times, but they have always perished. In this district they have to be pruned after flowering to keep them tidy, otherwise they get out of hand. They can also be raised from seed sown now. In height they vary. Catalogues say "2½ feet to 3 feet," but this must surely be a mistake, for established plants get up to 5 feet or even more. — E. T. ELLIS, *Brumcombe, Foxcombe Hill, Nr. Oxford*.

Rosa sericea pteracantha.—In the article on "Roses for winter effect," which appeared in the issue of GARDENING ILLUSTRATED for June 17th, no mention is made of this very distinct Rose. The main feature is the enormous spines with which the stems are armed. When young they are of a rich red, translucent character, which gives to a bush of this Rose a very striking appearance. The second year these spines become grey and woody. The typical species is native of a large tract of country in northern India, Burma, and China. In a state of Nature it shows a certain amount of variability in the

flowers, which are white, and each nearly a couple of inches across. In direct contrast to *R. sericea pteracantha* there is a form (denudata) totally devoid of spines. First raised by M. de Vilmorin, at Les Barres, France, *R. s. pteracantha* aroused a great deal of attention when shown at a meeting of the Royal Horticultural Society on September 26th, 1905. A first-class certificate was then awarded it. The spines form such a notable feature in winter, as well as in summer, that it is well worthy of mention among Roses for winter effect. It is now generally distributed, and can be obtained from most dealers in Roses. — K. R. W.

Cooks and Food.—The French have a saying about cookery which has often amused me. I asked Mons. F. Morel, of Lyons, what was the source of it, and he has replied as follows:—"Le cuisinier a fait beaucoup de mal à la cuisine" est simplement une phrase populaire pour dire que les professionnels maladroits nuisent souvent à leur profession. Combien de jardiniers, et surtout ceux qu'on appelle *paysagistes*, tuent le paysage qui leur est confié aussi irrémédiablement que certains médecins tuent leurs malades!

Notes from Berkshire.—Despite the recent inclement weather plants here are nearly a month more forward than those in our Sheffield gardens. The borders are gay with *Anchusas*, *Aquilegias*, *Campanulas*, *Corydalis*, *Erigerons*, *Geranium argenteum*, *Geums*, *Heucheras*, *Iris*, *Lupins*, *Lychnis*, *Nepeta*, *Pæonies*, *Pulmonaria*, *Pyrethrums*, *Trollius*, etc., many of which were only just starting to bloom when I left Sheffield a short time ago. In this district *Polemoniums*, *Doronicums*, and several other early-flowering plants are practically over, but in our Sheffield garden these do not come to their best till about now. In several gardens round about here there are fine mixed borders now gay with *Calendula*, *Pinks*, *Pansies*, *Honesty*, *Marguerites*, *Canterbury Bells*, *Sweet Williams*, early *Pentstemons*, *Oenothera*, *Clarkias*, *Godetias*, *Poppies*, etc. In the rock gardens there are *Armerias*, *Aubrietias*, *Alyssum argenteum*, *Asters*, *Campanulas*, *Erigerons*, *Phloxes*, *Pinks*, and *Primulas*; also *Gentians*, *Hellianthemums*, *Saxifragas*, *Saponarias*, *Sedums*, *Veronicas* in variety, etc. — E. T. ELLIS, *Brumcombe, Foxcombe Hill, Nr. Oxford*.

Saxifraga Elizabethæ.—Of this free-growing, free-flowering sort "Ess," at page 299, writes: "I find there are two distinct plants bearing this name." Your correspondent might almost multiply the "two" by three, since this year Messrs. Waterer, Sons, and Crisp have shown five varieties, each good in its way and quite distinct enough for garden purposes. The greater value, however, of this unusually long procession of varieties of *S. Elizabethæ* lies in the fact that they so succeed each other in their flowering as to afford an almost unbroken chain for several weeks, No. 5 being the latest of the set. This has flowers of a more orange-yellow tone than the rest, and was exhibited by the firm named in splendid condition before the Royal Horticultural Society in mid-April, a specimen I secured lasting to the end of the month quite well, a very late date in the south for any of the set. Other good attributes of No. 5—it and three others have not as yet, I believe, received distinctive names—are its sturdy stems and spreading flower-clusters, both inherited, doubtless, from *S. sancta*, one of the parents of *Elizabethæ*, one of whose varieties it should be noted has been erroneously distributed as *Cherry-trees*. — E. H. JENKINS.

FRUIT.

PLUMS IN COTTAGE GARDENS.

THE spells of frost we had earlier in the year came, so far as this neighbourhood was concerned, before the expansion of the Plum bloom and after it was set, and so there is every sign of a good crop. This, in the majority of seasons, would be both useful and lucrative, but at the present price of sugar there is hardly likely to be much jam-making or opportunity for disposing of the surplus supplies. The receptacles, too, that might be used for bottling, in the way of jars and bottles, have all largely increased in price, especially the glass bottles, and so unless on hand they would mean an additional outlay where a fair quantity of fruit was to be dealt with. Few cottagers, however, seem at present to have gone in for bottling, despite oft-repeated advice in different journals, and the fact that it is a very economical way of securing a supply of wholesome fruit between the last Apples and the advent of Rhubarb. It is interesting to note in some seasons the effect of what might be termed unconsidered protection towards securing a crop. Many of the cottages have a Plum tree on a portion of the wall, and the enormous eaves projecting from the thatched roof keep off several degrees of frost. They have their drawbacks, however, later in the season, for they also keep off the rain, and trees suffer here more than in the open from the attacks of aphid and red-spider unless precautionary measures are taken. They are, unfortunately, often allowed to get into such a bad state, especially so far as red-spider is concerned, that the foliage is ruined for the season. Some growers, however, realise the necessity for anticipating such attacks, and the contents of the wash-tub are saved for a weekly application. *Victoria* and the old *Green Gage* are the two favourite varieties, and a sort that appears to be *Cox's Emperor* is also rather largely grown. — E. B. S.

Hardwick.

Strawberry runners.—If specially good runners are wanted for autumn planting or for forcing, a very good way to secure these is to suppress the blooms of a few lines of the desired varieties and permit the earliest runners to develop the embryo plants upon them. Such plants will not only be early, but very vigorous, and may be relied upon to give a good account of themselves in the season after planting. It is too often the case that Strawberry runners are selected in a haphazard way from plants which have carried a more or less heavy crop of fruit; and it stands to reason that such plants will be weak and quite unfitted to withstand the vicissitudes of our capricious winters. — KIRK.

Fruit-trees in pots.—Stimulants may now be freely given to trees in a cool-house, and syringing is practised twice a day. Formerly, syringing was done in the afternoon round about four o'clock; but the alteration of the time means that this must now be delayed until the watch indicates 5 p.m. For a few days the habit was difficult to overcome. The same tendency had to be guarded against in the case of the closing of the stove and of Melon pits.

The Wonderberry (*Leon Fonteneau*).—The Wonderberry as grown in this country cannot be distinguished from certain forms of *Solanum nigrum* (Linn.), a cosmopolitan weed whose fruits are said to be edible in some countries and poisonous in others (including Britain).

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TREES AND SHRUBS.

RHODODENDRON DECORUM.

ALTHOUGH *Rhododendron decorum* flowered in this country upwards of fifteen years ago, it is only of late that it has been grown much, for plants were few in number until seed was sent from China by Mr. E. H. Wilson. It had, however, a very near relative amongst the older species, for it has much in common with the fragrant-flowered *R. Fortunei*. *R. decorum* is a native of Yunnan, and is distinguished from *R. Fortunei* by its more vigorous habit, stronger branches, with fewer branchlets, glaucous-green or

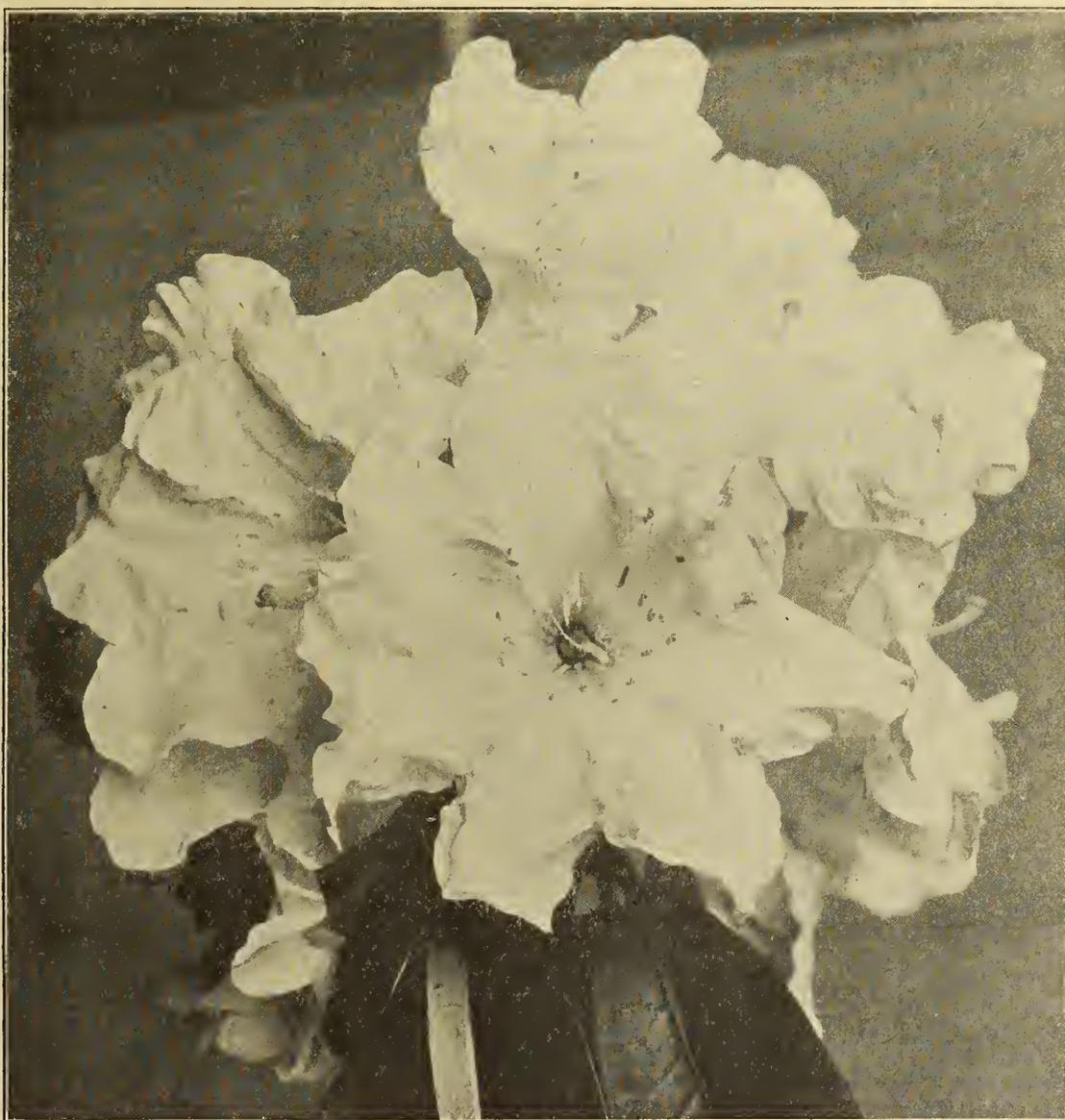
other parts of the same plant less than half that size. The heads of flowers are large and shapely, and suggest that it would make a useful form for crossing with various *R. catawbiense* varieties or hybrids. D.

NOTES AND REPLIES.

Increasing Lilacs.—A neighbour has a splendid double white Lilac-tree. He offers me twigs to root as cuttings. Would they strike at this season of the year in a cool, shady position? What would be the best time for putting them into the ground?—RIDUNA.

[Lilacs do not root readily from cuttings out of doors; in fact, they are more generally increased by layering. Your greatest

Chelsea Show one was previously honoured. They were all shown by Messrs. Waterer, Sons, and Crisp, Bagshot. The variety shown at Chelsea was Bagshot Ruby, an exceedingly free-flowering form with large, rich, crimson-red blooms dotted in the upper part with black. It was shown at the international exhibition by Messrs. Waterer, but did not then receive any award. The varieties selected for awards on June 6th were Donald Waterer, pinkish-white with a deeper-coloured border. The upper segment is dotted with brownish-yellow. Duchess of Teck has a fine cluster of pale rose flowers edged with a deeper tint. In Diphole Pink the blossoms are of a clear



A flowering shoot of Rhododendron decorum.

grey-green young shoots and leaves, and rather later blooming. The flowers are white tinged with pink, each one being about 3 inches across. The leaves are usually larger than those of *R. Fortunei*, those of specially vigorous shoots being 8 inches or more long. The flowering time is late May and early June. Another closely related species is found in *R. discolor*, whose flowers, each 3½ inches to 4½ inches across, white suffused with rose, and slightly fragrant, open about the middle of June. The leaves vary a good deal in size, for while those of specially strong shoots may be 10 inches long and 4 inches wide, there may be leaves on

chance of success will be to take cuttings of the mature shoots during the latter part of August and insert them firmly in a cool, shady spot, mixing some sand freely with the soil. They must then be covered with a hand-light or frame, which should be left on till they are rooted. This will be seen by young shoots being pushed out freely the following season.]

New Rhododendrons.—In 1914 no less than two first-class certificates and five Awards of Merit were given to Rhododendrons, and not one gained recognition in 1915. During the present year three received awards on June 6th, while at the

rose-pink of a distinct and pleasing shade, with yellowish dots on the upper petal. All are of good habit.—W. T.

Dyers' Greenweed (*Genista tinctoria*).—In many parts of the country this showy Broom is found wild, usually as a prostrate or semi-prostrate plant, but sometimes from 6 inches to 1½ feet in height, its rich golden blossoms for the greater part of summer brightening up many a common and hillside, where it often grows amongst short Grass, giving the flowers the appearance of being borne by the Grass. It is distinguished by its small, dark-green, simple leaves, and by its flowers being borne from the points of the

current season's growth. The flowers are in good-sized panicles, which, in the variety elatior, sometimes exceed 1 foot in length. That variety, by the way, is of vigorous habit, growing 2 feet or 3 feet high, and it is improved by an annual pruning in spring, the shoots of the previous year being cut back to within 1 inch or 2 inches of the base. It is not, however, a very long-lived plant, and should be renewed from seed every few years. Of several other varieties, *G. t. flore pleno*, with double flowers, is one of the best for garden planting. Growing a few inches high, it forms a dense carpet and blooms with great freedom. It is increased by cuttings. One defect attaches to this variety, however, for it is often attacked by aphides, which, if not destroyed at once, soon detract from its beauty. The type is an excellent plant for dry, sandy, or stony soil. In such a place seeds may be sown broadcast and the young plants allowed to develop naturally.—D.

Azalea roseiflora.—It is too frequently imagined that this is not hardy, but tests by various people in different parts of the country have proved the contrary. I have grown it in the rock garden for twenty years or more, and it has never suffered in the least.—S. ARNOTT.

PLANTS AND FLOWERS.

CHRYSANTHEMUMS.

CHRYSANTHEMUM NOTES.

SOME time during June the plants should be placed in the pots in which they are to flower. I am rather in favour of a simple compost; at any rate I have seen many mistakes made with various mixtures. Good loam—rotted turf—is the principal item, and if this be naturally light and sandy the addition of bone-meal at the rate of a couple of pounds to a bushel will answer its purpose well. If the loam be heavy then mortar rubble and rotted manure will be helpful. In this case rather more than two-thirds of the whole may be loam, and the bone-meal is added here too. Chop the soil or pull it to pieces with the hands, so that no fibre is wasted. It is not advisable to get it very fine, because the rougher portion can be used in the bottom of the pots over the drainage. Broken pieces of flower-pot should be placed with care over the drainage holes, and the soil rammed down tightly with a blunt stick before putting in the plant. Pots 9 inches in diameter are the more useful generally, although some growers use a size larger for the stronger-growing kinds, and a size even smaller than that first named may be employed with advantage by amateur cultivators who may not desire exhibition blooms. Err on the side of small pots, and ram the soil firmly is not bad advice.

When repotting at this time of the year an item, simple, but of much importance, is to thoroughly soak with water the plants that are to be shifted. This not only helps the ball of earth to come from its old pot without damage to the roots, but it prevents later the old ball becoming dry whilst the fresh soil is wet, thus deceiving the grower and perhaps throwing the plant out of health. For a few days after potting sprinkle the leaves twice daily, but do not do this at mid-day, when the sun is powerful. If these little things be attended to the plants will hardly feel the disturbance, and they can be placed in summer quarters. I like an open spot on a firm ash bottom, and also plenty of room between each plant. It is convenient to stand the plants in rows because later on it will be necessary to

provide wire supports to keep the wind from toppling them over. Of course, each will be provided with a stick, and to this stick the growths should be loosely tied as they lengthen. Bamboo-canes are neat as well as strong. The training should be done in accordance with the wishes of the grower. If a few large flowers to each plant are desired then reduce the stems to three, and so on up to a bushy plant that shall carry a dozen or more. But do not interfere with the upward direction of the shoots, nor is it necessary to "pinch" them to obtain a number. The Chrysanthemum is naturally branching. Routine work in summer is exacting—that is to say we cannot neglect the plants for a single day, unless, indeed, the weather helps us in the matter of moisture. We should look through our plants at least twice a day, and water them only when water is needed. To help in this, tap the pots, and if they give a ringing, hollow sound it is pretty certain that moisture at the roots is required. I always like the soil of my plants in pots to be on the dry side rather than on the wet side at nightfall. The roots are thus kept sweeter when there is moisture in the air to help the leaves. Some gardeners are never satisfied unless they are pouring water into their pot plants—especially Chrysanthemums. It is doubtful, however, if such can be termed successful growers. Nor do I think it good practice to be continually syringing the leaves. It may be beneficial during a spell of very hot weather. In dull times this does more harm than good, inasmuch as it causes mildew. Damping the leaves, if done, should be in the morning and early evening, when the sun has either not gained or lost its full power. For a month or six weeks after potting anything in the way of stimulants will not be desirable.

Disease and pests may include mildew and green-fly. A dusting on the undersides of the leaves with flowers of sulphur in the case of mildew, and either dusting with Tobacco powder or syringing with some insecticide when the latter appears, should be useful remedies. H. S.

NOTES AND REPLIES.

Hardy Chrysanthemums.—A good trio of hardy Chrysanthemums may be found in *Mme. Desgranges* and its two sports, *George Wermig* and *Nellie Blake*. *Mme. Desgranges* is pure white, while *George Wermig* is of a good shade of yellow. *Nellie Blake* is equally good in its colour—a dark red; and as these three varieties are identical in habit and flower simultaneously, their value is obvious. Here, naturally, they bloom later than further south, but they are more appreciated for that very reason. After the ordinary run of hardy Chrysanthemums is over, the display is prolonged by the use of these varieties. It is sometimes necessary to protect them, in the event of early frosts, by tiffany or scrim over the blooms, but it is well worth going to this trouble, as the interval before the earlier greenhouse Chrysanthemums become available is bridged over.—W. McG.

Pompon Chrysanthemums.—The notes of your contributor "E. G.," re "Early or semi-early Pompon Chrysanthemums," in the issue of December 11th, page 742, are very interesting, and may reasonably be expected to create a desire to possess some or all of the varieties he mentions. But it is not easy to get on the track of these varieties. It appears that very few of the advertising Chrysanthemum specialists grow Pompons, and the list of a firm which does grow them contains among the score or so of varieties there named not one of "E. G.'s" varieties.—F. J. B., *Barnet*.

A late white Chrysanthemum.—Market growers on the look out for a white to produce high quality flowers late in the year should try *Enfield White*. It is excellent, and invariably commands high prices. It is a capital grower and a very free bloomer. Probably we shall see a great deal of it during the next few seasons.—S.

INDOOR PLANTS.

PHYLLOCACTI.

To one whose horticultural memory extends back for twenty years or more the neglect into which these showy-flowered Cacti has now fallen is very noticeable. After having been generally grown for many years they were taken in hand by Messrs. Veitch, who raised a great number of charming varieties. Some idea of these may be formed by the fact that during the years from 1893 to 1899 no less than seventeen varieties of Messrs. Veitch's raising received Awards of Merit from the Royal Horticultural Society. For several seasons, too, a group of these Cacti formed a very noticeable feature of Messrs. Veitch's group at the Temple Show. Among them were flowers of widely different tints, from pure white or nearly so through various shades of pink to deep scarlet. Some of the subtle shades of violet, purple, and orange, which in their metallic lustre appeared to be of different tints when viewed from different standpoints, were very interesting and attractive. Within the years named these Phyllocacti enjoyed a period of popularity, but they soon began to decline in favour, and they are now very little cultivated. This is a pity, as they can be well grown by the amateur with but a single greenhouse, as well as in more pretentious establishments, and they are extremely showy when in bloom. Probably their decline in favour is due to the fact that the individual blossoms do not last long, and they are not at all adapted for cutting, which is the standard by which most flowers are judged nowadays. As a set off, however, they are of easy culture, give but little trouble, and, treated reasonably, can be depended upon to give a good display of blossoms. They are very easily propagated by cuttings of the branches taken off at a joint to a length of 4 inches to 5 inches and put into small pots of sandy soil. The cuttings do not need to be shaded; indeed, except during the flowering period the plants should be fully exposed to the sun. Repotting, if needed, should be done as soon as possible after the flowers are over, a most suitable compost being made up principally of loam, lightened according to its consistency with a little sand, broken brick rubble, and leaf-mould. Effective drainage is, of course, necessary. The plants may be freely watered during the summer, lessening the supply as autumn advances, while in winter they must be kept moderately dry, but not parched up. A thorough ripening by exposure to full sun in autumn is very essential to the formation of flower-buds. W. T.

NOTES AND REPLIES.

Zonal Pelargoniums to flower in June.—Would you please be kind enough to inform me when is the best time to take Pelargonium cuttings so that I may have them in bloom about the third week in June, and what is the best compost to use for potting.—LANCASHIRE LAD.

[You should lose no time in taking the cuttings of Pelargoniums which you require to form good flowering plants by the third week of next June. It is, in the first place, essential that good, sturdy shoots are selected for the purpose, as weak and attenuated ones, though they root readily enough, will never lay the foundation of good plants. If your cuttings are put into pots or boxes these must be effectually drained. A suitable compost for the cuttings may be made up of two parts loam to one part of leaf-

mould and nearly one part of sand. It should be pressed down moderately firm. The cuttings may at this season be stood out of doors. As soon as they are well rooted they must be potted singly into pots 3½ inches to 4 inches in diameter, using much the same compost as that for cuttings. Directly the roots take possession of the new soil the tops of the plants should be pinched out in order to induce a sturdy-branching habit. A second or even a third pinching may, in the case of some, be necessary later on. During the winter the plants should have all the light and air possible in order to prevent them becoming drawn. For the spring potting the soil should be of a more holding nature, and consist mainly of good loam with a sprinkling of sand, bone-meal, and well-decayed manure. If there is any doubt about insects in this last it should be sterilised or omitted altogether. Should the loam be of a very heavy nature a little leaf-mould will be beneficial.]

Imantophyllum miniatum.—For the decoration of greenhouses, conservatories, or windows this is one of the finest plants

they may be able to ramify the more freely. To winter the *Imantophyllum* well and safely, a higher temperature than that of an ordinary greenhouse is required, but where this cannot be afforded it should have the warm end, and be kept a little drier than usual. In order to get plants to flower freely, the point is to treat them well through the spring and summer by supplying them liberally with water and liquid manure, as then they are sure to make strong growth.

Camellias on walls.—For covering the back walls of conservatories or plant houses nothing is equal to Camellias, for the partial shade that is so detrimental to many other plants seems to quite suit the Camellia. We have seen a back wall of a conservatory covered with Camellias, and a lovely background they make; for even when not in bloom their deep green foliage is always pleasant to look at. The single and semi-double varieties are equally, if not more, effective than the very double sorts, and the colouring is so brilliant that I believe they will be rather more popular than hitherto. For covering walls a good

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

WAHLENBERGIA.

(SYN. *EDRAIANTHUS*.)

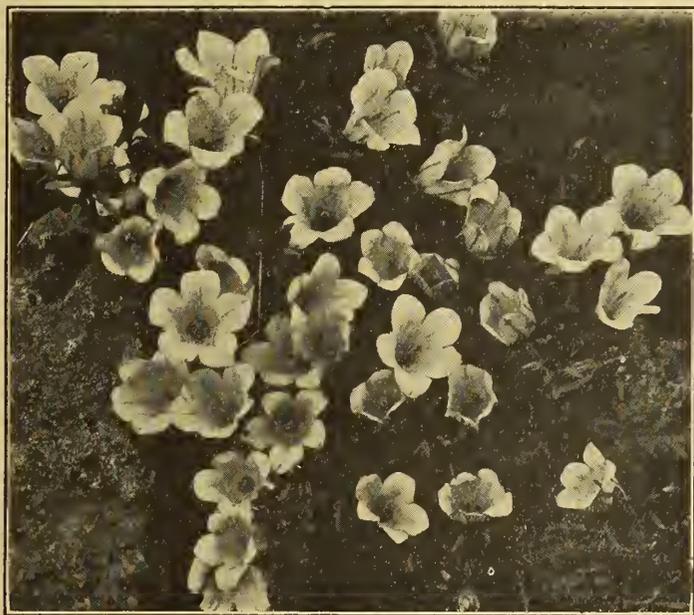
In nurseries and in catalogues of hardy plants this pretty genus of the Bell-flower order is usually found under the synonym given above. Essentially rock-loving, some special provision is necessary if we would realise, so far as this is possible in lowland gardens in England, a little of the wealth of beauty and colouring afforded by the best kinds when rightly placed and well grown. These *Wahlenbergias* dislike much soil about them, indeed, it is not too much to say that, apart from such a pest as the slug, soil and soil damp are among the chief drawbacks to their successful cultivation when the ordinary methods of growing them are indulged in. Failures may be turned into successes, however, by planting in rocky crevice or fissure, or in those instances where the rock garden is not of an extent to admit of such being done, the rougher surfaces of rock walls may be turned to good account by sowing seeds or planting seedlings freely in suitable positions. One of my earliest successes was the outcome of introducing seedlings into a rudely-constructed wall. The idea was quite successful, and, moreover, on the rock wall these choice plants rarely suffered from the attacks of slugs. If, however, it is desired to create a colony of any one of the species on a sloping rock bank, the best plan will be to excavate the soil to certainly one-half, replacing the portion removed by small stones, old mortar, or limestone chippings. In this way, and with the plants fairly dry at the ground level, there is every hope for success, more so where a soil very light and sandy, and with a little peat mixed, is prepared for their reception. Firm planting about the collar of the plant and an elevated position should not be overlooked by the planter.

All the species are low-growing, not more than 4 inches or so in height, and, composed of a chief central rosette of leaves, send forth their trailing or procumbent flower-stems in many directions. Seeds form the best means of increase, some care being necessary to prevent damping in the early stages, plenty of grit and crushed limestone being as important as soil to these plants. Manure should on no account be employed. The following are the best kinds:—

WAHLENBERGIA DALMATICA.—Blossoms of a rich purple or violet, in clusters not unlike a Campanula, each cluster containing from six to a dozen flower-stems. This is one of the easiest to cultivate, and at the same time one of the most vigorous of the genus. By reason of the nearly prostrate habit of growth the plants in grouping should be kept well apart. Native of Dalmatia and flowering in June.

W. PUMILIO.—A small-growing and compact habited plant. The solitary blossoms are erect and of a purplish-blue tone, which is variable in seedling plants. A characteristic of the species is the covering of minute hairs on the upper surfaces of the leaves, giving it, when in a rather dry position, a silvered appearance. May and June.

W. SERPYLLIFOLIA.—This, here figured, to my mind is the most beautiful of the genus, producing handsome, erect bells of a royal purple colour on trailing wiry stems. I know of no alpine that is calculated to give greater satisfaction, than this when well grown. Flowering period May to June.



Wahlenbergia serpyllifolia in the gardens at Lilford Hall, Oundle, Northants.

that can be grown, as it sends up numerous heads of orange-scarlet Lily-like flowers that last a long time in perfection. In habit and general appearance it greatly resembles the *Agapanthus*, but has stiffer and darker foliage, and blooms resembling those of the *Vallota purpurea* in size and colour, so that anyone acquainted with the latter may easily imagine what a fine effect they produce. The *Imantophyllum* makes a fine window plant, as it stands the treatment well, and, being fond of water after it gets in a pot-bound state, it is never injured by standing in a pan or being kept wet. Dust is the great enemy to most window plants, but as the *Imantophyllum* has thick, shining, leathery leaves there is no difficulty whatever in keeping them clean, as they may be easily washed without injury. In order to increase this plant take off any suckers which it shows, if possible with roots attached to them, as then they are sure to grow if placed in a pit or house where they can have a little heat for a time. The soil that suits them best is fibrous loam and sand, but as the roots are very large and fleshy, the loam should be rough and lumpy and the potting loose, in order that

border of at least 5 feet or 6 feet in width should be made of good fibrous turf, peat, and sand, and enriched by means of top-dressings of cow or sheep manure, and the plants should not be stiffly trained to the wall, but allowed to spread out in large masses. We surface-dress the border every year with the richest manure we can get, and the plants are always loaded with blossoms, the foliage very deep green; and although the double whites, pinks, and crimsons are extremely handsome, the semi-double sorts are, as I have said, quite as effective from a decorative point of view.—T.

Arum Lilies.—In the course of the week *Arum Lilies* have been planted out. Diversity of opinion exists—and will always exist—as to the relative value of drying off and planting out these Lilies. Good results can be attained either way, and circumstances must decide which practice it is better to follow. In planting out, I always use a place fully exposed to the sun, and of rather a poor nature. There the foliage speedily ripens off, and the crowns are to all appearance, and certainly judging by results, equal to those which have been sun-baked in their pots during summer and autumn.—K.

GARDEN FOOD.

SPOILING GOOD VEGETABLES.

WE see in the *Queen* an article by Mrs. Peel on preserving vegetables mostly by using quantities of salt. Physiologists of the day tell us of the bad effects of using much salt, and vegetables so treated may be anything but wholesome. In the case of Cucumbers the markets are now well supplied through the year, so what can be the object of preserving them? We give two of the recipes here, merely remarking that it is a way of spoiling good food.

PRESERVED CUCUMBER.—Choose small and young Cucumbers, put them into jars, pour a brine over them, and cover down. When wanted, remove the rind, and use them in the same way as fresh Cucumbers. For the brine: Take 2 pints of water to 1 pint of vinegar and 1 lb. of salt, put it all into a pan over the fire till the salt is melted, let it stand to settle, then pour it off clear before using.

TOMATO CATSUP.—Take half a peck of sound, ripe Tomatoes and wipe them well, quarter them, place on dishes, and scatter over them $\frac{1}{2}$ lb. of salt. Leave for twenty-four hours, drain the juice through a clean tammy or hair sieve into a pan. Add two dozen small Capsicums and ten Shallots, or, if not to hand, 2 oz. of whole Pepper and four tablespoonfuls of Onion juice. Simmer for half an hour and then add the Tomato which has been pulped through a fine hair sieve. Cook for thirty minutes more. Bottle, cork, and seal.

UNLEAVENED BREAD.

I HAVE now the pleasure of eating bread that is really natural and good. I get the flour from the Artox Mills, Rotherham, and the bread is made by my cook. We shall never have a good bread until yeast is got rid of altogether. The following is the recipe:—

Put 1 lb. of wholemeal into a basin, with a pinch of salt, if liked. Work well into the wholemeal a piece of butter the size of a Walnut. Then gradually stir in a $\frac{1}{2}$ pint of cold water using a fork for the purpose. When well mixed, turn out on a well-floured board, or slab, and knead from five to ten minutes; form into little rolls, and place on a baking sheet or in American patty-pans, and bake in good oven from twenty minutes to thirty minutes.

Those who know the effects of salt will omit its use in bread. W.

NOTES AND REPLIES.

Strawberries.—Although tons of Strawberries are annually consumed with apparently little harm to the majority, it would appear there are a few people on whom they act with a very prejudicial effect, and the recent notes on the subject in GARDENING ILLUSTRATED lead to the inference that the ill-effects might be considerably obviated if raisers of new varieties would eliminate all the acid, watery sorts. One of the worst in this direction in bygone days was Trollope's Victoria, and in a less degree Kitley's Goliath, a huge fruit not so acid as Victoria, but decidedly watery and with very little flavour. Noble, a sort much in request for a time on account of its earliness, was very little better from a flavour standpoint. I thought it inferior to Goliath. River's Royal Hautbois, Lady Suffield, and Doctor Hogg might be tried by those anxious not to forego a treat of Strawberries if difficulty has been experienced with other varieties. Probably one of the worst of the present day, so far as acidity is concerned, is Sir Charles Napier. One of the older sorts that was always favourably received and from which no after ill-effect (or, at any rate, very little) was experienced was Myatt's Eliza, but I have

not seen it for many years, and believe it has been superseded by River's Eliza, but whether this has the rich flavour of its predecessor I am unable to say. I suppose few remember a later Strawberry season than the present one. The spell of cold weather experienced in late spring is doubtless responsible for this, but once expanded the blossom in the majority of cases came through safely, and so, although late, the crop is likely to be a good one.—E. B. S., *Hardwick*.

Turnips boiled in milk.—A very appetising vegetarian dish may be thus prepared. Wash and brush some Turnips in cold water, and pare away the thick skin. Cut the pared Turnips into oblong pieces and let them remain in cold water till they are to be cooked. Then put them into boiling water with a little salt, and boil them till they are slightly soft; drain off the water and nearly cover the Turnips with milk. In this milk let them boil till quite tender, but the pieces must not break, or they would look unsightly. When cooked, place them in a vegetable dish, add a piece of butter to the milk, and thicken with flour, seasoning with pepper and salt. Boil for another few minutes and pour over the Turnips, or, better still, return the Turnips to the sauce, leaving it at the side of the fire to keep hot until required for use.

Parsley.—When sowing Parsley to stand the winter a plain-leaved variety will be found superior to the curled or mossy sorts. The latter, no doubt, are the handsomer, but the leaves retain both snow and rain, and when frost follows, the plants soon succumb. On the other hand, a plain-leaved Parsley is far hardier and will survive even a severe winter. It certainly is not so attractive for garnishing as the curled variety, but for cooking, what signifies appearance if flavour be correct? Double the trouble is experienced in obtaining a supply of Parsley during winter, when only the curled-leaved varieties are grown.—Kirk.

The best gingerbread I know.— $\frac{1}{2}$ lb. brown sugar, $\frac{1}{2}$ lb. fresh butter, $\frac{1}{2}$ pint of milk, 1 lb. flour, 1 lb. black treacle, 1 dessertspoonful of ground ginger, 1 dessertspoonful mixed spice, $\frac{1}{2}$ teaspoonful carbonate of soda, 4 eggs, a little finely-chopped citron peel. Mix all dry ingredients together, warm the milk, dissolve the butter in it, beat up the eggs, then add the milk, and treacle. Bake three-quarters of an hour in a square cake tin, not very deep, or flat saucepan. The mixture should be quite a running consistency before baking; add a little milk if necessary. This is a moist, black ginger-bread.—S.

Grape Mrs. Pince in April.—It is doubtful if we have another late Grape with so high a flavour as Mrs. Pince. Early in April a friend sent me a bunch—about a pound. I do not remember ever having seen any late Grape so well preserved and having so much flavour. Lady Downe's is good, but it is eclipsed by Mrs. Pince in flavour. The Mrs. Pince was grown in a house with Muscats, allowing six or eight eyes to remain and not depending on spurs.—J. C. F. C.

Egyptian Coffee.—The Coffee berries must be freshly roasted, then pounded to a powder, not ground. About a dessertspoonful of the powder is used to two tablespoonfuls of water. The powder is put into the Coffee-pot, which is nearly filled with water, and put over a slow fire and brought to the boil. As soon as it begins to boil draw it off the fire, then replace it and bring to the boil again; repeat this, and it is then ready to serve. In Egypt they seem to drink the grounds with the liquid, but we generally prefer to let it stand a minute to let the sediment settle before pouring it into the cups. It should be drunk without sugar and milk.—*Queen*.

[It should be added that the Coffee is the true Mocha, a kind not always to be had in the shops.]

W. S. DINARICA (syn. *W. Pumiliorum*) is a less beautiful plant than the type, having large, purple, bell-shaped blossoms. It is of easy culture and a very desirable plant.

Other members of the genus include *W. Kitabeli* and its variety *W. K. croatica*, *W. graminifolia*, and *W. tenuifolia*.

E. H. JENKINS.

—Mr. F. W. Gallop, to whom we are indebted for the photograph from which the illustration was prepared, writes as follows:—

"This is one of the most beautiful of this family, and is in every respect an ideal plant for the rock garden, producing a perfect sheet of purple-violet cups. Deep fissures of gritty loam and a rather sunny aspect on a ledge in the rock garden so that its creeping branches of Thyme-like leaves may spread over the rocks suit it well."

WATER LILIES IN TUBS.

CAN you kindly give me advice about Water Lilies in tubs? I wanted to grow these in this way in the rock garden in four round tubs, about 2 feet 6 inches wide and 18 inches deep. Good kinds of Lilies were put in in May, and they came away all right, but went back after making a fair growth. So as not to lose them, I took them out and planted them in a shallow pond. In tubs, ought the water to be constantly changed or only filled up. In two of the tubs it became a thick, green, smelling filth, and in the other two, in which the Lilies did better, it remained fairly clear. I simply planted the Lilies in baskets in good loam and set loam all round the baskets, about 6 inches to 9 inches, and then filled up with fresh rain-water, and kept them full. As they began to look so bad, I took them out this past week. The tubs are old barrels, and I am not sure what they had been used for. Two (the ones the water went very green in) were tarred in winter, but have stood with water in them ever since, and it was changed constantly in all till the Lilies were planted.—C. A. HOPE.

[The growing of Water Lilies either in tubs or shallow receptacles of any kind is not infrequently attended with both difficulty and disappointment. The water question is a difficult one, and unless there is a supply arranged, and tubs connected with each other, so that a certain amount of circulation is set up, not much success is assured. Tub s are best set in the ground—sunk nearly to the brim—open zinc or other gullies conveying the water. Starting with the first raised a few inches higher than the rest, the arrangement would present no difficulty, and sides of the tubs could be easily shrouded by plants. The water in isolated tubs invariably quickly becomes stagnant, and often evil smelling to boot. All tubs before being used for this purpose should have been first burned—i.e., charred. No tarring is necessary, indeed, it is a mistake. Good loam surrounded by clean gravel stones or pieces of limestone is all that is necessary in the way of soil. Manure should not be used, as it favours, during the process of decomposition, the formation of green scum and other like matter. Rain water, if you have a good supply, is best, and adding sufficient to cause a considerable overflow of the tubs once weekly should keep it fairly clear. The varieties of *Nymphaea odorata* would be best for your purpose. In future, when sending queries, please write on one side of the paper only.]

Phujopsis stylosa.—This is very useful for bare places at the top of the wall garden or banks, and may be used in the rock garden or border, where it soon spreads. It flowers very freely from May to August if the soil given it be fairly light. The flowers are of a rose colour, rather pale, but quite pretty.—E. T. ELLIS, *Wetwood, Ecclesall, Sheffield*.

OUTDOOR PLANTS.

LONGLEAT.

At this season of the year, when Rhododendrons and the hardy Azaleas are in full bloom, Longleat, with its well-kept roads, affords pleasure to thousands of visitors, who come from long distances attracted thereto by the beauty of this vast tree-clad estate, which its owner, the Marquis of Bath, throws open to everyone on foot or on wheel. "Heaven's Gate" has been made famous by the poet Crabbe, whose centenary has just been celebrated. This beautiful spot is on an elevated ridge overlooking the park and many square miles of distant country. Nothing, however, one could write could even vaguely express the natural grandeur of Longleat. Our purpose was not so much to write of these natural pictures,

ones. Owing to the war only the elder workmen and quite young lads are employed, but despite the shortness of labour the condition of the gardens in their several departments is well maintained, and quite a varied lot of plants occupies the glass department. Melons, once largely grown, have naturally fallen behind. We can remember years ago Melons grown on the extension system showing fruit in every stage from the flower to the matured fruit, numbering, perhaps, two dozen on a plant. This extension system has fallen into abeyance of late years, and the more orthodox custom followed. Cucumbers and Tomatoes are now, as in past times, grown freely and well. Among the Peaches are some very old trees that have borne good crops of highly-coloured fruits for, it is said, over eighty years, and yet are as vigorous and fruitful as at any time in their long history. This speaks

R. F. Felton, Lucy, Mary Allwood, and a nice border variety named Lady Hermione, which has a Clove fragrance, were remarked. Malmaison Carnations are grown, but their propensity to disease may lead to their non-cultivation, since labour shortage allows of no margin for special treatment. Salpiglossis sown in late autumn has been remarkably effective and highly prized for decoration, the varied and beautiful colour markings making it much more desirable in early spring than outdoors in late summer. These remarks apply to other annuals that are adapted to pot culture. Another annual that has been much admired is *Asperula azurea setosa*, this doing well in comparatively small pots. *Schizanthus retusus* was bright and good, and *Humea elegans* appears to grow as freely as weeds. Harrison's Musk, *Primula malacoides*, Cyclamens, herbaceous Calceo-



Longleat, the Wiltshire residence of the Marquis of Bath.

but rather to renew an acquaintance with its gardens.

We distinctly recollect visiting these gardens more than thirty years ago. The man who made Longleat famous was Mr. Wm. Taylor, who still survives his three successors. He it was who gave Longleat Gardens their highest fame by the erection of the great vinery. This famous structure, once filled in three sections by twelve Vines, its length 220 feet and its width 30 feet, became a source of education to both old and young as to the extension system of training. The substitution of Palms, Bamboos, and other tropical plants for Hamburgh Grapes, to which a section has now been devoted, detracts from the dignity of the structure. The introduction of plants brought the dreaded Vine pest, mealy bug, its baneful influence contributing, no doubt, in a great measure to the debility of two of the four Muscat Vines, which have been replaced by young

volumes for the care bestowed on them and the fertile soil in which they are grown. There are, naturally, some occupants of recent time and some older trees that are destined for removal. The older trees are those which have been forced year after year, and they each cover considerable space with apparently no sign of branch debility, and the crop this year is quite a heavy one. Pot-trees afford early pickings. These are almost finished for this season, and Figs in pots occupy the same structure.

In the plant-houses Carnations occupy much space and are grown remarkably well in not over-large pots. Some 1,500 plants give an abundance of cut bloom at all seasons. We were impressed with the pure yellow of Improved Cecilia, its vigorous growth, and marked succession of buds. Salome, Mrs. Chas. Knopf, Carola, Scarlet Glow, Mikado, Mrs. Dutton, Circe, Washington, Colossus,

larias, Begonia Gloire de Sceaux, and B. Gloire de Lorraine, are other plants grown remarkably well.

About 700 Strawberries are grown in pots, and these at the time of our visit were in various stages of growth and ripening, while earlier batches were over. The fruit crops are variable on walls and in the open. Peaches appear to have set freely, and are swelling up very well. Plums also appear to give promise of a good yield, but Apples are thin and many Pear-trees carried no fruit. Strawberries are limited to four varieties. Newton Seedling appears to be a distinct late-fruited variety, Laxton's Latest is being tried, while Royal Sovereign and Vicomtesse supply the maincrop. Figs fruit uncommonly well on the walls and attain to a large size, Brown Turkey being the favourite variety.

The vegetable garden, enclosed by high walls, extends to about six acres. Large

plots outside, formerly cropped with Potatoes, have since the war been sown down, the depletion of the staff compelling this limitation. Much trouble is experienced with pheasants, which attack Peas, Broad Beans, and even Runner Beans, clearing sometimes whole rows completely.

The central walk of the kitchen garden is in summer gay with herbaceous plants, wide borders being of late years set apart for them, backed by espalier-trees, trained on wire. Apples, mostly, are thus grown, and, we believe, bear well. Quite a large area is devoted to flowers in the flower garden proper, and the preparation of summer bedding plants imposes a heavy tax on the resources of the garden.

Much credit is due to Mr. Barter for the upkeep of the garden, considering the limitation of the staff, particularly in the glass department, which is worked by young lads only. W. STRUGNELL.

HARDY FLOWER NOTES.

ALSTREMERIA AURANTIACA.—The cultivation of some hardy plants would puzzle the most experienced grower to explain. I had a bed of this Peruvian Lily which bloomed very freely annually and which had been undisturbed for some years. There came a demand for it, and the greater portion of the roots was lifted. As they had been growing in poor soil and not in a very good position I thought I would give the remainder a better chance, and transplanted on to good ground. Hardly a plant appeared, and the following year the same thing happened. I thought that I had removed all the roots, but this was not the case, for this season, nearly three years later, young growths have appeared quite plentifully. If a root here and there had started it would not be so strange, but that every root should refuse to push into growth for so long a period and then make a fresh start is very puzzling. Where this *Alstroemeria* is suited in the matter of soil it grows like a weed and is a very showy thing and very fine for cutting.

ROCKERS.—One advantage of a garden which is not conducted on very precise and tidy lines is that frequently natural conditions favourable to the continuous existence of some particular hardy plant without causing trouble to the owner are set up. The single Rocket is a case in point. In a border which is allowed to run a bit wild this Rocket has become naturalised. It was planted a good many years ago, but no effort at propagation has been made from that time until now. The plants seed, and young ones spring up, which in a general way are allowed to remain, and they bloom evidently with native vigour. This year they are very fine, the moisture and cool atmosphere having apparently suited them. A pleasing feature of it is that hardly two plants bear flowers of the same tint, as they vary from almost white to a mauve-pink. Where there is a demand for cut flowers the Rocket will help to fill the basket at a minimum of cost. The double varieties are fine, but they need good culture if they are to take up a permanent residence in the garden. In a heavy moisture-holding soil they are unhappy and pine; in a very light soil they are apt to suffer badly, the strain of producing a full crop of bloom bringing them into a semi-exhausted condition from which they never recover. Biennial transplanting into fairly rich ground with a mulch of rotten manure in summer will, however, maintain them in vigour. They should be planted in autumn, not later than mid-October, or

in early spring; never in the depth of winter.

CAMPANULA MURALIS.—What a valuable little hardy plant this is, so easily pleased, making no demand on the cultural resources of the owner. A little mound of soil studded with stones forms a happy home, where it will remain quite content for years.

SAXIFRAGES IN SUMMER.—The trying time for this large family of hardy plants is approaching. Some, such as *S. pyramidalis* and *altissima*, are able to bear much drought without flinching, but the majority are liable to injury during a period of heat and drought. Watering will, of course, counteract this, but there are always more things that need watering than can be properly attended to, and rock plants are apt to suffer. If they do not die the seeds of decay are sown, the wet and cold of the following winter completing the mischief. A top-dressing of leaf-soil is a fine thing at this time of year, and I do not know an alpine which is not benefited by it. In the case of the encrusted kinds it should be worked well in among the growths, this causing new roots to be made from the crowns. August is supposed to be the most trying month for vegetation, but July I consider the most dangerous time, for surface-rooting plants do not belong to the more robust-habited forms of vegetation. The days are long and the nights are generally dry, whereas in August the resting hours are extended, and it is characteristic of our climate that we get heavy dews in that month, and these are very refreshing.

J. CORNHILL.

NOTES AND REPLIES.

Planting herbaceous border.—I wish to make a new herbaceous border late this autumn of, or about, 10 feet wide and from 40 feet to 50 feet long. I want plan of same. This border will face almost due south, and I should like, if possible, to have a permanent coloured border from April to October. I have quantities of beautiful old-fashioned herbaceous plants which I wish to remove. What would be the best time and the best way of removing same?—BOG-CORTON.

*[It is much better not to work from a plan, as plans usually lead to stereotyped effects. Make the border to suit your taste and plant whatever you are most devoted to and have the best selection of. Many plants in mixed borders are quite unfitted for them, and should be excluded. Do not work to have things all in flower at the same time; that prevents some of the finest plants being used. Plants like *Acanthus* look well when out of flower. The soil should be at least 2½ feet deep. Avoid putting things in lines, and group the plants together—say, five to a dozen or more—and let greys predominate as much as you can. Give good place to the best plants of recent coming, like the *Azure Sage* (*Perovskia*) and the *Californian Tree Poppy* (*Romneya*).—Ed.]*

Lifting English and Spanish Irises.—Will English and Spanish Irises, if moved every two years, go on for ever, or will they deteriorate?—H. T. SHAWCROSS.

[If the Spanish and English Irises are being grown in the heavy soil referred to they would be best if lifted and rested annually, though the English kinds often improve in the second year in suitable soil. The lifting should be done at the end of July, the replanting in October, resting the bulbs meanwhile in an airy and dry place sheltered from sun, and cleaning them before replanting.]

The Basil-leaved Soapwort (*Saponaria ocyroides*).—This does not always stand the winter, but I think this is largely owing to the soil and exposure. I have

observed that the plants most liable to perish are those in the lower parts of the garden and not fully exposed to sun and air. A dry soil with free drainage is the most suitable. I have not lost a plant during the past winter, and now quite a number of large specimens is in full bloom, giving sheets of warm pink. Self-sown seedlings appear in considerable numbers, and from among these may be selected some good forms to be propagated from cuttings, although seedlings make the more vigorous plants.—S. ARNOTT.

Primula Bulleyana.—This, one of the moisture-loving species, is now blooming freely, the wet winter and spring which we have had having suited it very well. It is quite hardy and does well in my London garden in a shady border made up of gritty leaf-mould mixed with well-decayed garden refuse, though it is, perhaps, not so fine as when grown in a wet spot. I find, however, that a deeply-dug soil with the surface kept well hoed does much to help those plants which need moisture, and pieces of stone buried about the roots still further assist. The flowers of *P. Bulleyana* are borne in tiers, as in the case of *P. japonica* and *P. pulverulenta*, but, unlike those species, the colour is a sort of ochreous yellow, the unopened buds being of a deep orange-red. It grows freely from seed, especially if sown as soon as ripe in a shaded, moist place.—NORTH LONDON.

Plant losses in the winter of 1915-1916.—It is rather strange that the losses among many things considered hardy should have been much heavier as the result of the winter of 1915-1916 than is usually the case, especially when up to the second week of February of the present year hardly any exceptionally cold weather had been experienced. It was before this that the mischief was done, because, looking through the border at quite the beginning of February, I found the majority of the *Antirrhinums*, *Chrysanthemums*, and several *Fuchsias* had succumbed, and this, too, in a fairly sheltered position. It is specially strange in the case of the *Antirrhinums*, as they have been in the same quarters many years, and hitherto invariably broken away strongly. It was a good strain, and there is, fortunately, a good batch of seedlings to take their place. I found it useless to leave *Lobelia cardinalis* outside through the winter, so plants of this did not share the fate of other things, and are now making nice headway in association with Pinks.—E. B. S., Hardwick.

Geum Mrs. Bradshaw.—Groups of this pretty border plant have made a gorgeous show for some weeks past. Seeds should now be sown to furnish plants for flowering next spring. The seeds should be sown in boxes filled with light compost, and the soil watered with a fine rose-can. Stand the seed-boxes in a cold frame and keep them shaded until the seeds have germinated. When the seedlings are large enough pot them singly into 3-inch pots and plunge in ashes in a cold frame, where they may remain for the winter. If another sowing be made in the autumn it will furnish plants for flowering later.

Gaillardia grandiflora.—I consider this one of the best of all *Gaillardias*. The flowers are of orange, yellow, or red, and are beautifully marked. This plant will soon be in bloom now, but it comes to its best here in July and August. It is grand for cutting, and with good treatment grows into a small bush 2 feet to 4 feet high. I find it does best in light shade, and it must have plenty of water in hot weather.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Veronica amethystina.—This is hardly suitable for a small rock garden, as it grows about a foot high and makes a big, spreading clump. The spikes of flowers are of a brilliant deep blue, similar to those of *V. Teucrium dubia*, but larger. It grows rapidly and is quite an easy doer in a sunny position, and can be increased readily by tearing the clump to pieces and planting the rooted pieces.—W. O.

ROOM AND WINDOW.

PYRUS FLORIBUNDA.

THIS is now well known, but its flowering in the open air is, as with so many plants of the Apple tribe, rather apt to be short and interfered with by storms and other accidents. It is well, therefore, to gather the handsome shoots of this and others of its allies before the flowers are fully open and use them in the house, where they are very effective, as in this case.

ORCHIDS.

NOTES AND REPLIES.

Odontoglossum citrosimum.—This produces its drooping racemes of rose-pink coloured flowers during May. When the spikes are removed the plants will be in

spikes are seen, then the supply can be increased gradually. The pseudo-bulbs will shrivel slightly during the resting season, but no anxiety need be felt, as they soon recover when the time arrives to water the roots freely.—SADOX.

Miltonia vexillaria.—During May and June the various forms of this showy Orchid are in bloom. After flowering, a short period of rest should be allowed, placing the plants in the cool-house, and giving only sufficient water to keep the soil just moist. After this treatment has continued for six or eight weeks they may be repotted in a mixture of Osmunda-fibre, Polypodium-fibre, and Sphagnum Moss in equal parts, while a few partly-decayed Beech leaves may be added if the plants are not thriving. Fairly deep pans may be chosen, and, as *Miltonia vexillaria* is more or less a surface-rooting subject, they must be filled to one-half of their depth

mountains in 1899, and last year I had some lovely varieties of *C. ventricosum*, which is much more vigorous and striking. But at present I do not know how to treat them, or where to plant them, and it seems very much a matter of chance whether most of these *Cypripediums* live or die. Mr. Irving, however, has got *C. ventricosum* established on the top of the Kew rockery facing north-west, where its white form was, to my mind, the choicest thing on the whole rockery recently, and I have got a fine form of *C. Calceolus* which I brought from Arctic Norway in 1905 still flourishing. — H. J. ELWES in *Gardeners' Chronicle*.

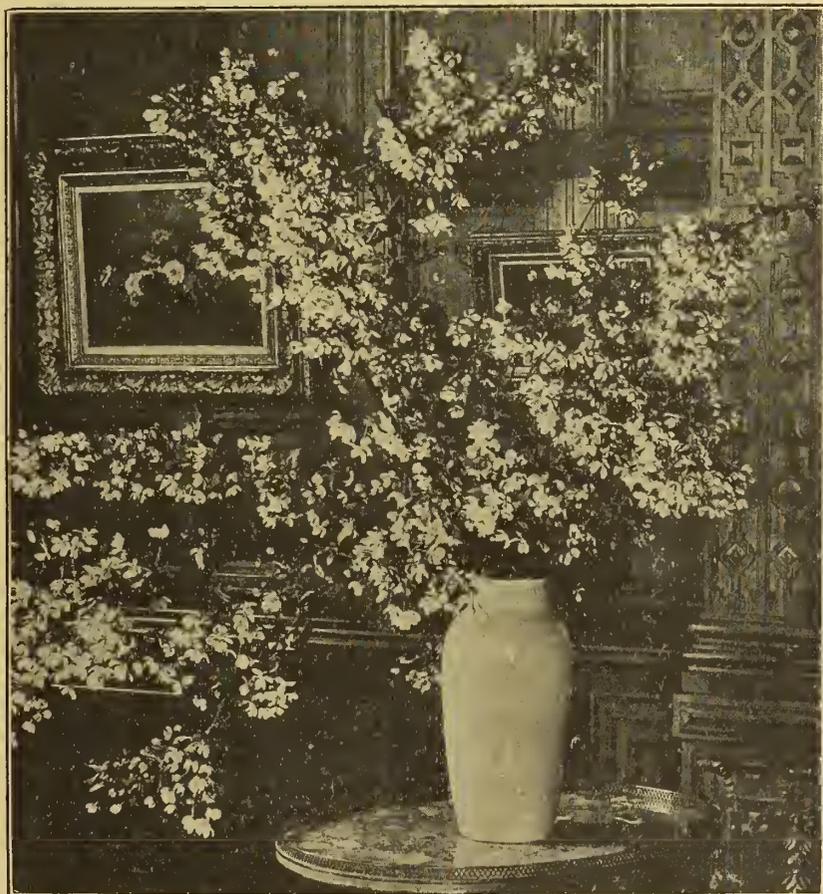
VEGETABLES.

SUMMER CARROTS.

I HAVE for some time abandoned the extensive cultivation of the big Carrot, and instead maintain a supply of small, tender roots by frequent small sowings. The seeds in showery weather germinate quickly, and soon develop into edible roots, and even in winter one may pull these from the open ground and thus preserve the sweet and delicate flavour of the summer Carrot. For flavouring and for garnishing, for which the Carrot is largely drawn upon in many households, probably a small sowing of the larger type may be economical, because these may be lifted and stored in a dry shed and be handy for daily use. It may be argued that the Short Horn is just as well adapted to this purpose as the larger root: I know this is quite possible, but there is undoubtedly a considerable amount of waste when large Carrots are sent to the kitchen.

Carrots are sometimes seriously injured by the garden slug. I have known instances where Carrots which had germinated well, the lines being distinctly seen, suddenly disappeared. Soot scattered over the bed thinly and frequently makes the leaves distasteful, and a good dusting of dry road-sweepings is helpful in warding off an attack if threatened. In the clearing of the ground of summer crops, Peas or Potatoes, for instance, there is ground quite ready for the reception of Carrots at any time up to the month of September. In this way ground that in the ordinary way would be given over to Carrots could be more profitably devoted to Potatoes, the early varieties of which would be cleared in time to sow successional batches. There are several kinds of the short-rooted Carrot, Early Nantes being a very general favourite. Carter's Golden Ball and Long Forcing I find early maturing. Early Gem and Summer Favourite are other good stocks of a quick-maturing character. Young Carrots are so much appreciated in many households that gardeners devote much time to forcing them in order to get them in early. No one will deny they are well worth this extra labour. In the market young Carrots find a ready sale, but to keep up a good supply it is necessary to make frequent sowings. Short Horn Carrots will become coarse and lose their flavour if allowed to get overgrown, hence the necessity for frequent sowing. W. STRUGNELL.

Turnips.—As Turnips are soon over after they become ready for use, especially during the early part of the summer, seeds must be sown frequently, and in small quantities. During July and the early part of August it will be necessary to sow in larger quantities and greater variety, because from these sowings the autumn and winter supplies will be obtained.



Sprays of Pyrus floribunda in a jar.

a fit condition for repotting if the compost is at all decomposed. Teak-wood baskets or pans are the most suitable, and a wire handle should be attached whereby they may be suspended near the roof-glass of the Cattleya-house. Each basket or pan should be filled to one-half of its depth with drainage material, over which is placed a thin layer of rough compost to secure a free outlet for water. The compost should consist of three parts Osmunda fibre and one part Sphagnum Moss, both cut up fairly fine. Press the soil moderately firm. Throughout the growing period afford liberal supplies of moisture at the root, but when the pseudo-bulbs are fully developed very little water will suffice. To obtain a full complement of scapes it is essential that the pseudo-bulbs be thoroughly ripened. When the plants commence to grow in the spring, water must be nearly withheld until the flower-

with drainage material. The soil should be made moderately firm about the roots, and it ought not to be raised above the rim of the pan. Arrange the plants near the glass of the intermediate-house. Give sufficient water to wet the whole of the soil, and then just sufficient to keep the compost moist. When root-action increases, water may be given more liberally.—SADOX.

Hardy Ladies' Slippers.—Hardy terrestrial Orchids are usually supposed to be difficult to grow, and still more so to keep, but if people would give them a little of the care and skill that they give to hot-house Orchids we should soon find out the secrets of their life-history. I have managed to keep alive for sixteen years and to flower several times one of the rarest and prettiest of the hardy *Cypripediums*, namely *C. guttatum*, which I found in the pathless forest of the Altai

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JUNE 28TH.—*Aubrietias* (in variety), *Mossy and Encrusted Saxifrages* (in variety), *Antirrhinum Asarina*, *A. glutinosum*, *Ethionemas* (in variety), *Alyssums*, *Androsaces* (in variety), *Andromeda polifolia*, *Aster alpinus* (in variety), *Aquilegia* (in variety), *Armerias*, *Onosma tauricum*, *Convulvulus Cneorum*, *Globularia nana*, *Lewisia Howelli*, *Suponaria ocyroides*, *S. cæspitosa*, *Campanulas* (many varieties), *Dianthus* (in great variety), *Ramonda pulegioides*, *Alpine Phloxes* (in variety), *Primulas* (in variety), *Cheiranthus* (in variety), *Lycnis Viscaria splendens*, *Veronicas* (in great variety), *Oralis cneaphylla*, *Heeria elegans*, *Lithospermums* (in variety), *Helianthemums* (in variety), *Cistus* (in variety), *Mecanopsis*, *Geums*, *Erinus*, *Mule Pinks*, *Dryas octopetala*, *Silene alpestris*, *Sempervivums*, *Thalictrum aquilegifolium*, *Thymes* (in variety), *Ourisia coccinea*, *Tradescantia virginiana rubra*, *Asperula nitida*, *Sedums* (in variety), *Arenarias*, *Gypsophilas* (in variety), *Omphalodes cappadocica*, *Incarvillea Delavayi*, *Heucheras*, *Gladiolus byzantinus*, *Eremurus robustus*, *E. Bungei*, *Delphiniums*, *East Lothian Stocks*, *Liliums* (in variety), *Pyrethrums* (in variety), *Lupinus arboreus*, *L. polyphyllus*, *Nepeta Mussini*, *Iris* (many varieties), *Drimys Winteri*, *Tricuspidaria lanceolata*, *Schizophragma hydrangeoides* (Climbing *Hydrangea*), *Solanum crispum*, *Clematis* (many species and varieties), *Roses* (many species and varieties), *Senecio Greyi*, *Olearia macrodonta*, *O. Gunniana*, *Ozothamnus rosmarinifolius*, *Deutzias*, *Abutilon vitifolium*, *Grevillea rosmarinifolia*, *Philadelphus*, *Rodgersia podophylla*, *Romneya Coulteri*, *Anchusas*, *Cypripedium spectabile*, *Nymphaeas*, *Butomus umbellatus*, *Aponogeton*, *Spiraea Aruncus*.

WORK OF THE WEEK.—Where watering has been necessary, the ground has been gone over and the surface-soil stirred to break the crust, afterwards mulching where practicable with decayed leaf-soil. *Phlox Drummondii*, *Verbenas*, and trailing plants generally have been pegged down. Staking is an important item at present. All plants are staked in as natural a manner as possible, displaying as little of the supports as is practicable. Tall-growing herbaceous plants must be supported before the growth is too far advanced. Climbers are given an occasional look over to prevent the young growths becoming entangled or the strong shoots getting broken, at the same time thinning out weak spray where too thick. Late-sown annuals have been finally thinned, and a further sowing of *Mignonette* made on a shady border. Many alpine which are passing out of flower have been cut back, except in cases where seed is required. The propagation of various plants is carried out as cuttings become ready. Cuttings of most plants root readily in a bed of sand placed in a cold frame. The sand is kept constantly moist by sprinkling with a rose-can three or four times daily. The frame is kept quite close, and no shading whatever given. On no account must the sand be allowed to become in the least dry. Cuttings of the following have been put in during the week:—*Aubrietia* (in variety), *Dianthus* (in variety), *Phlox subulata* vars., *Phlox Laphami*, *Onosmas*, *Saxifrages*, *Frankenia laevis*, *Malvastrum lateritium*, *Pentstemon Scouleri*, *Ononis fruticosa*, *Daphne Cneorum*, *Rosmarinus prostratus*. F. W. G. *Northants*.

SOUTHERN COUNTIES.

Shrub-pruning.—Whatever pruning early-flowering shrubs may require should be done now, and not left till the winter, as this occasions much loss of bloom. *Lilacs* and *Mock Oranges*, as soon as they pass out of flower, *Gelder Roses*, etc., come under this heading. The seed vessels should also be removed from the choicer varieties of *Rhododendrons*, *Azalea mollis*, and their hybrids; also *Ghent Azaleas*. *Wistarias* need to have their young growths stopped at this season, not only for appearance sake, but that flower-buds may set on the lower portion of the spurs. The young growths on the *Virginian Creeper*, where they would lead to an obstruction of light, should

be cut away from around windows, otherwise they should be left for the sake of the effect produced by the foliage when it changes colour in autumn. As soon as the leaves fall these superfluous growths can then be removed. The strong growths should be cut out from summer-flowering *Jasmines*, as these do not bloom and are not needed on established plants. Vigorous growths on *Tea* and other *Roses* trained against walls should be looked after and fastened back before they get blown about and broken by rough winds. *Hedges of Tree Box* are best clipped at this date, when they will retain a neat and tidy appearance throughout the remainder of the season. The clipping of *Box* edgings to walks, though best carried out in May, can yet be done. The common *Laurel*, where grown to shut out unsightly objects, should have the young growths cut back to keep them within bounds as well as furnished at the base. This is best done with a knife.

Early Peach-house.—Directly all the fruit has been gathered the trees should be looked over and the old bearing wood, as far as possible, cut out. This will allow of more space being devoted to next season's bearing wood, which should at the same time be regulated and tied to the trellis. The admission of a greater volume of air and light which results from this mode of treatment is always reflected in the character of the young wood when autumn arrives, inasmuch as it is always more perfectly ripened and studded with fruit-buds than when this little extra amount of trouble is omitted. The house must also be ventilated to its fullest extent, and as it is essential that the foliage be allowed to die a natural death, so to speak, it must not be allowed to fall a prey to insect pests. The worst of these is red-spider. If this has already gained a footing, sulphur mixed with soft-soap and water should be applied. After this a vigorous hosing or syringing of the trees will keep this foe at bay. The border, as heretofore, must be regularly attended to in the way of watering, and old trees may have an occasional soaking of liquid manure.

Second house.—The colouring of the fruits is the signal to commence modifying the treatment by gradually diminishing the amount of atmospheric moisture and substituting warm, dry air for it instead. After so much dull weather *Nectarines* must be carefully looked after, as intense sunlight will damage the exposed portions of the fruits. Some varieties are more susceptible to scalding than others, but it is always wise, especially when the houses are of modern construction, and the trellis situated no great distance from the glass, to apply a light shade as soon as the fruits commence to colour.

Late house.—Unless necessary to forward the crop in order to have the fruit ripe by a certain date, the house should be freely aired, reducing the amount of ventilation only in dull weather and at night when damp and chilly. On bright days the paths and borders should be frequently damped and the trees subjected to a good washing every morning and afternoon. Border watering must have regular attention and stimulants afforded according to the age and vigour of the trees.

Frame Melons.—Plants showing a good number of female flowers should be kept rather on the dry side until more than sufficient have opened and are set. Syringing, too, must be suspended for the time being, as a perfectly dry atmosphere is necessary to ensure success. Fertilisation will occupy a few days, and as soon as a good set has resulted a soaking of tepid water will swell out the fruits. As they gain size leave four of the most promising on each plant and elevate them on pieces of slate laid on inverted flower-pots. To concentrate the full vigour of the plants on fruit production alone, all lateral growths produced beyond where stopping is done at the time of setting should be kept closely pinched in. The mounds of compost must be added to the margins, but not round the stems of the plants, to keep the roots active and the fruits swelling. Settle the fresh compost into place with a free supply of tepid water. Syringing must be carried out in accordance with weather conditions, and the frames closed sufficiently early to secure a temperature of 85 degs. to 90 degs.

Cucumbers.—Plants growing in frames need a look over twice weekly, when thinning and stopping of growths should have prompt attention. Avoid over-cropping, and remove all deformed fruits before they have time to develop. Top-dress the roots on the little-and-often principle to encourage the production of quantities of new roots and to maintain the plants in a vigorous condition. As with *Melons*, syringing must be regulated according to the weather, and closing for the day done as early as is compatible with safety, always remembering that no harm will result even if the thermometer registers a temperature of 90 degs. provided the plants are syringed at once with tepid water.

A. W.

MIDLAND COUNTIES.

Strawberries.—Strawberries are ripening very slowly. No Strawberry plantation should be retained after the fourth season of cropping. The most satisfactory method of renewing the Strawberry beds is to plant a given number of rows each year, and destroy a similar number of the old ones as soon as the fruits are gathered. As soon as strong runners are procurable they should be layered. A convenient method is to layer them into small pots, which enables them to be removed from the bed at an early date. The compost for layering may consist of good loam mixed with a little manure from a spent Mushroom bed. It is not necessary to crock the pots, some of the rougher particles of loam placed in the bottom being all that is necessary. Pegs may be used for layering or the runners may be kept in position by placing stones on them. The ideal runner is one with a stout single crown, moderate leaf stalk, and a good root system. Such plants ripen their crowns well in the autumn and fruit well the following season. Keep the layers growing whilst attached to the parent plant, and when well rooted transfer them to their permanent quarters. Only a few runners should be secured from each plant and the others cut off.

Bush fruits should be adequately protected from birds. Where they are planted in squares and not permanently protected by wire netting it is a good plan to fix stakes all around and across, about 6 feet high, with long poles or cord to fasten all together at such a distance that the net when stretched over them will not bag too much. This method gives easy access to the fruit, and the net also dries quicker after rain. If useless shoots have not been cut away, as formerly advised, it should be done before netting the bushes.

Herbaceous borders.—Everything possible should be done to make the flower borders neat and tidy. Remove the old flower-stems and any unsightly shoots. Stake where necessary, and secure any shoots that need tying. Keep down weeds, and promote a fine tilth on the surface by means of the Dutch hoe. Where the hoe cannot be employed, hand weeding must be practised. Plants that are dry at the roots should be given a thorough soaking of water and afterwards a mulch. The present is a suitable time for dividing the *Fritillaria* or *Crown Imperial*. *Fritillarias* grow well for a number of years undisturbed, but it is sometimes advantageous to thin them, and division is one of the easiest means of increasing the stock. *Herbaceous Pæonies* may also be divided at the present time.

Pinks.—It is advisable to raise a fresh stock of *Pinks* each season or the clumps become weak and straggly. This may be done now either by layering the Grass in the same manner as *Carnations* or by striking cuttings. I prefer the latter method. The cuttings should be pulled off the old plants, and, after trimming off the lower leaves, inserted in boxes of sandy soil and placed in a close frame for a week or two, shading from bright sunshine.

Roses.—Many of the climbing varieties will shortly need overhauling. All faded flowers should be removed. Any that have finished blooming should have the old flowering shoots cut out and the young growths trained in their places. Be careful not to injure the stout basal growths, as these will form the flowering branches for next season. In the

case of Hybrid Perpetual Roses, the appearance of the Rose garden will be enhanced if the plants are gone over once a week and the petals of faded blooms removed before they fall.

Azalea indica.—Plants that were forced and which after flowering were put into heat to complete their growth have now matured their buds sufficiently to allow the plants to be gradually hardened and placed out-of-doors. They will be placed in a position that is partially shaded during the hottest parts of the day, plunging the pots in ashes to keep the roots at an equable temperature and to prevent them drying quickly. Water with care and syringe the plants thoroughly every fine evening, using occasionally some clear diluted soot water, this serving to ward off thrips and other insect pests.

Calanthes are now growing freely. Extra care in watering is necessary for these plants during dull weather, as the compost will not dry through so quickly as it otherwise would, and if kept in a saturated condition without sunshine the bulbs and leaves will become spotted. Keep the plants as near to the roof glass as is convenient, and as the season advances gradually accustom the most forward plants to a greater degree of light. Very little syringing or damping between the pots is done during dull weather. Where a number of young roots appears on the surface of the compost a thin layer of fibrous loam should be placed lightly over them, into which the roots will quickly penetrate.

Broccoli.—Plants intended for furnishing a supply in late spring will be put out as soon as the ground is ready, choosing an open situation where the soil is not excessively rich, in order to promote the growth of hardy plants to withstand the winter. The ground must be made very firm before the plants are put out, as more failures are due to planting late Broccoli on loose, rich soil than to any other cause. Sufficient space must be allowed between the rows to prevent the plants becoming drawn. If the weather is dry at the time of planting a good soaking of water must be given to each plant.

Carrots.—A good sowing of stump-rooted Carrots will now be made on a south border previously occupied with early Potatoes. Last year the best and cleanest roots for use in winter were obtained from a sowing made early in July. The drills are drawn at 9 inches apart and one inch deep. Thin the plants as soon as large enough, leaving a space of 4 inches between each plant. Give an occasional dusting of soot, and hoe the surface-soil frequently between the rows.

Celeriac (Turnip-rooted Celery) needs abundance of water, and, where practicable, manure water should be liberally afforded. Keep the foliage well dusted with soot and the surface-soil stirred frequently. All side shoots should be removed.

Shallots have done well, and are now ready for lifting. They will be spread out thinly in full sunshine to ripen, and should the weather be wet and unsettled they will be placed under cover where plenty of air can circulate about them. When perfectly dry they are stored, selecting the hardest and best matured bulbs for keeping until spring.

Onions that were raised in heat and planted out for furnishing extra large bulbs are making rapid progress. The surface-soil is kept hoed and free from weeds, and an abundance of water and liquid-manure is afforded to the roots.

Vegetable Marrows should be watered frequently, and all weak growth removed. Cut the fruits before the skins become hard. Further plantings may be made in some sheltered spot in order to keep up a supply of young Marrows as late in the season as possible.

Parsley should be thinned to a distance of from 8 inches to 10 inches apart. The surplus plants may, if required, be transplanted to a sheltered part of the garden. Stir the surface of the soil frequently and apply a dressing of soot. Make another good sowing now on a south border, where protection can be given in severe weather.

Radishes should be sown in a cool situation, and water afforded frequently. The best place

to grow Radishes in summer is in frames behind a north wall. The soil should be light and rich. Sow the seeds thinly.

F. W. GALLOP.

SCOTLAND.

Vegetable garden.—Favoured by suitable weather, further successional plantings of the various Brassicas were made in the course of the week. Frequent showers fell, and the young plants were got out under the best of conditions. Taking further advantage of the moist soil, more Celery was planted, the varieties put out being Grove Pink and Major Clarke's Red. The latter, if not one of the largest, is very hardy, firm, and solid, has a good flavour, and keeps well. Second-early Potatoes have now been moulded up. Both these and the earliest plantings are more than usually promising, growth having been rapid during the past few weeks. During the week a dressing of soot was given to Carrots. For some reason germination has been poor in the case of the maincrop varieties, and resowing will be necessary. On the other hand, the Early Horn sorts are coming away freely. In the Onion beds good progress is being made. During the present season there will be no striving after exceptionally large bulbs; but, at the same time, a little artificial manure will be applied from time to time. The quarter intended for Leeks was levelled in readiness for the reception of the young plants. This particular quarter was occupied by Celery last season, and is, therefore, in excellent heart. A supplementary sowing of Parsley was made, more Lettuces were put out, and another sowing was made. Birds are at times troublesome in respect of germinating Lettuces, and it becomes needful to protect them by netting until the seedlings are out of danger. Glohe Artichokes were mulched to keep the roots cool and to check evaporation.

Sweet Peas.—The flowers on the earliest-planted clumps are now showing colour—at about the usual time. The hlooms are always useful, and endure a long journey, when cut, exceptionally well. The stems are cut at their full length, and when possible the hlooms are taken just when they are on the point of expanding. Close picking is necessary if the display is to be prolonged. During the week the clumps in question were given a light dose of sulphate of ammonia, and, as they are in a position where they can be reached by the hose, the sulphate was well watered in. It is surprising how quickly Sweet Peas respond to a little feeding. Later plantings and sown-out lines are equally promising, but as they are in a more exposed situation, some bud-dropping has been noticed. This, however, is in no way alarming, being merely the result of the somewhat cold nights which have been rather frequent of late.

Fruit-trees in pots continue to make satisfactory progress. The syringe is being used twice a day, and this will continue until symptoms of ripening are noticed. Figs, allowed to come away naturally, are very encouraging, and now they are being freely fed, a change of stimulant being given from time to time. Nothing, I think, seems to suit them better than liquid from the tank given in a well-diluted state, and at frequent intervals. The surface of the pots, however, must be kept stirred up, for this liquid appears to clog the pores of the soil. Stopping is practised when the sixth leaf is developed, and when the first crop is picked, if the temperature be kept fairly high and moist, a very useful second crop may be expected.

Plant-houses.—Some promising pieces of double-flowering Begonias have been moved from 6-inch to 9-inch pots, in which they make very showy and massive specimens. Begonias, generally, I think, do not much appreciate stimulants, experiment showing that tubers which have been fed with chemical manure in solution do not keep so well in a dried state as those which have received nothing but soft water. Gloxinias, now on the point of flowering, will presently make a good display, and if it is necessary to increase the stock, leaf-cuttings taken now and inserted in a close propagating-case will soon root and form

useful little tubers. The final lot of Geeneras has been potted up. The corms are, meantime, put in threes into 5-inch pots, and if necessary they can be broken up at a later date. Shade is now a necessity, for not only does shading prolong the display, but, in addition, it certainly reduces the amount of water required. A good batch of Zonal Pelargoniums is now being permitted to flower. These will probably be at their best about mid-July. There is not, however, the same interest taken in flowering plants under glass at that period of the year—the attractions out-of-doors being preferred, and I think rightly so.

Winter-flowering plants.—Provision is being made for a sufficiency of winter-flowering plants, and in the course of the week a good number of different things was planted out. These include the various kinds of Salvias—*S. splendens*, *S. rutilans*, *S. lactiflora*, and a few plants of *S. Pride of Zurich*. The last is used to some extent for summer bedding, but a small number is usually reserved for pots, chiefly for providing cuttings in spring. Eupatoriums were also planted out, as was a number of late-struck Chrysanthemums. All these are put out on a south border with a sunny exposure, and, in a general way, make large and massive plants when the time comes to lift them at the end of September. If the roots are cut round with a spade a week or ten days before the plants are to be lifted for potting they experience no visible check, and are very useful over a long period. Cinerarias for early-winter flowering make good progress. If these can be plunged to the rims of the pots in a cold-frame with a northerly exposure the sashes may with advantage be entirely removed except during prolonged wet. Some year-old pieces of *Primula obconica* and *P. sinensis* were planted out in a comparatively shady place. These, lifted in late autumn and put into 6-inch or 7-inch pots, make very useful stuff, and if the hlooms are not so large as those from seedlings, they are much more freely produced, and throughout the summer the plants give no trouble whatever, a fact not to be lost sight of under the present condition of affairs.

Blooms for cutting.—Very useful just at the present time are various subjects to which reference has been made from time to time. These include the early-flowering Gladioli—*G. Colvillei albus*, *G. Ackermanni*, and a variety known as Blushing Bride. *Ixia* and *Sparaxis* are likewise available, and the Spanish Irises are turning in at a very useful time, and will be succeeded by the English varieties. As all these things are grown thickly in cold frames a large quantity of bloom can be secured with the expenditure of but little labour. I find it unnecessary to lift and replant these subjects annually. They do perfectly well if left undisturbed for four or five years if the heds are given an annual top-dressing of good, sifted leaf-mould.

Hardy fruit.—Thinning and disbudding are being attended to among Peaches and Nectarines, this work being spread over a considerable time. It has not been found possible to devote so much time as usual to the hardy wall fruit, and a slight outbreak of aphids in the case of Peaches was noticed during the week. This was promptly dealt with by dustings of Tobacco powder, and the hose is being used upon the infected trees. Some small amount of watering was done in the case of Pears and Plums protected by a wide glass coping. This coping, while advantageous in some respects, has its drawbacks during the summer, for if these trees are not watered from time to time and inspected occasionally, vermin of one kind or another is almost sure to obtain a footing. Pears in the open give indications of heavy crops, and while many of the trees are carrying a full load, it is noticeable that in some cases Apples will be scanty. This is more evident on trees of some age, younger specimens, more especially those on dwarfing stocks, being full of fruit. Morello Cherries have set very well, and from their position are not so liable to be attacked by any of the various pests which at times are apt to worry fruit-growers.

W. McGUIFFO.

Balmie Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.

Naming plants.—All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.

Naming fruit.—Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.

PLANTS AND FLOWERS.

Lily of the Valley planting (Bog Cotton).—Early autumn is the best time to make a fresh bed. When preparing the fresh site, have the ground deeply trenched, adding as the work goes on plenty of manure and leaf-soil, if you can get it. Do this in good time so as to allow of the settling of the soil before planting. Keep the crowns well below the surface, and plant firmly. A mulch of manure is very beneficial during the winter.

Sedums and Crassula (Sedum).—Sedum glaucum, unless grown in large pots or in pans, would not be very effective, though in the small pot plants it is pretty enough. It is of the easiest cultivation in very gritty, perfectly drained soil, and in past days was largely used in carpet bedding arrangements. If the soil in the pots is made rather firm the surface could be covered by pricking single bits of the Sedum all over it, so that when grown together a dense growth would result. The plant is perfectly hardy. Crassula perfoliata is a tender or greenhouse sub-shrub, and does best in loam freely charged with old mortar. Not much water at the root is required. If you know Crassula coccinea, similar soil conditions suit the above. Mesembryanthemum falciforme is not an annual, but an evergreen greenhouse shrub having sub-erect, woody, and somewhat rigid stems. It grows 1½ feet or so high and bears pink-coloured flowers.

Asparagus plumosus, treatment of (Belgian).—You say nothing as to the treatment your plant which has been cut down has previously received, hence we can only assume that it has been grown in a pot in the greenhouse. If so, it would be an advantage to place it in a warmer structure to encourage the production of new shoots from the base. If you have not such a place available, put it in the warmest part of the greenhouse, and keep the soil fairly moist, but not too wet. With this treatment it will in all probability throw up shoots from the base, but it would have been much better had the cutting down been done in March or early April, a considerably longer growing season being thus ensured. The first part of your question refers to large roots of Asparagus plumosus. That would almost seem to imply that they are perhaps imported ones, lifted from the ground. If so, they should be potted in a mixture of loam, leaf-mould, and sand, and placed in the greenhouse. Large masses of roots may sometimes be divided before potting, and in this way the stock can be increased. Strong plants of this Asparagus, if

planted out in a prepared border in the greenhouse will grow freely, and in this way are useful for clothing a wall; pillar, or part of the roof of that structure.

Scarlet Lobelia in winter (R. Owens).—In some heavy and retentive soils the Scarlet Lobelia will pass through even severe winters unharmed in the border without the slightest protection. In other gardens herbaceous Lobelias are found to winter well in the border undisturbed if mulched with an inch or so of leaf-mould or Cocoanut-fibre, but in the majority of cases it will be found necessary to lift the clumps in the autumn, after the flower-stems have been cut off, placing them in boxes or pans and afterwards shaking a little fine soil into the interstices between the clumps. Treated in this manner they will pass the winter safely in a cold-frame from which the frost is excluded, requiring but little moisture until they are starting into growth in the spring, when they may be separated and planted out in the border. Single shoots which form after the flower-spikes have been removed may be taken off in the late autumn when they have formed their first leaves, placed in small pots, and grown on in the greenhouse.

TREES AND SHRUBS.

Leaf soil (F. M. G.).—The best of all leaf-soil is that made from Oak leaves, as these seem to be of a more woody nature than are larger leaves. Next to Oak come Spanish Chestnut, Beech, and Elm leaves. The evergreen Oak leaves will also be useful. The best of leaf-soil is that which has taken two years to thoroughly decompose.

VEGETABLES.

The Tree Onion (Miss Ross).—Instead of a cluster of small bulbs of a brown-red colour, from which the plant is propagated. When planted in the spring these small bulbs form large ones by the end of the year, but do not produce any bulblets till the following year. The flesh of the Tree Onion is agreeable, but rather deficient of delicacy of flavour. The bulbs soon decay, but the bulblets keep very well.

SHORT REPLIES.

Lancashire Lad.—If you can get sheep-manure and immerse it in a bag in a tub of water, when using diluting it to the colour of pale ale, you will find nothing better for Chrysanthemums.—**Riduna.**—The tipping of Broad Beans has two advantages. One is that the tipping clears off the black-fly that congregates on the points of the shoots, and the other is that by so doing the energies of the plants are thrown into the pods that are already formed.

NAMES OF PLANTS AND FRUITS.

Names of plants.—A. S.—Limnanthes Douglasi.—M. B.—1, Limnanthes Douglasi; 2, Iris sibirica; 3, Phacelia tanacetifolia.—D. R.—Campanula glomerata dahurica; 2, Centaurea ragusina; 3, Cerastium tomentosum; 4, Veronica Andersoni.—A. S.—1, Diplacus glutinosus; 2, Astrantia major; 3, Oxalis floribunda; 4, Centranthus ruber.—H. D.—1, Tradescantia virginiana; 2, Geum coccineum; 3, Helianthemum vulgare var.; 4, Arenaria balearica.—W.—1, Malva moschata; 2, Nepeta Mussini; 3, Epilobium angustifolium; 4, Astrantia major.—G. J.—1, Sedum Sieboldi variegatum; 2, Lychnis Viscaria fl.-pl.; 3, Heuchera sanguinea; 4, Lycopodium formosa.—F. B. Harvey.—1, Hemerocallis flava; 2, Saxifraga granulata fl.-pl.; 3, Enothera Fraseri; 4, Polygonum Brunonis.—A. M.—1, Thalictrum flavum; 2, Lihertia formosa.—W. J. N.—1, Lychnis chalcedonica; 2, Boccia cordata; 3, Dictamnus Fraxinella albus; 4, Euphorbia Lathyris.—Frank Wynne.—Arabis petraea (a weed)—F. F., Leamington Spa.—Syringa Emodi.—D.—Probably Symphytum caucasicum. Should like to see better specimen.

City of London Rose Society.—We have been asked to state that, owing to the exceptionally cold weather we have been having, this annual show has been postponed to July 7th.

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GARDENING ILLUSTRATED.

No. 1949.—Vol. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

JULY 15, 1916.

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A TRUE ECONOMY IN GARDENS.

A TRUE economy would be to stop altogether the clipping and distortion of trees and shrubs which are done to a vast extent in our gardens without the slightest reason, artistic or other. It is a wasteful expenditure of energy; injurious, too, in that it teaches young men that that sort of false form is right. As I go from the country to the "wen" I pass acres of disfigured Cherry Laurels sometimes shorn down without any reason except to get these trees to a dwarf state. If a shrub is wanted of that height why not plant the evergreen Barberry or other low-growing shrub, which would give one a free outline and natural grace without which everything worth having is lost?

But whatever it is, whether the Cherry Laurel, or the true Laurel, or the Yew, in our country seats there are these monuments of misdirected activities, sometimes miles of them, and imagine the thoughts of the men who are put to do this degrading work. Some places where men of scientific attainment are in charge are as much disfigured by this clipping as any others.

Look at the shrub garden against the Palm-house at Kew. It is disfigured with trees cut into the shape of billycock hats. The idea of wishing to break up the surfaces of gardens with shrubs taller than the flowers is right, but why not choose shrubs for this purpose that are of the right size to make distortion unnecessary? Many evergreens, from the true Laurel to the nobler Rhododendrons, have fine forms, which are easily destroyed by those who do not see true form. It is not unusual to see forest trees put under this indignity, but why plant a forest tree in the garden? The wood is the place for Yew, Beech, and Hornbeam, and these trees are wrongly placed in a garden, and can only torment the hapless gardener by spreading their roots where they should not be.

Another point of some importance is the loss of the beauty of form which trees and shrubs take in a high wind, and which is very striking in the Yew and the Cedar of Lebanon, and, indeed, almost any natural form of evergreen tree or shrub. One does not see this when such trees are cut into shapes and walls. Thus an enormous amount of labour is wasted. In one garden in Surrey I know there are several millions of Yews all cut down to the height of 6 inches or less, and this is done every year in order to carry into effect

some fantastic idea of an architectural gardener.

The hard lines of Yew hedges are most offensive to the artistic eye. Who can make a picture out of such deformities? And this distortion is not really an old English practice; much of it was brought on by Dutch William, and it then became the fashion to plant Yews to an inordinate extent in many gardens, such as Levens. The Yew is one of the hungriest of forest trees we have; it is impossible to grow flowers under it with any effect. If we look into the old Dutch books we find the whole idea of the Dutch gardener was to clip and shave everything into line, even forest trees were so trained into hideous examples.

Our most beautiful native trees are distorted in this way. Holly, Yew, Fir, and Box are trees which have their most beautiful form and colour in winter, and this is destroyed. Even the Ivy does not escape. I have lately seen a large and costly garden in which immense beds are almost entirely given over to an ugly variegated yellow form of the common Ivy. This has been planted with the misguided view of affording some colour in winter, but the result is indescribably hideous. In the same garden there are many variegated Yews cut to a shape. Many miles of Yew hedges have been planted of recent years by men who clearly did not know anything of the poisonous nature of the Yew and its fatal effects on horses and cattle.

Now we have another gift from the Dutch nurseries in the shape of Yews and Box clipped to many shapes—e.g., corkscrews, lambs, pheasants, and foxes. A garden with a stock of these must be well supplied with skilled labour to keep the abortions in "shape." Such labour might well be applied to the growth of beautiful flowers and shrubs. W. R.

NOTES OF THE WEEK.

The Silvery Geranium (*Geranium argenteum*).—After many years' acquaintance with this plant I doubted its health and good effect as a garden plant until I saw it at Friar Park—a silvery cloud of it happy between two bold rocks. It was a pleasure to see it after so many failures, including my own. It grew on the cool side of the rock garden, the raised position keeping it dry. Among the Cranesbills there are various good border and rock plants, this being a gem of the alpine species.—W.

Nierembergia rivularis.—It is curious to read the experience of one of your correspondents as to growing this in a shady and damp position. I have grown it here for years, and without success, in just such a situation, misled by the name *rivularis*. Now I succeed splendidly by growing it near large stones, in a distinctly dry position, and in hot sun.—RICH. H. BEAMISH.

Iris sibirica does well in a shallow tank sunk in the ground and filled up with ordinary loam. No drainage seems to be necessary for this or other marsh-loving Irises, and the stagnant conditions appear to suit them. They are a mass of bloom now and look lovely, the large pure white form known as *orientalis* Snow Queen setting off the blue and purple forms. I find many marsh plants will grow and flourish under similar conditions without any of the drainage which seems so necessary for some of the moisture-loving species.—W. O.

The Lettenhall Rose.—Under this name Sir Herbert Maxwell kindly gave me a charming single Rose some years ago. It is an early bloomer, and flowered in May with me this season. The large blooms are of good substance, and may be described as of a warm, deep pink. The habit of this Rose is erect, and it appears to be a form of *Rosa alpina*. It resembles one which I saw at Barskimming, known there as "Pink Arches," and which seems to have more of a climbing habit. It is also early, but a little later than the Lettenhall Rose.—S. ARNOTT.

Rose Anemone in Kirkcudbright.—This, said to be a hybrid of *Rosa levigata* or *sinica*, does very well on walls in the garden of Mr. W. D. Robinsou-Douglas, Orchardton, Kirkcudbrightshire. Facing west or south-west it is again blooming freely this year and is exceedingly handsome. The flowers, almost as large as those of *Rosa macrantha*, resemble in colour those of the H.T. La Fraicheur, and are described pretty accurately as "silvery-pink, shaded rose." At Orchardton, close to the sea, *R. Anemone* growing on a wall blooms freely. It is not generally known that this Rose is excellent for cutting and lasts well.—S. A.

Bamboos.—With reference to E. Markham's interesting notes on Bamboos in your issue of June 24th it would be very interesting to know whether he or any of your readers has made a success of *Phyllostachys Henonis* for any length of time. It

has had two trials in this garden, and each time after about three years, when just getting into its greatest beauty, it has flowered and died. It certainly is one of the most beautiful of the Bamboos to be grown in this country, but, of course, if this habit is general it does away with its value. *Arundinaria palmata*, I should say, is a most valuable covert plant, besides being one of the handsomest of them all when planted in a bold group, and with canes quite 9 feet long here.—M. F. YORKE, *Hillbrook Place, Iwer Heath, Bucks.*

Gentiana verna in Grass.—I see someone talking of this in GARDENING ILLUSTRATED. It is impossible in our coarse Grass. A little bit of thin Grass on a mountain would be different. I think I passed many acres of it in bare, peaty soil without a bit of Grass. In our rich English Grasses it would not have a chance. The Willow Gentian, being a woody plant, and accustomed to grow in rank Grass, would, I think, succeed.—W.

Senecio Grayi.—The handsome shrubby *Senecio Grayi* is not quite hardy in all districts, but in some where it is cut to the ground it makes good growth and flowers well the following summer. At Orchardton, Castle Douglas, Mr. W. D. Robinson-Douglas's delightful garden close to the Solway, it is occasionally cut down, but this season, after a similar ordeal, it has been flowering with the greatest freedom. In the rock garden the other day a good-sized plant was almost covered with the yellow flowers. So freely, indeed, were they produced that but little of the grey foliage could be seen. Readers who find this *Senecio* badly injured in winter will be well advised to cut it back and give it a chance of recovery.—S. ARNOTT.

Onosma tauricum is looking very pretty now with its numerous pendent heads of quaint, tubular, almond-scented flowers of a deep yellow colour, hanging over a rock ledge. It is very impatient of winter wet, and my plants all suffered more or less from the excessive rain which we had last winter; indeed, one or two of them died. Those which did come through, however, are blossoming very freely, although the centres of the clumps are looking brown and I fear that another wet winter may finish them off altogether unless they are protected with a pane of glass. I do not like plants which have to be coddled in this way, but with such wet winters as we have had recently some protection is necessary for species such as this if the plants are to be saved.—N. L.

Primula helodoxa.—May we correct the misapprehension that may be caused by "C. R.'s" note in your issue of June 10th. The flower-spikes of this new Chinese *Primula*, for which we secured the Award of Merit at Chelsea Show, measured from 29 inches to 36 inches high (we do not see "the ordinary Maidenhair Fern" that height in the East), and instead of the flowers being in "whorls of three," whorls of twelve flowers are common, and we have counted seventeen in one whorl. These plants were pot grown, others are over 3 feet, and they will no doubt easily exceed this in the open. As quickly as a stock can be raised there is no doubt that *Primula helodoxa* will become equally common and more appreciated than *P. japonica* and *P. pulverulenta*. Mr. J. C. Williams wrote us a week or two back: "I put five small plants of *P. helodoxa* into the narrow Rose-bed, opposite the front door, last autumn. They now have thirty-seven separate spikes, the best of which is 40 inches high, and plenty of them 25 inches to 36 inches." "C. R.'s" Chelsea friend may perhaps be referring to *P. serratifolia* or a yellow

form of *P. Cockburniana*, both of which are new and grow only about 1 foot high, with two or three smallish whorls. These were staged alongside *P. helodoxa* in the group among Maidenhair.—R. WALLACE & Co.

Eupatorium Raffii.—When I saw this *Eupatorium* (which is figured on page 321 of GARDENING ILLUSTRATED) in flower at Kew I took it to be an old plant with a new name. As far as my memory serves me it appears to be much the same, if not actually identical, with that grown at Kew forty years ago under the name of *Hebeclinium atrorubens*. That and *H. ianthinum*, both of which were afterwards changed to *Eupatorium*, used to be employed for the decoration of the greenhouse. According to the Dictionary of Gardening *Eupatorium atrorubens* and *E. ianthinum* are both natives of Mexico, the latter having been introduced in 1849 and *E. atrorubens* in 1862. As *E. atrorubens* is named in the Kew Hand List of Tender Dicotyledons one is scarcely prepared to learn that it has been overlooked, and it may be that the two are distinct, though, as above stated, I have my doubts.—K. R. W.

The deadly Yew.—I must write to tell you of our sad experience of the fatal effects of Yew clippings. About the beginning of the year some Yew trees had to be cut, and some (not a large quantity) of the clippings were thrown on a rubbish heap in what we call the park. No one seems to have known the danger. A few weeks after, our tenant turned seven bullocks into the park, and four of the seven died. We have had to pay compensation for the act of our servant. The man did not know, and even a nursery gardener whom I had to see in connection with the matter was ignorant of the danger. You cannot emphasise too strongly the necessity of keeping Yew, alive or dead, out of the reach of stock and of horses, which I am told are even more easily killed. Sheep seem either not to touch it or to be immune.—A. F. KIRKPATRICK, *Deanery, Ely.*

[It is surprising that the deadly properties of the Yew are so little known, even to gardeners. They ought to be taught to every child. Designers of gardens are careless in scattering Yew hedges about the country house when there are so many other plants that would make good dividing lines.—ED.]

— Under the heading "The Poisonous Principle of the Yew," I have the following note made in August, 1892. Lieutenant F. J. M. Stuart Wortley, R.N., Agricultural College, Downton, Salisbury, in a letter to *The Times* says:—

"I believe the actual poisonous principle of the Yew has never yet been definitely determined. Some weeks ago Mr. E. P. Squarrey told me he was of opinion that the male Yew was poisonous, but the female harmless to cattle. . . . Professor Munro is of opinion that if the poison in the Yew is taxine, the experiments (made by Mr. Stuart Wortley) go to show that Mr. Squarrey's idea is correct. . . . It is plain that taxine, whether or not it is the poison affecting cattle, is contained chiefly or entirely in the male Yew, and that if that is the poison, the female Yew may safely be planted in parks and pastures where cattle are turned out."

This may be of interest, and explain undoubted facts on both sides of opinion as to the Yew and its poisonous qualities.—M. W., *Haywards Heath.*

FRUIT.

GOOSEBERRIES.

THE excellent recipes in a recent number of GARDENING ILLUSTRATED as to various methods of cooking Gooseberries are very opportune, the crop in the majority of cases being heavy. One is glad to know of different ways of utilising this wholesome fruit, coming in as it does before other small fruits are ready. It is advisable not to use sugar with an over lavish hand, especially when the fruit attains full size or the pleasant piquant flavour is destroyed, or at any rate not so perceptible. The Gooseberry being so easily grown from the cutting onward, if a little care and intelligence are employed, it is a pity to come into contact, as one often does, with trees crowded with useless wood and suckers, and occupying a lot of space that might be more profitably filled. Nor is the sucker nuisance a speciality of home-grown trees. I have seen more than one collection of cordons with stems throwing up suckers in great profusion. When one realises the little trouble necessary to secure clean-stemmed trees it is a pity so little care is taken.

The heavy crop of fruit will steady the growth of bushes, but on the closely-pruned cordons there will doubtless be the same exuberance, and the summer pinching may be taken in hand as time permits. As with bushes, there is often the tendency in cordon cultivation to have a superfluity of wood, this in the case of the latter being the result of leaving too many spurs on the uprights, a perfect thicket of shoots following as soon as summer growth commences. A lot of these have to be broken out and just one or two left on each spur to form the material for another season's crop. The fruit on the cordon, being easily netted, is generally left for dessert, and after pruning, and before netting, it is well to give the trees a good dousing with the garden engine to free them of red-spider and keep the foliage clean for the remainder of the season. Where ripe Gooseberries are appreciated it is just as well to have a stretch of the dessert kinds as cordons, and a sufficient number of bush trees to meet the demands of the kitchen.

It is advisable to be careful in the selection of the sorts for cordons, those of a fairly erect habit of growth being preferable to others of a more pendulous nature, also to have them varied so far as the time of ripening is concerned, and in connection with the later kinds those that hang fairly well after attaining that stage. The best results are obtained in this direction if the foliage is kept in a sound, healthy condition. We have not been troubled much with red-spider this season, an absence of sun and occasional heavy showers checking its development.

Hardwick.

E. B. S.

Pruning Apple-tree.—Some Cox's Orange Apple-trees, planted here in late spring, were scarcely cut back at all. Should they not have been cut back three-quarters of the length of the shoots to encourage spurs? What would be the best method of pruning them in winter? Will it do to cut back last year's growth?—B. D. J.

[All things considered, the best way of dealing with the Apple trees in question would be to cut the last year's young wood back, as you suggest, to one-third of its length, or approximately so. They will, or should, then grow away vigorously next season. As the planting was done late little or no pruning was required, but in all such cases it should not be omitted the following autumn, and performed directly the trees begin to shed their leaves.]

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

RAMONDIA.

LATELY, at Friar Park, I was pleased to see a handsome plant of *Ramondia pyrenaica* growing among rock shrubs, showing itself with fine effect. Although the place is quite different from what is believed to be the best for the plants, its growth is charming to see, showing the extended use of this handsome plant.

W.

past week, it has been in profuse bloom. Very large pieces on the broad tops of the walls are particularly handsome. Occasionally sports are found, varying in colour from the type, and white-flowered plants are, while not numerous, at times met with. *Centranthus ruber* does well in cracks in the walls, one of the finest pieces being on a west wall partly overhung by a large Chestnut-tree, in which rather shaded position it blooms freely. *Linaria Cymbalaria*, like the *Erinus* referred to, is especially numerous, so much so, in some instances, as to be rather a nuisance, owing to its habit of invading the branches of fruit-trees. It might be inferred that,

with the masses of flowers it is now bearing when I saw it lately in the rock garden at St. John's College, Oxford. In our Sheffield garden we cannot grow it. Perhaps it is because the atmosphere has always a certain amount of sulphur in it. The plants, which reach a height of about 6 inches, and are covered with deep blue flowers, do best when planted between pieces of limestone.—E. T. ELLIS, *Bramcombe, Foxcombe Hill, near Oxford.*

Dianthus neglectus.—I think this is one of the loveliest of the alpine *Dianthi*, but there seem to be two different forms of it, one having much smaller flowers than the other. It appreciates a good soil in an open position, but not too hot, and, like most of the *Dianthi*, likes lime. It comes into bloom at the begin-



Ramondia pyrenaica in the rock garden at Friar Park.

WALL PLANTS.

ALTHOUGH no proper wall garden exists, nevertheless, at the present time the plants in the walls are noteworthy. These walls are much higher and more extensive than in more modern gardens, at places approximating to 20 feet in height. The walls are built of the local whinstone in irregularly-sized pieces, and beyond question the progenitors of the plants now growing in them were originally introduced into suitable crevices. In the course of years these plants have increased from seeds until, as has been indicated, the display of bloom during early summer is very striking. *Erinus alpinus* is present literally in thousands, and, during the

in such cases, there would be some danger of insect pests. Such is not the case, as close observation has shown. In the course of the week the walls in the neighbourhood of fruit-trees were examined, and such pieces of *Linaria* as were inclined to encroach were rooted out. There are also in the walls many Ferns, chiefly varieties of *Asplenium*, which, too, tend to become rather too numerous. At the same time, as has been said, they and the other plants referred to make the walls not the least interesting part of the garden just at present. KIRK.

Campanula muralis.—This lovely *Campanula* is now in full bloom. I was much struck with the freedom of its growth and

ning of June, and can be propagated by cuttings or by seed—the latter being the easier and better way, as the plants seem more vigorous than when grown from cuttings.—W. O. C.

Æthionema schistosum.—In this we have a good hardy plant, which has stood the last two winters in the moraine, and which I saw doing well also in another garden a few days ago. It is about 9 inches or 10 inches high, with narrow, glaucous foliage, and numerous heads of bluish-pink flowers. The central head is longer and more conical than the others surrounding it, these being flatter and bearing fewer individual blooms.—S. ARNOTT.

Campanula Raddeana.—This species does not seem so easy to manage as some. I had several plants in various parts of the rock

garden in well-drained soil, but the wet winter was too much for them, and they all died off except those which had been planted in the moraine, and which came through very well and are now just coming into flower. I find that many species which are supposed to require moraine treatment do quite well in a retaining wall, but *C. Raddeana* does not seem to be one of them.—NORTH LONDON.

Helichrysum bellidoides has been in blossom for some time, and is quite pretty with its little white, Daisy-like blossoms, though I think its value is somewhat over-rated. I grow it in the moraine, but it spreads very fast and in a small moraine is hardly worth the room it takes up. It seems quite hardy and is easily propagated by division.—W. O.

ORCHIDS.

GROWING CATTLEYAS.

PROBABLY no Orchids are more largely grown than Cattleyas, and if we include the other genera that readily cross with the various species we have a formidable

any repotting or top-dressing is when new roots are about to appear at the base of the new growth. Turn the plant carefully out of its pot and then remove all decayed compost, dead roots, and useless back pseudo-bulbs, as three behind each lead will be ample. These back pseudo-bulbs may be used for propagating if it is desired to increase the stock of any particular variety. Ordinary flower-pots are chosen, and these are filled to one-third of their depth with drainage, over which is placed a thin layer of rough fibre to secure a free outlet for water. The plant is then placed in position and the compost, which should consist principally of *Osmunda* fibre cut up into inch lengths, removing all the finer particles, worked well between the roots and brought up level with the rim of the pot. The surface is then neatly trimmed off. If thought desirable a few live heads of *Sphagnum* Moss may be incorporated with the last layer of soil. See that the plant

if unnoticed, the whole pseudo-bulb will be lost. Scrape away the decayed parts and apply lime, sulphur, or powdered charcoal until all the moisture is dried up. B.

CHRYSANTHEMUMS.

SEASONABLE NOTES ON CHRYSANTHEMUMS.

BORDER CHRYSANTHEMUMS do not require much attention, but they well repay regular care. Many varieties of recent introduction are dwarf and do not need elaborate staking. As all must economise in labour, all the staking requisite may be done by fixing a few branching Pea-sticks round and among the growing stems in such a way as to ensure the natural habit of the plants. Use the Dutch hoe freely in fine weather, and water if the soil is dry. When the roots are permeating the soil freely a good soaking of liquid manure will be beneficial. Repeat the dose every ten days or so, and always when the soil is moist. Liquid manure may be made by putting one peck of manure into a coarse sack and immersing it in a tub of water containing about twelve gallons. Move the bag to and fro several times each day for three days, then use the clear liquid at the rate of one quart to a gallon of clear water. Fowl manure, also sheep manure, may, where obtainable, be used in a similar way. Do not disbud the plants, but encourage a natural growth, and thus secure a fine display of blossom on healthy foliage.

BUSH PLANTS FOR THE GREENHOUSE.—

These, grown in pots, will provide flowers for furnishing the greenhouse and for cutting after the outside plants are over. Here, again, a selection of neat Pea-sticks will prove useful, generally, one in the centre and three round the sides of the pots sufficing. The plants always grow very rapidly during September and October, so that the staking and feeding now must be judiciously done. For these and plants to bear larger blooms liquid manure should be used, as advised in the case of border varieties. Surface mulching will also be essential, and for this purpose use a good fibrous loam soaked for twelve hours in strong liquid manure and then partly dried on the floor of a cool shed before putting it on the soil in the pots. Thin layers, put on fortnightly, will prove most beneficial. In the case of plants to bear large blooms it will be necessary to pinch out all side shoots while they are quite small, only retaining the main stems and main leaves in readiness for bud-taking in August and the early part of September. Bamboo or similar stakes must be used for the due support of these plants.

PLANTS FOR LIFTING must not be neglected. They will grow more rapidly than those in pots and must not be unduly forced. Simply stake the plants temporarily against wind and keep the soil free from weeds. G. G. B.

Chrysanthemum Parson's White.—I think if this variety were called *White La Triomphante* no injustice would be done to the plant. The blooms are exactly those of *La Triomphante*, only white; and the foliage has the hereditary tendency of that variety towards mildew. It is equally free-flowering, a good doer, and, apart from its liability to mildew, quite a good early *Chrysanthemum* under any form of cultivation.—KIRK.

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Ramondia pyrenaica in the Royal Gardens, Kew. (See page 343.)

lot which produces some of the most gorgeous of blooms. The most suitable house is a span-roofed one with both top and bottom ventilators, and it must be fitted with ample piping. The temperature should average 60 degs. Fahr., but in winter it could fall to 55 degs., and in summer it may rise 10 degs. or 20 degs. and no harm will follow if due attention is paid to shade and ventilation. The ventilators should be opened whenever the elements are favourable, the object being to create sweet, buoyant conditions without producing a dry, arid atmosphere in which no Orchid will thrive. Shade will be necessary the greater part of the year when the sun is hot, and blinds must be so fixed that they can be run down when required. A moist atmosphere is essential, and the house should be damped down at least twice each day. The atmosphere may be allowed to become fairly dry for an hour or so during mid-day.

THE TIME TO REPOT.—The ideal time for

is quite secure, and until it is re-established the pseudo-bulbs may require some support.

WATERING is an important factor in Orchid culture, and is governed in its extent and frequency by the growth of the plant. Newly-potted examples require great care, and only enough should be given to keep the soil just moist. As root action increases, water may be afforded more liberally until the pseudo-bulbs are fully matured. At this stage only sufficient water will be needed to keep the pseudo-bulbs in a plump condition. Cattleyas do not appreciate a lot of spraying overhead, but if done with discretion and only on hot days they will derive a certain amount of benefit from the practice.

During the autumn and winter, Cattleyas of the labiata section should have their flower-sheaths examined periodically to ascertain if any moisture has accumulated at the base. This soon sets up decay, and,

OUTDOOR PLANTS.

LIFTING SPANISH IRISES.

THE question of lifting and resting Spanish Irises has interested me for a number of years. Going through the gardens of Mr. W. A. Coats, at Dalseairth, Kirkeudbrightshire, I observed some handsome clumps of a blue and white Spanish Iris in the best of health and flowering very freely. These appeared to me to be established clumps, and, on asking the gardener, he informed me that they had been planted for a number of years and were never lifted and replanted. In many gardens the Spanish Iris (*I. Xiphium*) appears to become weakened by being left too long in the soil. A safe rule is to lift the bulbs when the foliage becomes weak, either from overcrowding or from the soil being ungenial. A good many years ago I saw a very fine exhibit of *I. Xiphium* from Messrs. Cocker, of Aberdeen, at a show in

soil. I believe that it is better to lift the bulbs as soon as the leaves become yellow and to replant them at once in fresh soil. I know a good many places where *Iris Xiphium* thrives for many years and forms great clumps, but the point is worth considering by those who have lost their Spanish Irises by leaving them alone.

S. ARNOTT.

SOLOMON'S SEAL IN ROUGH, GRASSY PLACES.

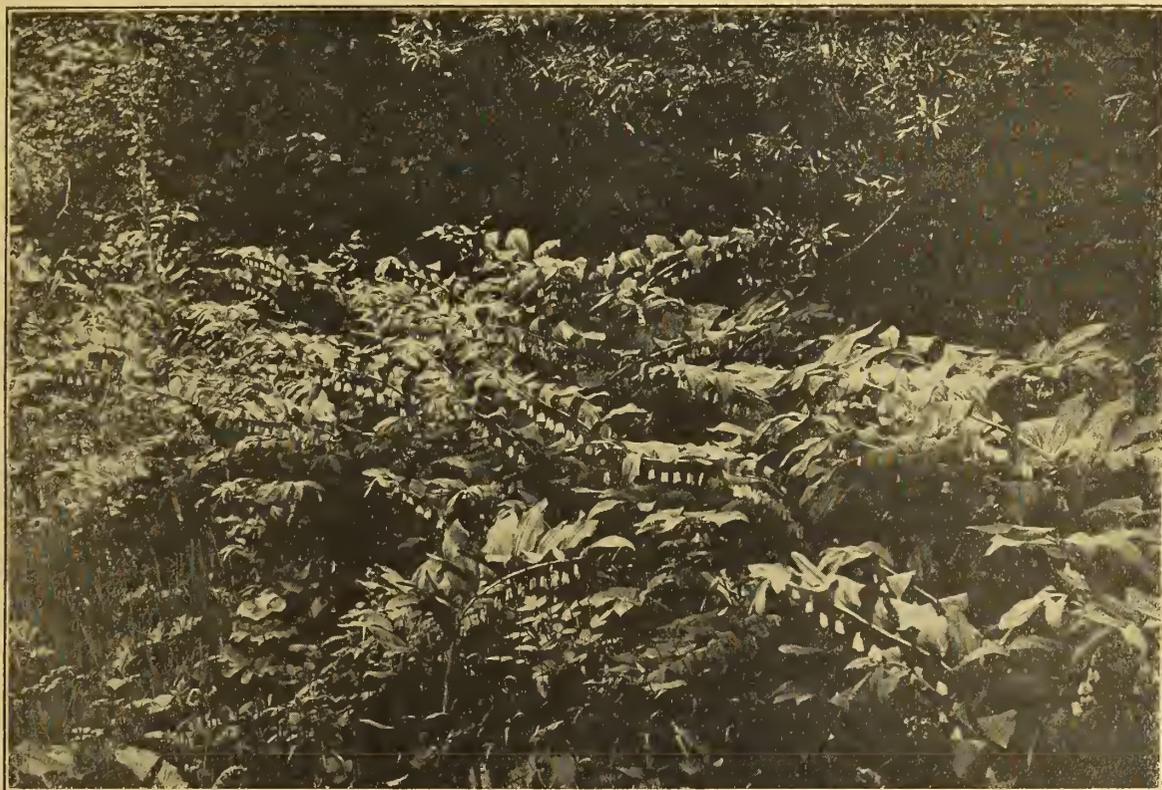
I HAVE seen many gardens in which no thought was ever given to such a plant as Solomon's Seal. It will not fit into flowerbeds, and should not, because the flowering is not long enough to justify its place in the flower garden. In places of any size there are often spots on the fringes of copse, shrubbery, or plantation in which this most graceful plant may be well grown. The colony figured has been growing for some years along a very little, rough bank, beside a streamlet in a spot

give a second crop of bloom, which, though, of course, considerably inferior to the first, will yet furnish a good display. Delphiniums, if they are not moved, do not exhaust themselves so readily as some herbaceous subjects. In proof of this I have some clumps which have been in the same place for five years continuing to increase in size and flowering well every year.—W. T.

PERENNIALS FOR HEAVY SOIL.

KINDLY give me a list of perennials that will do well on heavy clay? It is Wiltshire clay, and grows splendid Grass.—H. T. SHAWCROSS.

[It is only possible to give an approximately correct list of plants in such cases, experience of the peculiarities of local soils being necessary. There is, for example, a great difference between heavy soils that are constantly cool and moist and rarely contract, and those which, while heavy, contract badly in dry weather. Generally, however, you may



Solomon's Seal naturalised in old quarry.

Edinburgh. On discussing the point with Mr. Cocker I was informed that the flowers were produced by bulbs which had been three or four years in the ground without disturbance. "The English Flower Garden" is very emphatic on the question, and informs us that "The golden rule of not meddling over-much applies to the Spanish Iris." . . . "Plant the Spanish Iris in clumps on some rich, loose, friable plot where their bright colours may be shown to advantage, and let them stay there year after year until the dwindling foliage tells you that they have exhausted the soil." Mr. W. Rickatson Dykes tells us that "It delights in a warm, rich soil, and the bulbs should be lifted occasionally when the foliage withers, and separated before overcrowding occurs to diminish the size of the flowers."

In certain gardens known to me, where the soil is dry and poor, frequent lifting seems necessary, but the early growth from the bulbs appears to render it undesirable to keep them too long out of the

never mown, and where the plants can show their graceful bloom in May and fine colour in autumn without any care whatever. There are said to be some giant forms of this plant, but I have never been sure of getting them; the one we have is quite fine in form. W.

Delphiniums from seeds.—There is now quite a long list of named varieties of Delphinium, but where it is desired to have a good display at a cheap rate, seed saved from a good collection will yield a fine and variable lot of flowers. While the bulk of the flowers may not be the equal of those of the named kinds, they nevertheless make a grand display. Most seedlings, too, are characterised by a robust constitution, which is not always the case with those increased by division. From seeds I have obtained a great many delightful forms, varying considerably in colour. If the flower-stems of Delphiniums are cut off as soon as the blossoms are over many of the plants will

plant *Kniphofias*, *Acanthuses*, *Achillea Eupatorium*, *Anchusa italica* and varieties, *Michaelmas Daisies* in great variety, *Day Lilies (Hemerocallis)*, *Rudbeckias*, *Phloxes* if summer moisture is assured; such *Campanulas* as *grandis*, *carpatica* in variety, *latifolia* of sorts, the many good forms of *C. persicifolia*, *Heleniums*, *Erigeron speciosus*, *Monardas*, *Statice latifolia*, *Pæonies* in deeply-worked and rich soils, *Funkia*, *Lent Lilies*, *Lupinus polyphyllus*, *Everlasting Peas*, *Double White Rocket*, *Oriental Poppies*, *Eryngiums*, *Trollius*, *Veronica sub-sessilis*, *Doronicum*, *Lychnis chalcedonica*, *L. Viscaria rubra plena*, *Spiræa Aruncus*, *S. venusta*, *Pyrethrum uliginosum*, *Chrysanthemum leucanthemum* in variety, *Dictamnus Fraxinella*, *Galegas*, *Baptisia australis*, *Aconitum Wilsoni*, *Cimicifuga simplex*, *Astilbe Thunbergi*, *Thalictrum flavum*, *Spiræa filipendula*, and much besides. Had you stated for what particular purpose the plants were required we could have replied more definitely. Much

necessarily depends upon whether the plants are required for borders—narrow or wide—or for the rougher parts of the garden only. Much, too, depends upon the soil itself and how cultivated. Those given, however, are better suited to borders which, if well and generously cultivated, would grow many things well.]

NOTES AND REPLIES.

Growing Ranunculus.—Will you kindly answer the following queries:—1. When is the best time to plant Ranunculus bulbs—autumn or spring? 2. Also, best double kinds? My land is cold land, clay subsoil. 3. How deep to plant?—W. T. W., Gloucester.

[The situation should be open, but not exposed, and the soil a well-drained loam, to which has been added some well-decayed stable manure. About a month previous to planting, the bed should be prepared to a depth of 15 inches, and planting should take place about the last half of February; in some seasons it may take place in October, though such an early date is not the best. Drills about 5 inches apart and 1½ inches deep should be made with a small hoe; the claws of the roots should be placed downwards and pressed firmly into the soil, which should be raked over the roots, and a top dressing of about 2 inches of good loam given. If the surface soil is light it may be gently beaten with a spade in order to obtain a firm surface, and this may be repeated just before the foliage appears, say about a month or six weeks after the planting. As the Ranunculus delights in moist soil, water should be given if there is a scarcity of rain, and in no case should the roots be allowed to become dry. A light top-dressing of artificial manure or guano just as the foliage is above ground will do good. When the flowers are past and the leaves faded the roots must be taken up, dried, and stored in a cool place in sand till the next planting season, for roots left in the ground are injured by rains and never strong. It is useless to enumerate the different varieties, as they are usually sold according to colour, and are mentioned in nearly every bulb catalogue.]

Single Pyrethrums.—The new single Pyrethrum Pericles gives us another shade in these beautiful flowers, so that we now have them in crimson, pink, white, and yellow, besides intervening shades of a less distinct character. If not deemed advisable to purchase the best of the singles, an excellent selection can be obtained by sowing a packet of seed from a good strain any time early in spring. Prick off into prepared beds as soon as the seedlings can be handled, and let them remain there until they flower, so that the best can be selected for permanent planting. If not quite up to the form of the best-named varieties, these will make a good show and prove useful for cutting. Pyrethrums, being densely rooted and hungry plants, the ground for their reception should be well prepared, and if allowed to remain in the same quarters for several seasons, it may be found advisable to lift and replant annually. An association of these and Tufted Pansies makes a very effective bed.—E. B. S., Hardwick.

Calceolaria violacea.—This distinct and pretty Calceolaria is not much seen except in South of England and Irish gardens, where it often proves hardy. It is a quaintly pretty plant, with its helmet-shaped flowers of purple or violet, freely spotted, and always attracts attention. It needs shelter, however, in most places, and rarely stands the winter in the open north of the Tweed. At Culzean, the Marquis of Ailsa's garden, it is grown on a wall, and stands the winter.—A.

Dianthus Spencer Bickham.—This is a bright little hybrid Pink. It is only some 2 inches or 3 inches high, and forms a tuft of small, glaucous, spiny leaves. Above these rise, on short, erect stems, the bright-crimson flowers, which are effective, though so small. I find it thrives well on the moraine.—S. ARNOTT.

GARDEN FOOD.

THE HOME-GROWN APPLE SUPPLY.

JUDGING from the remarks of salesmen and from my own experience there would seem to have been a comparative slump as affecting the value and sale of home-grown Apples. It may be that fruit from the colonies arriving in a fresh state, and having such an attractive appearance, may to some extent account for the neglect of late keeping, British-grown fruit. We do not hear so much about growing late Apples now, possibly because it has been found a loss rather than gain to growers. Apples may be kept in suitable stores up to May and June if they have been purposely late gathered. If they are not carefully gathered, and the fruits left on the trees until the last moment, it is futile expecting good Apples even in March.

While the large growers at one time advocated the planting of late kinds, especially dessert fruits, there came a time when it was advisable to clear all stocks by the end of the year, because it was found once our markets were monopolised by the Colonial and American shipments then came a decline in the demand for home-grown Apples, though the imported fruits were dearer. I used to find a demand for good samples of such sorts as Reinette du Canada, Claygate Pearmain, Sturmer Pippin, Dutch Mignonne, Adam's Pearmain, and Bess Pool, but times have changed, and there is scarcely an inquiry for them at all now. This is my experience in the West of England, but whether such is the case in midland and northern markets I am unable to say. The tendency of our Apples is to become more or less shrivelled in the spring, and once this happens then their commercial as well as their edible value quickly depreciates. D'Arcy Spice has been referred to frequently of late as being among the very best of winter Apples. I have been the victim of mis-named trees. This has to be corrected by grafting or replanting, and thus time is lost. It is, I believe, not one of the showy kinds that find so much favour among purchasers, hence perhaps the reason why it has not become popular. Margil is another Apple of poor appearance, yet those who grow it set a distinct value upon it. Lord Burghley, where it succeeds, affords late dishes of plump, well-flavoured, crisp fruit. With me this cankered so badly it had to be discarded. King of Tomkins County, of American origin, generally keeps well, but, like the last named, is with me rather subject to canker, and the trees do not then remain long in a healthy bearing state.

The foregoing are all good Apples in a general sense, though soil influences are such that in some gardens some are unprofitable. It is in the market, not so much in the home provided with a good garden, where the influence of the imported fruit is felt.

W. STRUGNELL.

NOTES AND REPLIES.

Uses of Lettuce.—This vegetable, now so much grown, is too often, with us, thought of only as a salad. Welcome it is to all in that state, the more simply served the better. It should be borne in mind that its use in cooking is even more precious to us if we use it braised or otherwise prepared in the "conservative" ways now so often talked of and so often carried out in French cookery. It is often better in that way than any of the Brassica race in summer days. I was about to give recipes from a standard book on cookery, but drew back at sight of the needless things added to the dishes, nutmeg,

cayenne pepper, and salt, very doubtful aids to a good thing as a good gardener presents it. Adding such irritants to a dish is a British and a wrong way. French cooks use simpler means, and with good results. As the demand for salad may not lessen the stock, the cook should make good use of it in various ways. Here it should be said that the decoction called salad-dressing should be avoided. It must be bad Lettuce that would be made more palatable by it. For salad the best of all dressings are good olive oil and a squeeze of Lemon-juice, except for the epicure who prefers fresh Lettuce as it grows.—W.

Less Meat.—We quote from No. 4 pamphlet issued by the National War Savings Committee advice on this question:—"In ordinary times we get about half the meat which is consumed in this country from abroad. This is carried frozen in ships which have to be specially built for the purpose, and are, therefore, limited in number. Since the war began these ships have had to carry meat not only for our civil population and our own Army, but also for the French Army. It has, therefore, been a difficult task to keep up the foreign meat supply, and some shortage of this must be expected to continue. It is this shortage which has raised the price of meat, and may lead to our cows, which should be kept for milk, being killed for meat. This shortage of meat would disappear, the price of meat would fall, and our milk supply would no longer be threatened if everyone were to eat less meat than they have been accustomed to, especially during the summer and autumn months. Most people would not suffer in the least in health or strength by so doing, especially if they were to include in their diet a fair proportion of food which can supply the same kind of nourishment as meat."

A wholesome jam.—All those who wish to keep well should avoid artificial sugars in cookery, and take into the system only those contained in the fruits. This is quite practicable even for those wishing to preserve fruits for winter in the form of jam. I have experimented as follows on some fruit presented to me by one of my patients, with the result that all who tasted it considered it to far exceed the old-fashioned way. Here is the recipe:—To every pound of fruit allow ¾ lb. of Dates. First wash and drain your fresh fruit and throw into a clean enamelled saucepan; mash it down with a wooden spoon until you get some syrup, then throw in the Dates either stoned or not, after washing them in hot water; keep the fruit well stirred whilst cooking, and only allow it to simmer for about two hours; get the jars hot and dry, and pour in the preserves at boiling point; have ready some melted mutton suet or olive oil hot and pour over the top, tie down tightly at once and keep in a cool, dry place, and you can keep it any length of time.—MRS. MAY.

The high tea.—The typical North Country "high tea" will run through the whole gamut of cold meat or potted meat, Beetroot in vinegar, bread-and-butter, bannocks, scones, stewed fruit and sugar, milk pudding, cake, parkin, etc., all of which will be "washed down" with copious draughts of sugared tea. What is wrong with this meal? It has the fault of bringing together in unhappy digestive association the most unsuitable companions—sugar and vinegar, baking soda and potted meat, unripe fruit and soft starches, strong tea, and meat.—E. A. SAXON.

[With such coarse feeding, is it any wonder the Briton eventually blossoms out into a repulsive mass of gout or rheumatism?—Ed.]

INDOOR PLANTS.

ABELIAS.

THE Abelias form a small group of some five or six kinds, all mountain plants, and native of the hills of China and Japan, the uplands of India, and the mountain

Their pretty flowers are charming in drooping clusters, lasting long, and the good effect is continued after their fall by the coloured sepals, which retain their beauty far into the autumn. They may be increased by layers in spring, or by cuttings under a handlight during summer. Two Chinese forms known as

spot. The flowers, each about 1 inch long, are carried in clusters and are of a pale-blush colour, fragrant, and lasting for several weeks in early autumn. Even after the flowers drop the reddish sepals are still ornamental.

A. FLOREBUNDA.—This, which we figure to-day, is the finest of the group, but, save



Abelia floribunda in the greenhouse at Nymans.

in mild parts, must be grown under glass. Even in the south it is best as a wall shrub, when its evergreen leaves and drooping flowers are well seen. The flowers, coming in March and April as drooping clusters from every joint, are of a bright rose or rosy-purple, each about 2 inches long, and hang for many weeks upon the plant. It does best in light soil, and when grown in pots should be kept rather confined at the root. It is found in the mountains of Mexico up to a height of 10,000 feet.

A. SERRATA.—This species is found as a low evergreen bush upon dry and sunny hillsides in China and Japan. It is smaller in all its parts than the other Chinese species, growing little more than 3 feet high, with solitary pale-red flowers, which are large and sweet, appearing in March.

A. SPATHULATA.—This bears white flowers, marked with yellow in the tube, coming in pairs from every joint, and about 1 inch long. The leaves are rather long, finely toothed, with a pale-purplish edging.

A. TRIFLORA.—This is less hardy than the Chinese forms, needing the shelter of a wall. Being of robust growth it soon makes a fine object, of good habit, and branching freely. The flowers, coming in threes at the end of summer, are cream or pale-yellow flushed with pink, their beauty enhanced by the rosy colour of the unopened

buds. Grown in pots or tubs, it is a fine plant for the greenhouse, where it cannot be grown in the open.

Hydrangeas.—To have plants for forcing into flower early in the season the cuttings should be taken and struck in a propagating case now. An abundance of shoots of a suitable nature is now avail-

ridges of Mexico. Few of them are hardy in all parts of our country, though those that may be grown in the open air are beautiful and uncommon. In mild districts, with light soil, in sheltered corners on warm walls, they thrive in favoured parts. They do best and are hardiest in light, warm soils, enriched with peat or leaf-mould, and in well-drained spots.

rupestris and *uniflora* are not considered distinct at Kew, and are therefore united under the name of *A. chinensis*. The following kinds are in cultivation:—

A. CHINENSIS.—This is a pretty and distinct shrub, usually of dense growth, reaching a height of 3 feet to 5 feet. It is the hardiest kind grown, and to do well needs a warm, light soil and a sheltered

able on plants which have already been forced. They root quickly if taken and potted at once, singly, into small 60-pots filled with sandy compost, placing a little sand at the base of the cuttings and putting them at once into the case. With a good watering at the outset, but little will be required for some time afterwards, but the soil must, nevertheless, not be allowed to become dry. Shading from direct sunlight is necessary. Plants propagated in this way and shifted on afterwards into 5-inch and 6-inch pots throw up magnificent heads of flowers when forced the following winter.—A. W.

HELIOTROPE IN BAD HEALTH.

Will you kindly tell me with what the Heliotrope leaves sent herewith are affected, and the cure? It was badly infested with same thing last year. I pruned it back severely in the spring, and have several times fumigated with XL compound, which I find very successful with green-fly, but it does not seem to affect this white-fly. I also had the wall behind the Heliotrope limed in the spring, so am the more disappointed at the reappearance of this pest, as I do not know what else to try. Will you kindly tell me if fumigation is of any use in keeping Ferns free of scale and white-fly?—A READER.

[The white fly (Aleurodes), with which your Heliotrope is infested, is a difficult subject to get rid of. The fumes of hydrocyanic gas will destroy it as it will all other insect pests, but it is of too poisonous a nature to recommend. We have got rid of the white fly by persistently vaporising with the XL All vaporiser, in conjunction with spraying with paraffin emulsion or soft soap and quassia. A single vaporising is, however, of no use, as it destroys only the perfect insects, and even some of them drop to the ground and escape. Four or five vaporisings at intervals of about four days are necessary in order to effect a cure. Judging by the leaves sent, which are attacked by scale as well as by the white fly, we should say that your most satisfactory plan will be to do away with the Heliotrope and burn it, taking care to disturb the flies as little as possible before the plant is outside of the greenhouse. If this breeding place is not got rid of, the pest will spread to many other plants in the same structure. The plants most liable to attacks are those with leaves of a soft nature, which include, besides the Heliotrope, Abutilons, Fuchsias, and Bouvardias. Tomatoes, too, are very subject to its attacks. Fumigation, or rather vaporising, has little or no effect on scale, though it tends to check mealy bug. Once scale effects a lodgment on Ferns the badly-infested fronds should be cut off and burnt, and the others cleaned by hand.]

Unhealthy Gloxinias (P.).—The Gloxinias are, from specimens sent, simply eaten up with thrips, generally caused by too hot and dry an atmosphere surrounding them, just the condition under which yours were grown, as you say the house is a hot and dry one and has had but little moisture in it. No treatment will restore the plants to health now, as they are too far gone. Another season use more moisture in the house, and if any thrips are seen vaporise at once two or three nights in succession.

Chinese Primulas.—These are now at their best, and comparing the varieties now at the disposal of the grower with those of the late 90's and early years of the present century, the difference cannot fail to strike those who have watched the progress of the family. The stellata varieties grow more popular, while the rich range of colour in all classes makes the Chinese Primula indispensable in spring. The double forms, among which at one time there were some good things, are now rarely seen, with the exception of the useful Double White.—KIRKCOUBRIGHT.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JULY 5TH.—*Ostrowskia magnifica*, *Eremurus Bungei*, *Tritomas*, *Delphinium nudicaule*, *Potentilla nitida*, *P. arbuscula*, *Dianthus* (in variety), *Gypsophila transylvanica*, *Hypericum* (in variety), *Achillea Huteri*, *Ononis fruticosa*, *Linarias*, *Saxifraga valdensis*, *S. Cotyledon pyramidalis*, *Tunica Saxifraga*, *Saponarias*, *Aubrietias*, *Viola bosniaca*, *V. lutea*, *V. cornuta*, *V. gracilis*, *V. Rothomagensis*, *Veronicas*, *Helianthemums* (many varieties), *Cistus* (in variety), *Thymus* (in variety), *Omphalodes cappadocica*, *Libertia formosa*, *Campanulas* (in great variety), *Pulmonarias*, *Valerians*, *Lupins*, *Thalictrums*, *Gysophilas*, *Sedums* (in variety), *Convolvulus althæoides*, *C. Cneorum*, *C. mauritanicus*, *Dryas octopetala*, *Gnaphalium trinerve*, *Heucheras* (in great variety), *Incarvillea Delavayi*, *Onosma albo-roseum*, *O. tauricum*, *Ourisia coccinea*, *Alpine Poppies*, *Ramondia pyrenaica*, *Cypripedium spectabile*, *Androsace lanuginosa*, *Astromerias*, *Lychnis Haageana*, *L. chalcadonica*, *Phlox subulata Vivid*, *P. s. The Bride*, *Lithospermum intermedium*, *L. petraeum*, *Galega Hartlandi*, *Eriogon speciosus*, *E. macranthus*, *Delphiniums* (in variety), *Achillea ptarmica* *The Pearl*, *Lilium croceum*, *L. candidum*, *L. Szovitzianum*, *L. Martagon*, *L. Hanson*, *East Lothian* and *Ten-week Stocks* (in many colours), *Carnations*, *Antirrhinums* (in many colours), *Gazania*, *Dianthus Heddebergi*, *Candytuft*, *Petunias*, *Salvia patens*, *Calceolaria amplexicaulis*, *C. mexicana*, *Heliotrope*, *Ageratum*, *Ivy* and *Scented-leaved Pelargoniums*, *Tufted Pansies* (in many varieties), *Pentstemons*, *English* and *Spanish Irises*, *Gladiolus The Bride*, *G. Peach-blossom*, *G. Ackermani*, *Sweet Peas*, *Clematis* (many varieties), *Colutea arborescens*, *Escallonia macrantha*, *E. Edinburgh*, *E. langleyensis*, *Viburnum Henryi*, *V. tomentosum Mariesi*, *V. plicatum*, *V. Opulus*, *Olearia Gunniana*, *Philadelphus* (in variety), *Weigelas* (in variety), *Stranvessia undulata*, *Daphniphyllum macro-podum*, *Tricuspidaria lanceolata*, *T. dependens*, *Schizophragma hydrangeoides* (Climbing *Hydrangea*), *Hydrangea hortensis*, *Abutilon vitifolium*, *Solanum crispum*, *Teucrium fruticosum*, *Carpenteria californica*, *Drimys Winteri*, *Per-nettyas*, *Cotoneasters*, *Raphiolepis ovata*, *Robinnias*, *Spiræa Douglasi*, *Fuchsias*, *Nymphæas*, *Carex paniculata*, *Ranunculus Lingua*, *Lysimachia vulgaris*, *Iris aurea*, *I. ochroleuca*, *I. Kamperfi*, *Rodgersia dodephylla*, *Primula sikkimensis*, *P. pulverulenta*, *P. Bulleyana*, *Senecio japonica*, *S. Greyi*, *Roses* (many species and varieties).

WORK OF THE WEEK.—The recent showery weather has been very suitable for transplanting seedlings. Wallflowers have been transplanted into rows 12 inches apart, allowing not less than 9 inches between the plants in the rows. If the sun is very powerful after they have been moved they are afforded a moderate amount of shade during the day, removing the covering at night so that the plants may receive the full benefit of the dew. Seeds of Canterbury Bells, Delphiniums, Potentillas, Foxgloves, and Pyrethrums have been sown on a south border, and the seedlings will be pricked out into nursery beds as soon as large enough to handle. Autumn and winter-flowering Cyclamens have been sown on a south border and the seedlings will be pricked out into nursery beds as soon as large enough to handle. Autumn and winter-flowering Cyclamens have been lifted and replanted where necessary. *C. europæum* and *C. neapolitanum* generally start flowering early in September, so there should be no delay in planting. *C. Coum* flowers during winter and early spring, and enjoys plenty of leaf-soil in a partially shaded position. Some choice varieties of Daffodils have also been lifted and replanted. Cuttings of *Æthionemas*, *Androsaces*, *Drabas*, *Linarias*, *Morieia hypogæa*, *Asteriscus maritimus*, *Ageratum oxylobus*, and *Saxifrages* have been put in during the week. Weigelas, as they pass out of flower, are given what pruning they require, this consisting in the removal of some of the older branches. Philadelphia will also be thinned out after flowering. Climbing Roses on arches and pergolas are throwing up strong basal growths which have been made secure to prevent their being

damaged by winds. Where more are springing up than will be required the surplus ones are removed early to strengthen those retained.

Northants.

F. W. GALLOP.

SOUTHERN COUNTIES.

Late Potatoes.—These now need to be cleaned, weeds being very abundant. This will be done with a scuffle, which is set so that it cuts just deep enough to get the weeds up by the roots. After these are cleared off, the scuffle is again used to work the soil between the rows and get it ready for moulding. Before this takes place a Potato manure applied according to directions is strewn between the rows. The moulding will be done by horse labour, a moulder being attached to the front of the scuffle for the purpose.

Early Potatoes.—These are lifting well, and as fast as the ground is cleared it is cropped with something which will turn in and leave it vacant for winter digging. The crop is very satisfactory in every respect, which, to say the least, is surprising when the weather experienced since planting took place is taken into consideration.

Celery planting.—The plants, with the exception of the latest, will be got out without further delay. Part will follow early Peas and part the earliest spring Cabbage. The trenches will be opened out wide enough for two rows of plants to be set out in each and manured at once.

Onions.—These are at last fit for thinning, and all gaps in the rows will, therefore, be made good. After this is done the soil will be well hoed and the plants encouraged to make quick growth and make up for lost time.

Carrots.—The plants from the second sowing of a maincrop variety are now ready for thinning to 6 inches apart, this, seeing the season is far advanced, being quite wide enough to leave them apart.

Sweet Peas.—Two long rows sown a few weeks ago have done remarkably well, the growth being very vigorous and healthy. Moulding and etaking of the same have been carried out, and good results in the shape of an abundant crop of flowers should follow.

Border Chrysanthemums.—Encouraged by recent rains, very satisfactory growth is being made. To further stimulate growth, a dressing of Chrysanthemum manure will now be applied, which will be mixed with the soil by well hoeing the surface with a draw hoe. Staking will soon require attention. This is best done before the growths become bent or fall over and the symmetry of the plants spoiled. Bamboo canes are more suitable for this purpose than anything else, as they are, if judiciously disposed and used as sparingly as possible, less obtrusive than ordinary stakes. Frequent hoeing of the surface lessens the need for watering, but at the same time the plants must not be allowed to flag.

Border Carnations.—These have been staked and tied, and the hoe run through afterwards to loosen the surface. In dry weather these need to be plentifully supplied with water.

Cinerarias.—The seedlings should now be put into small-sized pots and be grown in the cool atmosphere of a frame stood over a bed of ashes and facing north. Vaporise should green-fly put in an appearance, and should an attack be set up by the leaf-miner, which in some seasons is very troublesome, pick off and burn the infested leaves directly it is noticed. This is often the means of preventing any appreciable amount of damage being done. Young plants resulting from the second or last sowing should be pricked off either into pans or boxes, and as soon as large enough shifted into small 60-sized pots.

Primulas.—These need much the same treatment as the foregoing, both in regard to potting on and in giving them frame culture, only the frame is best kept rather closer than is advisable for Cinerarias.

Herbaceous Calceolarias.—The seed should now be sown if the plants are required to bloom in May next. Pans are the best in which to sow. They should be filled to within half an inch of the rims with fine, light, rich, sandy compost. This should be made quite firm and then thoroughly watered. After

draining for an hour, sow the seed and scatter a very small quantity of silver sand over it. Cover the pans with glass and keep shaded with paper or Moss until germination takes place, when it must be removed and the pans stood close up to the light to prevent the plants becoming drawn. A careful watch for slugs, etc., must be kept or many of the plants may disappear in the course of a night. It is a good plan to place the pans on inverted pots, which, in turn, should be stood in earthenware saucers kept filled with water. The seed may be raised either in gentle warmth or in a frame, one being as good a way as the other, the only difference being that the seed is longer in coming up in the frame. Afterwards cool-frame culture should be accorded the plants for some time to come.

Cyclamens.—The corms raised from seed sown in the autumn of 1914, having experienced a thorough rest, are now starting to grow anew. This is the best time to shake out and repot them. Care is necessary in doing this, as oftentimes great injury results through the corms being too severely denuded of the old roots. The pots should be clean and well drained, the compost consisting of good fibrous loam, leaf-mould, a little lime rubbish, some dried cow-manure rubbed through a fine sieve, and a liberal quantity of coarse silver sand. In potting keep the base of the corms just beneath the surface of the soil, make the latter fairly firm, and dredge a little sand over the surface afterwards. Place the plants in a frame or pit, which keep close and shaded for a time or until new roots are emitted and fresh leaves appear. Until they recover from being shaken out, it is a good plan to syringe the corms in fine weather two or three times a day.

Wallflowers.—The plants raised from seed sown last month require to be pricked out in lines 1 foot apart, with a distance of 9 inches between the plants. Cut off the tap-roots, as this ensures the plants becoming much better rooted than if left on. In addition to this, they also then lift with a good ball of soil attached to the roots. The soil should be firm and not too rich, as the firmer and more sturdy the growth the more likely are they to pass through the winter unscathed.

Sweet Williams.—Seed should now be sown to provide plants for setting out in autumn for blooming next June. A good-sized box will furnish an ample supply of plants for all ordinary purposes. A. W.

MIDLAND COUNTIES.

Strawberries need sunshine to ripen the fruits. As I write, the fruits have not been dry for several days, although very little rain has fallen. Slugs have increased to an alarming extent, and are spoiling many fine fruits even before they change colour. The late varieties look exceedingly well, and, as the weather is damp and cool, they are backward, many being only in bloom. Laxton's Latest, Givon's Late Prolific, and Latest of All are three reliable varieties for late fruiting in this locality.

Raspberries promise a bountiful crop. All suckers not required for next year's fruiting have been removed, and a soaking of liquid manure given.

The Loganberry.—The strong basal growths of the current season have been reduced to five or six of the more robust, and these secured to the wires, so that they do not become broken or twisted at their bases. The Loganberry resembles the Raspberry in that it requires plenty of feeding during the summer.

Apples are a very light crop in this locality, and many trees have not a single fruit on them. Pears appear to be a good average crop, and thinning of the fruits is necessary on many trees. Large trees which have filled their allotted space are kept closely pinched, whilst young trees, having further space to furnish, are allowed to extend. Even young trees require extra strong shoots to be stopped in order to preserve a proper balance of the tree. Continue to stop and thin the shoots on all fruit-trees as recommended in previous notes, especially all side and lateral growths not required for extending the tree.

Melons.—Plants swelling their fruits are afforded plenty of stimulants, liquid cow-manure being an excellent stimulant. Where fruit is ripening manure is withheld and clear water given only moderately. As soon as the fruits are cut another batch of plants will be placed in the same pit for fruiting in September. The young plants are in readiness and well rooted in 5-inch pots. All the soil from the old bed is removed and the house thoroughly cleaned with soft soap and water. The borders are made very firm, with new soil placed in the form of a ridge. The Melons are planted 18 inches apart on the ridge, staked and tied, and when all is finished a good watering with tepid water is given. The atmosphere of the house is kept close and damp, and the plants sprayed overhead both morning and evening. When the plants begin to grow freely more air is admitted in suitable weather.

Liliums.—As the various batches of these plants come into bloom they are removed from the house in which they have been gently forced to a cool and shady house, where the blooms last in good condition much longer than in a close and warm atmosphere. *L. speciosum rubrum* and *L. s. album*, for autumn flowering, are placed out-of-doors in a shady position, and are frequently fed with good liquid-manure, never letting the roots suffer from the want of water. Occasional sprays with Quassia extract keep them free from aphid.

Autumn-sown Onions which have not yet commenced ripening to the top growth should be broken down at once preparatory to their being harvested. As soon as the bulbs have attained to a fair size, and before any signs of splitting can be observed, they should be lifted carefully and well dried before putting them under cover. It is generally complained that these Onions will not keep well, but this is frequently because the bulbs are allowed to remain too long on the land before lifting.

Celery.—The earliest plantings are now growing away freely. Each plant should be carefully examined and all side growths and split leaves removed. Keep the soil constantly stirred on the surface, and give frequent small doses of artificial manure and soot. Damp overhead twice daily in fine weather and water freely at the roots. If not already done, no time must be lost in completing the planting of the latest sown plants. It is a good plan to arrange for the trenches to be got out between the lines of early Peas, the latter affording just sufficient shade to enable the Celery plants to get over their removal quickly. I prefer to plant double lines at this season. Lift the plants with good balls, shorten back the longest leaves if at all drawn, and plant very firmly.

Peas are very late this season. Owing to the absence of sun the pods do not fill, but there is every promise of an abundance later on. The latest sowings have been well thinned and securely staked.

Broad Beans.—Late sowings of these have to be kept well syringed with insecticide to keep them free from black aphid. Strong soft soap and water answers well and is both safe and effectual. Stop the growths in good time, mulch between the rows, and water freely in dry weather.

Coleworts.—Another good sowing of both Rosette Colewort and London Hardy Green will be made at once. These will stand the winter much better than the early sowings, and give useful supplies during early spring, when Cabbage is often very scarce. Continue to take every opportunity of showery weather to plant all kinds of green vegetables for winter use, filling every available piece of vacant ground. F. W. GALLOP.

SCOTLAND.

Hardy-flower borders.—From now onward a full display may be expected from hardy plants. Very vivid are the Oriental Poppies, although their display is a trifle fleeting. After flowering, the bed in which these are grown assumes rather an untidy appearance; but I think it is better to tolerate this than, as I see practised sometimes, cut over the foliage. This induces a second growth which may bloom in late autumn, but the extra

strain upon the plants must in time lead to deterioration. Many Irises are in bloom. Pyrethrums (single and double) are at their best, *Thalictrum aquilegifolium album* and the variety *atropurpureum* are very free, while the Day Lily (*Emerocallis flava*) is in full flower. This is one of the few hardy plants which seems to increase in effectiveness year by year when left undisturbed. Just on the point of expanding, *Morina longifolia* will presently add its pinkish-white whorls to the number of hardy plants in bloom. Sea Hollies, as usual, are strong and vigorous, *Eryngium planum*, *E. amethystinum*, and *E. Zabelli* being already in flower. Colonies of Lothian Stocks in a south border yet remain effective, and towards evening their perfume is especially noticeable. If rather coarse, *Senecio sarracenus*, in a heavy, rather shaded border, is not unworthy of a place among the taller and more robust herbaceous plants, such as *Epilobiums*, *Rudbeckias*, *Napæa dioica*, *Funkias*, *Eupatoriums*, and the like. During the week some further hoeing, tying, etc., were attended to, and as a tankful of liquid-manure was available a good drenching was given to large clumps of *Kniphophias*. These respond well to occasional applications of liquid-manure given fairly strong. At the same time, an allowance was afforded to *Delphiniums* now beginning to show colour.

Wallflowers.—In the course of the week seedling Wallflowers were dealt with, some going into nursery beds in the open, and some hundreds being put into a bed in a two-sash cold-frame. There will, of course, owing to the restrictions, be very many less bulbs available for spring work, so that it is advisable to prick off a larger quantity than usual of Wallflowers.

Cucumbers.—A final planting was made in a pit upon a partly expended hotbed. These plants will now come away rapidly with the sun-heat alone, and if shut up early in the afternoon and kept in a rather moist atmosphere they will provide good supplies throughout the autumn, or, at least, until the pit is again required. Previous plantings are turning out well and will maintain the supply for an extended period. Rich top-dressings are very necessary to keep up the vigour of Cucumbers, more especially during the early stages of bearing. If a few inches of mellow loam are added to the top of the bed every ten days the roots will speedily take possession of it. If it can be spared, a little good artificial manure may, with advantage, be mixed with the loam previous to top-dressing. Equally important is the regular pinching of the young shoots. One leaf beyond the fruit is sufficient; any more will lead to overcrowding and a cessation of fruiting. In the case both of Cucumbers and of Melons we cannot, during the present summer, work, as formerly, by the clock. In this district, generally speaking, the usual hour for closing Cucumber and Melon pits in sunny weather used to be 4 p.m.; now, of course, shutting is deferred until 5 p.m., when syringing is done. In any case, however, on exceptionally sunny days it is much more advisable to follow the sun than to have a hard and fast hour for shutting up.

Late Potatoes.—In the course of the week the cleaning of late Potatoes was finished, and immediately afterwards they were moulded up with the plough. So far these Potatoes are very promising, more especially King Edward VII., a variety which is always an outstanding success in these gardens.

Turnip-thinning was attended to as became needful, and further lines were sown. The latter included Six-weeks, White Stone, and Orange Jelly. A breadth of Swedes was thinned finally to a distance of 10 inches from plant to plant.

Brassicac.—Further breadths of Brassicas were got out. These included Early Ulm Savoy, Drumhead Savoy, Eclipse and Autumn Giant Cauliflowers, and Curly Kale. Blanks—not very numerous—in previous plantings were, at the same time, made good.

Celery.—Another trench was filled with Celery during the week. So far, the weather has been suitable for this important crop, and as planting was, in all cases, accomplished under the most favourable conditions, no watering home has been needed.

Fruit-trees in pots.—When the fruits are swelling freely rich top-dressings and plenty of moisture are indispensable, but when ripening begins less water is necessary. Most fruits, especially Peaches and Nectarines, are easily spoiled when a too free use is made of water when they are finishing. If the pots have been, as previously recommended, partially plunged, when less water is given the roots will push out through the holes in the bottoms of the pots, and in this way obtain what support and moisture they require. As regards watering at the present time, do not permit it to be done indiscriminately. Every pot ought to be individually tested daily, and when found to require moisture let the soil be thoroughly soaked. The syringe may yet be kept regularly at work twice a day, and if black aphid appears no time should be permitted to elapse until it is effectually dealt with. Tobacco powder is as good for exterminating this pest as any other specific.

W. MCGUFFOG.

Balmoe Gardens, Kirkcudbright.

NATIONAL ROSE SOCIETY.

JUNE 30TH, 1916.

THE exhibition of this Society was held on the above-named date in the Royal Botanic Gardens, Regent's Park, and probably no flower festival is looked forward to with greater interest or receives a larger measure of support. This year, however, owing to a variety of causes beyond the Society's control—difficulties of transit and shortage of labour chiefly—the show was shorn of its usual fulness, the blooms also having suffered appreciably in size, colour, and quality, owing to the exceptional cold and sunlessness of the weeks immediately preceding the show. From these latter causes alone it would appear that the show at the end of June was, this year at least, a little too early for the Rose. This year the group classes were less well filled, and a greater proportion of table spaces than we before remember were vacant. Some growers of note, who in former years had staged well, said they "were quite unable to show." What we missed most of all was the superb splendour of the "Silver Medal" Roses. Hence, as we have already hinted, the date this year—so great a factor is the weather in this connection—was too early for the flower. These things notwithstanding, there was still presented to view a great exhibition, an exhibition which in its hundred odd classes caters for all phases of Rose growing as well as utilitarian display. If we might venture a couple of hints they are, first to the executive to arrange the exhibits—those of the table classes particularly—in the consecutive order of the schedule, and to exhibitors of blooms in boxes that the names be not so cleverly hidden from view. Queen Alexandra was an early visitor to the show, and, while displaying the keenest interest in the flowers generally, selected from the stand of Messrs. Alex. Dickson and Sons, Newtonards, two magnificent baskets of blooms—the golden Margaret Dickson Hamil and the scarlet Donald McDonald.

Following are some particulars of the show, exigencies of space precluding our giving a complete report.

NURSERYMEN'S CLASSES.

Seventy-two blooms, distinct varieties (champion class), for which the first prize is a trophy, gold medal, and £7 in cash, brought five collections, the premier award going to Messrs. A. Dickson and Sons, Newtonards, Ireland, who showed, among others, the rich yellow Mrs. Stuart Clark, Mme. Melaine Souperet, Avoca (fine red-dish-scarlet), Red Cross (fiery-crimson, very telling colour), S. J. L. Mock (pink), and Lady Greenall (cream with golden

base, very handsome and distinct). Messrs. D. Prior and Sons, Colchester, were a good second, their blooms of Medea (soft yellow), H. V. Machin (brilliant scarlet), Mildred Grant (a highly popular variety), Mme. Jules Gravereaux, and Mrs. C. Reid (blush) being of outstanding quality. In the class for forty distinct varieties, three of each, four collections were staged, the two exhibitors above named occupying similar positions. Here, again, Red Cross, a glorious crimson and more conspicuous than in the preceding class, caught the eye at once; not less so the superb quality of the new golden-yellow Margaret Dickson Hamil, for which no description could give an adequate idea of its beauty. It is obviously a great Rose. Mrs. J. H. Welch, Dean Hole, and E. E. Coxhead (cherry-red) were other notables. In Messrs. Prior's collection Lady Helen Vincent and Mrs. W. J. Grant, in addition to those named in the leading class, were good specimens. Forty-eight blooms, distinct varieties, brought three competitors, Messrs. Hugh Dickson, Limited, Royal Nurseries, Belfast, being placed first and staging many good examples. Here Nelly Parker (flesh-tinted white and a gold medal Rose of the occasion) was one of the most strikingly beautiful and distinct. It is a well-formed Rose with a presence of its own. Gorgeous was another telling variety (salmon and cream), but inadequately suggestive of an exquisite colour blend we do not recall in any other variety. Mrs. Charles Russell and the richly-coloured George Dickson were very fine. Mr. Elisha J. Hicks, Hurst, Berks, was second, prominent varieties being the new golden Margaret Dickson Hamil, George W. Waud, Prince Arthur (fine dark maroon), and Sarah Bernhardt. The class for twenty-four distinct varieties, three blooms of each, was less well represented, the quality less good. Messrs. G. and W. H. Burch, Peterborough, were first, their best sets being Margaret, Augustus Hartman, Mrs. Vanderbilt, Queen of Spain, and the cerise-red Lieut. Chauré; Messrs. J. Burrell and Co., Cambridge, second, William Shean and Mrs. T. Roosevelt being among their best, though none were free from weather blemishes. For twenty-four distinct varieties Messrs. Jarman and Co., Chard, staged an excellent lot and took first prize, the best bloom being a magnificent, well-coloured, finely-proportioned George Dickson, Mamie, Medea, Dean Hole, and Mme. J. Dupuy (gold and pink) being also remarked. Messrs. Chaplin Brothers, Waltham Cross, were second, but surely the firm were defeating their own ends by tilting their exhibit at such an angle as to render the reading of the names literally impossible without descending to our knees.

Messrs. Jarman were again first for twelve distinct varieties, three of each, Mrs. Foley Hobbs, St. Helena, and Mrs. C. Russell being good examples. Mr. Henry Drew, Longworth, was second, Lyon and George Dickson being among his best. For twenty-four distinct varieties Tea and Noisette (D'ombraïn Cup) the last-named exhibitor stood first, having exceptionally good examples of Mrs. Edward Mawley (silver medal), White Maman Cochet, Souvenir de Pierre Notting, Comtesse de Nadailac, and Molly Sharman Crawford (a lovely white); second, Messrs. D. Prior and Son, Colchester, who showed excellent blooms of Mme. Jules Gravereaux, Nita Weldon, and Molly Sharman Crawford. For twelve Teas and Noisettes Mr. J. Mattock, Headington, Oxford, was first, Mrs. Foley Hobbs and Molly Sharman Crawford being good. For sixteen distinct varieties, three of each, Messrs. D. Prior and Son

and Mr. H. Drew were the only competitors, and took first and second prizes respectively.

ROSES IN BASKETS.

These, as usual, constituted a leading feature of the exhibition, the generous contributions and fine quality throughout being the greatest possible tribute to the decorative or garden aspect of the flower in a year by no means kind. The three or four dozen blooms each basket contained, together with the abundance of buds, afforded evidence of a flower freedom so much to be desired. In the more important class for nine baskets of cut Roses, nine distinct varieties, each variety in a separate basket, Messrs. Hugh Dickson, Limited, Belfast, were first with a magnificent exhibit which included Ulster Standard (single crimson), Mme. Edouard Herriot, Irish Elegance (single), Mrs. George Shawyer, Mrs. David MacKee (cream), Mrs. James Lynas (blush), and Lady Pirrie. No praise would be too high for this exceptional exhibit; second, Messrs. Alex. Dickson and Sons, Newtonards, Co. Down, the pick of whose collection were Irish Fireflame, Mrs. H. Stevens (pure white), Lady Pirrie, Red Letter Day, Donald McDonald (reddish-scarlet), and Margaret Dickson Hamil, the two last-named baskets being selected and borne away by Her Majesty Queen Alexandra. In the class for five baskets of Roses, similar conditions, six collections were staged, the whole constituting a most imposing array. In this Mr. Elisha Hicks, Hurst, Berks, led with an excellent lot, the varieties being Joanna Bridge (blush-white, lovely form), Princess Mary (single crimson), Lady Hillingdon (of fine colour richness), Mrs. E. Powell (cerise-red), and Mrs. Dunly Best (soft apricot); second, Mr. G. Prince, Longworth, whose best baskets were Mrs. H. Stevens, Irish Elegance, Ethel Malcolm (blush), and Lady Hillingdon. For eighteen distinct varieties, seven stems of each, in vases, Messrs. Chaplin Brothers, Waltham Cross, were first, showing Red Letter Day, Mabel Drew, Lyon, Mrs. H. Brocklebank (white), Mrs. George Shawyer, British Queen (splendid white), and Old Gold. Messrs. D. Prior were second. For nine varieties, similar conditions, Mr. George Lilley, Yiewsley, Middlesex, who was placed first, showed General MacArthur, Mme. E. Herriot, Lady Pirrie, and Lyon (good). Mr. Elisha Hicks was second, Lady Pirrie, Lady Hillingdon, and Joanna Bridge being three of his best. For thirty-six distinct varieties, space allowed 14 feet by 3 feet, Mr. John Mattock, New Headington, Oxford, was first, his superb lot including the golden-yellow Iona Herdman, Mrs. H. Stevens (white), Rayon d'Or, Mme. Segond Weber, Simplicity (single white), and Silver Moon, also single. Messrs. Frank Cant and Co. were second.

For a representative group of Roses space not exceeding 250 square feet, Messrs. Wm. Paul and Son, Waltham Cross, were first, their most important item being Paul's Scarlet Climber, a brilliant Rose undoubtedly. Queen of Fragrance and Elise Robichon, the latter pleasing in bud blossom and leafage, were also shown. For a group 33 feet by 3 feet, Messrs. W. and J. Brown, Stamford, were first with an admirable lot, the outstanding feature being the arches formed by the single pink pillar Rose, Mrs. Rosalie Wrench, a welcome bit of colour in a variety of remarkable size.

In the amateur's division the big class for thirty-six blooms, distinct varieties, was strongly contested, no fewer than eight collections being staged. In this

the champion trophy, gold medal, and cash prize fell to Mr. Herbert Wettern, Oxted, in whose fine assortment the pink-flowered Wm. Shean secured a silver medal.

GOLD-MEDAL ROSES.

NELLY PARKER (flesh-pink and white), perfect form and of exceptional fragrance, from Messrs. Hugh Dickson and Sons, Belfast.

CHARLES E. SHEA (deep pink), in the way of Mrs. G. Shawyer, a variety of distinction and merit from Mr. E. Hicks.

HOLLAND HOUSE SHOW.

JULY 4TH, 5TH, AND 6TH.

THE summer exhibition of the Royal Horticultural Society was held in the grounds of Holland Park by kind permission of Mary Countess of Ilchester, and from every standpoint it must be considered a success. Smaller—decidedly smaller—than others that have preceded it, it was, notwithstanding, large enough to demonstrate, even in these strenuous times, that horticulture in all its branches is still conducted with much of its pre-war enthusiasm.

Hardy flowers, as on former occasions, were well to the fore, the great gathering everywhere revealing their summer wealth, beauty, and variety, and demonstrating in some measure an ever increasing popularity. The more imposing displays of *Iris Kœmpferi* which we have seen at this function in other years were, owing to the coldness of the season, absent. Roses were very fine, particularly from Mr. George Paul, of Cheshunt, who, unable to show at the "National" a day or two before, has probably rarely exhibited in better form or presented finer quality. Sweet Peas, too, were particularly good, those from Ireland of great excellence. Orchids have been seen on a much more lavish scale, though rarely of finer quality or so replete of the choicest and best. Orchard-house grown fruit trees in pots from Feltham, Strawberries from Bedford, and Cherries from Maidstone were the chief of the fruit exhibits shown. A collective exhibit of vegetable produce came from members of the Market Growers' Association. Following are some particulars of the show:—

HARDY FLOWERS.

The most sumptuous group of these came from

Mr. Amos Perry, Enfield, and while well conceived was also imposingly displayed. His group of Lilies was probably the richest ever staged, his collection of hardy Ferns magnificent. Everything, indeed, was on a lavish scale, and whether Lilies, Herbaceous plants, Water Lilies, or Ferns, everything exceedingly well done. Some 1,400 square feet were thus filled, the group well meriting the Coronation Cup—the highest award of the occasion—in addition to the gold medal it also received. Of Lilies alone there were much variety and charm in the hybrid Marhan set (*Martagon* x *Hansonii*), the varieties valuable alike for beauty and their easy culture. Miss Willmott and G. F. Wilson were among the best. The one parent, *L. Hansonii*, was in great form and is an excellent garden plant. The graceful golden-flowered *Roezli*, the still intenser yellow, larger flowered Amos Perry, the changeable *Washingtonianum*, with cernnum and *Krameri*, were among the more telling in a batch which impelled admiration. Brilliant masses of *Delphiniums*, a hundred or so of spikes of a sort, showed the distinctive worth of the best of these, though that named *D. Belladonna* semiplenum, with graceful spires of sparkling sky-blue flowers, appealed to us most

strongly. Around a pool containing *Nymphæas*, *Primulas*, *Sarracénias*, *Darlingtonias*, *Rodgersias*, and other suitable things were planted. The fine collection of Ferns adjoined, our regret being that we cannot more fully refer to them. The *Phloxes* from

Messrs. H. J. Jones, Limited, Lewisham, S.E., contained the best of these plants. Mrs. Alder (pearl-pink), Mrs. H. J. Jones (rose-pink), Mrs. John Meakius (salmon), Doris Meakins (white-pink eye), Violet Guest (rich salmon), and Rose Queen were among the more distinct.

Messrs. Wallace and Co., Colchester, showed well of hybrid *Eremuri*, the great wealth of spikes indicating the interest and wondrous variety now found in this unique race. *E. Warei*, *E. Bungei*, and *E. B. magnificus* were notable. Elsewhere in the group *Lilium pardalinum* *Johnstoni* and *L. Hansonii* were conspicuous, and not less so the fine summer *Iris* *Mon-aurea* and *Shelford Giant*. *I. spuria lilacina* is of a distinct type and very pretty, the intense royal purple of *I. Delavayi* also appealing. *Delphiniums* were also a host in themselves, the richly-coloured Water Lilies very attractive.

Mr. J. C. Allgrove, Middle Green, Langley, Slough, had a large exhibit of choice things, in which such *Primulas* as *Poissoni*, *capitata*, *Bulleyana rosea* (a lovely plant), and *Beesiana* were seen to advantage. In the cut state the rare *Magnolia parviflora* (white with maroon centre) was seen in plenty, and behind it a remarkable lot of *Fremontia californica*, whose golden cups are rarely seen in such profusion. *Philadelphus Virginalis* is the best of its class, the handsome semi-double flowers of the purest white. *Eremurus Warei*, *Rodgersia æsculifolia*, and *Lavatera (Malva) Olbia grandiflora* were also remarked.

Messrs. Harkness and Son, Bedale, displayed a brilliant lot of *Gaillardias*, *Peter Brownridge* and Mrs. MacKellar occupying a central place. Their gold and crimson flowers were very fine. *Verbascums*, too, were imposing; *Britannia* (bronze), *Lady Allison* (rich golden), and *Joss Richardson* (bronze and yellow) strikingly ornamental. *Giant Oriental Poppies* *The King* (crimson) and *The Queen* (pink) were noted.

Messrs. Bunyard's group of herbaceous plants was most tastefully done, the items easily and naturally disposed throughout. The firm's new *Delphinium*, *Queen Mary* (brilliant sky-blue with large white eye), constituted a good centre-piece. On right and left flanks were equally good groups of *Alake* (rich purple) and the indispensable *Rev. E. Lascelles*, the pale-blue, dark-eyed *Jessica* also appealing. *Iris Shelford Giant*, an ochroleuca hybrid of 5 feet to 6 feet high, also demonstrated its importance. Alpines were in the margin.

Messrs. Blackmore and Langdon, Bath, showed strongly of *Delphiniums*, three varieties, Mrs. Shurley (*heliotrope-mauve*), Mrs. A. J. Watson (deep mauve), and Mrs. Colin McIver (deep mauve, white centre) gaining Awards of Merit. These are important colour additions to the group and handsome varieties withal. *Torquoise* (light blue) and *King Bladud* (a double dark sport from *Rev. E. Lascelles*) were among other good things.

Mr. G. W. Miller, Wisbech, had a great gathering of *Lilium giganteum*, some six dozen or so spikes being staged as a centre to a comprehensive group. So remarkable a lot of this Lily has never before been seen at one of these meetings. The giant spikes, towering to 7 feet or 8 feet high, made an imposing exhibit, the

drooping, white, crimson-stained flowers a great feature. Many other hardy flowers—notably *Potentillas* and *Delphiniums*—were on view.

Mr. J. Box, Lindfield, showed well of *Delphinium Rev. E. Lascelles*, *Erigeron B. Ladhams*, and the fine *Campanula glomerata superba*, a giant compared with *C. g. speciosa* of a quarter of a century ago. The brilliant and graceful *Lilium Grayi* and a handsome lot of *L. Hansonii* were features of a good group.

Messrs. J. Piper and Sons, Bayswater and Barnes, arranged a streamlet, grouping the moisture-loving *Primulas* *Bulleyana*, *Beesiana*, and *Iris Kœmpferi* suitably at the sides. In shade a little removed, *Lilium regale*, a couple of dozen or so, made a fine picture, while on a rock bank at the extreme left the lovely pale-blue trailing *Gentiana Przewalskii* was most pleasingly colonised. In a group from

Messrs. Barr and Sons, Covent Garden, W.C., the finest hardy plant novelty of the meeting—*Campanula persicifolia* *Telham Beauty*—was seen. Of giant stature—4 feet or more—its refined, pale-blue bells are in like proportion, the variety head and shoulders above all else in the Peach-leaved section. A good addition to its tribe, it is an acquisition to hardy plants as a whole. Early *Gladioli* were very good, such distinct varieties as *Fiery Knight*, *Crimson Queen*, and *Peach Blossom* standing out well. *Delphiniums* gave a feast of colour.

Miss Willmott, Warley Place, had a dozen or so spikes of *Gentiana lutea*, some showing shades of bronze. *Salvia Warleyensis* (dusky purple) received recognition among new plants. *Lilium mirabile* appeared from the material displayed to be a dark-stemmed, small-growing *giganteum*.

Messrs. George Jackman and Sons, Woking, showed *Delphiniums*, *Capri* (pale blue), *King of Delphiniums*, and *Rev. E. Lascelles* being very fine; also *Lavatera Olbia* and *Astilbe gloriosa*, the best coloured form, among many things.

Messrs. T. S. Ware, Limited, Feltham, showed the handsome *Verbascums* *Lady Allison* (gold and bronze) and *Lady Havelock Allen* (dark bronze), together with *Heucheras*, *Pæonies*, *Erigeron Edina* (a pretty white-flowered sort), and much else in season.

Messrs. J. Waterer, Son, and Crisp, Bagshot, had a nice lot of *Delphiniums* in good sorts, also *Campanula persicifolia* *Wargrave Blue*, a very distinct and good form. *Spiræa digitata nana*, 6 inches or so high, was nicely grouped. Dwarf *Campanulas*—e.g., *pulla*, *pulloides*, G. F. Wilson, and others—were freely disposed, among other things, on a rock bank.

Messrs. James Kelway and Sons, Langport, contributed a large assortment of *Delphiniums*, great spires in the main of these best of summer flowers being shown. *Star of Langport*, *Dusky Monarch*, *Smoke of War*, *Effective*, and *Lord Holland* (deep mauve) being some of the more notable.

Messrs. John Forbes, Limited, Hawick, in the open air showed a brilliant group of *Phloxes*, *Pyrethrums*, *Tufted* and other *Pansies*, and *Pentstemons* in much variety. Messrs. Godfrey and Son, Exmouth, had an excellent strain of the *Cup and Saucer Canterbury Bells*. Mr. B. S. Ladhams, Shirley, Southampton, brought a rich assortment of *Pinks*, hardy, free, and fragrant. Messrs. R. H. Bath, Limited, Wisbech, filled a considerable table space with *English Irises* and *Early Gladioli*, while from Messrs. Lilley, Guernsey, came a most interesting collection of *Ixias*, *Sparaxis*, *Brodiaea*, *early Gladioli* and others of a bulbous nature. The most

graceful subjects of the group were *Sparaxis pulcherrima* and its white variety and *Moræa iridioides*, a plant of considerable interest and charm. *Pæonia lutea grandiflora* and *Lilium regale* were of interest in a group from Mr. A. D. Thompson, successor to Thompson and Charman, Bushey, Herts.

Messrs. H. Cannell and Sons, Eynsford, Kent, showed a particularly fine strain of Canterbury Bells of the Cup and Saucer section, also such brilliant *Delphiniums* as Mrs. Robert Cobb (a magnificent variety of azure-blue and white), Lullingstone (deep blue, white centre), Prince of Naples (dark purple), and Eynsford Beauty (of rich metallic purple hue). *Pæonies* and many other hardy flowers were also well shown.

FRUIT AND VEGETABLES.

The exhibits of fruit and vegetables were not numerous, but there was, speaking generally, evidence of quality and culture of a high order. Of

Vegetables there was a remarkable and extensive collection, or, rather, a series of collections, staged by various growers and exhibited under the auspices of the Market Garden, Nurserymen, and Farmers' Association. The staging of the various productions was not, as might be expected, carried out in that elaborate and artistic manner which visitors to these exhibitions are wont to see and admire, but of the quality of the individual exhibits there could, with but few exceptions, be no two opinions. Taken collectively, the outstanding features were excellent medium-sized and very fine heads of Cauliflowers, very fine, solid-hearted Lettuces of both the Cos and Cabbage types, typical Globe Artichokes, excellent Turnips and Carrots, and model Mushrooms. There were also green Gooseberries in variety, Black and White Heart Cherries, Black Hamburg and Buckland Sweetwater Grapes, and Cucumbers and Tomatoes. To the Association great credit is due for their enterprise, and they are to be congratulated for bringing such a fine collection of market-garden produce together and exhibiting it for the benefit of the public at large. Coming to

Fruit, the Messrs. Laxton, of Bedford, showed a large number of baskets filled with fine examples of Strawberries of their own raising, such as King George V., Bountiful (which has the reputation of being a very heavy cropper), The Admiral (also said to bear heavily), Royal Sovereign, Latest, etc., which attracted great attention and were much admired. The same firm also had on view a promising new variety of Red Currant named Perfection, the individual berries large, the bunch of great length, and containing upwards of twenty-five berries. Two trees in pots were also exhibited to show the productiveness of this novelty.

Messrs. Stuart Low arranged a collection of pot-grown Vines, Peaches, Brown Turkey and St. John Figs. The latter were freely fruited, but the fruit generally was in an unripe condition. Among the Vines, the now little known and grown variety Grove-end Sweetwater was noted.

Messrs. Bunyard and Co., of Maidstone, staged a comprehensive collection of Cherries in pots, all carrying excellent crops of fine and highly developed fruits, which formed a highly instructive object lesson to all interested in the pot culture of fruit-trees and of Cherries in particular. Varieties calling for special mention are *Noir de Schmidt* (a remarkably large fruit, glossy black in colour), *Noir de Guben*, and the very fine black variety *Emperor Francis*, a dark-red *Bigarreau*, *Napoleon Bigarreau*, *Black Circassian*, and *St. Margaret's* or *Tradescant's Black Heart*. Excellently fruited examples of *May Duke*,

Late Duke, *Governor Wood*, *Kentish Bigarreau* or *Amber Heart* were also noted. The collection also contained a specimen of the true, useful, and free-fruited variety *Kentish Red*. The premier exhibit of orchard-house fruit-trees in pots was contributed by the

Messrs. Richmond and Sons, of the Royal Nurseries, Feltham, which contained finely-fruited examples of *Peregrine Peach*, *Early Rivers Nectarine*, *Green Gage*, *Jefferson* and other varieties of *Plums*, *Brown Turkey Figs*, *Pears*, and *pot Vines* in fruit. Every specimen bore the hallmark of high culture and showed that the exhibitors have a perfect knowledge of the requirements of fruit-trees grown on this principle. This was a truly laudable exhibit and justly merited the gold medal awarded it.

Owing to want of space we are compelled to hold over notes as to the *Roses*, *greenhouse plants*, *Orchids*, etc. A detailed list of the certificated plants and medals will be found in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Moving Roses (Bog Cotton).—All depends on the care you take in the removal of the *Roses*. In the case of those that have been planted three or four years it would be very risky, but those that have been planted, say, one year could be easily moved. On the whole, it would be better, we think, to start with young, vigorous plants, which would, if carefully planted early in the coming autumn, have time to root before the winter is with us.

Mulching Carnations (H.).—Carnations, as a rule, do not like mulchings of raw manure, but if you have any old hotbed manure, leaf-soil, or even old pot soil, you can spread about the plants, which will help to check evaporation, it will do them good. Should you desire to layer some shoots of the best varieties later, you will find the mulch of old potting soil very helpful for that purpose, and especially if when layering you add some sharp sand. When the weather is dry a watering of liquid-manure weekly will do much good.

Potting Chrysanthemums (J.).—In preparing *Chrysanthemum* compost break or chop up your turfy loam well, but do not sift it. Mix with two parts of this loam one part composed of old hotbed or Mushroom-bed manure, this in the greater proportion, a small quantity of bone-meal or ground dust, and some sharp gritty sand; a moderate quantity of soot also may be added. If you use blood-manure, let it be in very moderate quantity. It is not desirable to induce a coarse wood and leaf growth at the first. The best time for feeding is with liquid-manures moderately after the large pots have become filled with roots. The addition of strong, coarse manures to the soil early causes it presently to become sour and pasty. In potting use turfy pieces on the drainage, and ram the soil firmly round the balls of roots.

Growing Violets (Bog Cotton).—Runners should be put in every year, April being the best month for doing this. In the case of very light soil, which always suffers if the summer is very dry, a little shade is beneficial. On holding soils, *Violets* are just as well, if not better, planted in the open. This applies to double or single *Violets* intended for frames or outdoor culture only. Ground for *Violets* must be of good quality, and be well prepared by trenching or deep digging, with plenty of manure added, and, if possible, some leaf-mould. The single varieties, on account of their stronger growth, require more room than do the double forms. Single varieties of the more modern kinds, such as the *Princess of Wales*, flower freely on the runners which issue from the parent plant, and for this reason such runners may be left. The double varieties, on the contrary, must have the runners removed, so as to strengthen the crowns which give the finest blooms. Good varieties are:—*Singles*: *Princess of Wales*, *Admiral Avellan*, *California*, and *Wellsiana*. *Doubles*: *Mrs. J. J.*

Astor, *Lady Hume Campbell*, *Mme. Millet*, and *Marie Louise*. You will find an article dealing more fully with the cultivation of *Violets* in our issue of March 13th, 1915, page 155, a copy of which can be had of the publisher price 1½d. post free.

FRUIT.

Insects spoiling Strawberries (J. R. Ship-sides).—Your *Strawberries* have been injured by the spotted snake millipede (*Blanjulus gutturalis*), a very destructive pest to that fruit and to the roots of many plants. Liquid insecticides have but little effect on them. One of the many soil fumigants will destroy them, and they may be trapped by burying pieces of Turnip, Mangolds, etc., just below the surface of the soil. Stick a small wooden stick into each bait to show where they are placed, and examine them every morning.

MISCELLANEOUS.

Management of gold-fish (H. T. Shawcross).—*Vermicelli* is the best food for gold-fish. It should be finely crushed, and thrown sparingly into the water, taking care not to supply more than will be consumed at once, that none may accumulate at the bottom of the tank. The fish when "on the feed" will take the vermicelli as it slowly sinks, and will soon learn to take it eagerly. A little raw lean meat shredded fine is also good for them, and small garden or water-worms may be given from time to time. All gold-fish tanks should contain a number of water-snails, as they not only keep the water sweet by consuming decayed vegetable matter and so forth, but their eggs and fry afford excellent food for the fish. If your tank is not furnished with sand and water-plants it would be well to supply these as soon as possible. The water should not be changed, but only sufficient added to make up for evaporation. Feed about three times a week in mild weather.

SHORT REPLIES.

G. G.—Impossible to assign any reason without seeing the bulbs.—*Rev. W. F. A. Lambert.*—The Board of Agriculture and Fisheries, 4, Whitehall-place, London, S.W., issue a pamphlet (No. 250), "Fruit Bottling for Small-Holders." This can be had from the Board. There is no need to stamp your letter of inquiry.—*Mrs. Barron Newell.*—Any nurseryman who makes a speciality of greenhouse plants could supply the *Coleus* you inquire about. It used to be grown at one time largely for the flower garden.—*C. Barnby Smith.*—1, We have failed to trace *Wahlenbergia tasmatica*. Your best plan will be to treat it as you would the ordinary forms. 2, *Gentiana Kurroo* is offered by Mr. Amos Perry, Hardy Plant Farm, Enfield.—*J. A. J.*—"Root and Stem Vegetables," which can be had through any bookseller, price 1s. 6d. The best book on the subject is "The Vegetable Garden," from this office, price 15s. net.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*Frank Bennett.*—*Sidalcea malvæflora* (Gray).—*Matlock.*—1, *Campanula pusilla*; 2, *C. muralis* (syn. *C. Portenschlagiana*).—*F. M. A. H.*—One of the many varieties of *Mesembryanthemum*.—*A. M. L.*—A, *Dianthus* sp.; B, *Philadelphus* sp.; C, *Veronica Traversi*. Specimens very poor, hence the difficulty in naming more definitely.—*Miss A. Donovan.*—1, The white form of the *Red Valerian* (*Centranthus ruber*); 2, *Centaurea macrocephala*.—*M. R. Hearn.*—1, A pink form of *Lychnis chalcidonica*, not common, but not equal to the type; 2, *Hieracium aurantiacum*.—*C. G.*—*Olearia Gunniana*.—*G. Strickland.*—There are so many *Speedwells* like the one sent that to name it rightly we should thank you for a better example of the flowers and shoots pressed between sheets of paper.—*E. H. S.*—Your two specimens are the *Masterwort* (*Astrantia major*) and *Symphytum caucasicum*. When sending plants for name in future, please number each specimen.

CATALOGUES RECEIVED.

GEO. BUNYARD AND CO., LTD., Maidstone.—List of *Apples Grown at the Allington Nurseries.*

H. N. ELLISON, 43, West Bromwich.—*Vegetable Seeds for Autumn Sowing.*

GARDENING ILLUSTRATED.

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SAVING LABOUR AND GAINING BEAUTY.

My lake, with Water Lilies in large groups, has had for many years a turf path a mile long round it. As the water-side vegetation and that on the land side near are vigorous it was thought essential to have a mown path all round, but owing to scarcity of labour mowing had to be discontinued. I lately paid a visit to the scene and found the path full of native flowers—Clovers, Bedstraws, and other charming wild flowers—the effect being many times better than when the path was regularly mown. So we have proof here that paths that are commonly mown may well be left alone, with the result that they have a much better effect. In fact they were never half so pretty when they were mown every week. Now we do nothing to them beyond sending a man round with a fag-hook occasionally to knock away any wandering bough or coarse tuft.

In the woods also we have some miles of rides which were mown every summer at the cost of much labour even in normal times. In the last two years we have let them alone and have not suffered any inconvenience from it. The rides are 18 feet wide and most important for view and air and other reasons, but so far they are none the worse. It may be that boughs and growths will need to be controlled every few years. In some country places it was the custom to mow many acres, and the owners were often proud of it—in fact, on as many as 40 acres the Grass was kept short.

The fact is that a lawn is made much more beautiful without any such attention, letting the natural flowers of the meadow be seen, and only cutting it when the Grass is ripe for hay. Not only is there the saving of labour but there is an enormous addition of beauty to the lawn if one has taken the trouble to put in Crocuses, Grape Hyacinths, Blue Wind-flowers, and all the flowers of early spring which do well in it, and disappear before the mower wants the Grass. Here we have a succession of beauty without cost beyond putting the things in in the autumn. Such bulbs are often sold at low prices by the thousand. The hay is quite as good, and some of the early things, like the Crocus, will have left no trace of leaf by the time the hay is cut. It is desirable to keep out any plant which is injurious to stock, and for that reason we are inclined to exclude the Narcissi and keep them more for copses and woods. A few groups are little

harm. The mowing of Grass paths should be limited to those among the evergreens and a few near the house. This is easy with the light hand-mowing machines of the present day. It is surely an advantage to get rid of the horse or pony, still more so the horror of a motor mower. By reducing the area mown to necessary limits on Grass paths or used playground the mowing may be easily done by a strong youth and one of the best small mowers. It is a clear gain to get rid as far as may be of any noise in mowing. W.

NOTES OF THE WEEK.

Gentiana Przewalskii.—A distinct and beautiful Gentian with a trailing habit. It may vary a little from seed; the one I saw was a rich fine purple. Among all the beautiful Gentians this is the one we cannot do without. It is growing in flinty soil at Hillbrook Place. A native of China and one of the best.—W.

Sisyrinchium striatum (Rush Lily).—For the waterside nothing can be prettier or more effective than a group of this plant. The narrow leaves, each about 1 foot in height, of a bluish glaucous green, harmonise with the creamy-lemon flowers, about a dozen of which are carried on a narrow spike about 2 feet high. It is rarely grown, but is quite hardy, and no water-side planting should be without it, but it must be grouped and not planted in twos or threes.—FRANK CRISP.

Fremontia californica.—I have had the rare pleasure of seeing this beautiful shrub in fine flower. Originally planted against a wall, it leant away from this and formed itself into a very graceful bush some 10 feet high, and full of lovely blooms. It is a precious plant and is growing in warm, flinty soil at Hillbrook Place, and is happy there. I have made several attempts to grow it in quite a different kind of soil without any success, but must go on trying it. Raising the plant from seed should be easy.—W.

Eucryphia cordifolia in Scotland.—There are a few good plants of Eucryphia pinnatifolia in the south-west of Scotland, notably the fine specimen in the garden of Mr. W. D. Robinson-Douglas, at Orchardton, but it is rare to meet with the newer Eucryphia cordifolia, a handsome plant, both in foliage and flower. There are, however, two good plants at Monreith where, unfortunately, they are often cut by frost in spring, and thus prevented

from flowering. This year, however, these plants have escaped and will probably bloom in due course.—S. ARNOTT.

Meconopsis Wallichii.—I had rather a varied experience with this, and have only lately seen it in a fine state. What seemed to suit it so well was a little trickling water running through boggy soil. In that it stood up 6 feet high, and the blue flowers seen at that height were more attractive than usual. I have tried it in various soils and never got it half so good. Hillbrook Place, mid-July.

Gaultheria Shallon.—This should be more extensively grown than it is. While the members of the Bournemouth Gardeners' Association were recently inspecting the trees and shrubs in the charming grounds of Branksome Dene, by the kind permission of Mrs. M. S. Cassel, they were much interested in this shrub on account of its thriving condition under large Fir and other trees, on dry banks, and in sand and peat. In places the whole of the surface was thickly covered with handsome foliage to a height of about 3 feet.—BOURNE VALE. W.

Tree Lupins should not die in Sheffield, though I can imagine they will not flourish as they would at Boar's Hill and neighbourhood. I have a yellow one here, about four years old, only protected from the north by a Privet hedge. It grows in about 6 inches of made sandy soil on the top of very heavy yellow, shaly loam. It was quite ready to grow 5 feet high, only what rose above the hedge was broken by recent northerly gales. It is quite 6 feet in width and covered with bloom. The whole garden here is on a northerly slope and the winter climate is not exactly balmy, no better than at Sheffield.—L. J. ROGERS, 6, Hollin Lane, Leeds.

The Californian Lilac (Ceanothus thyrsiflorus).—This, the hardiest of the early-flowering Ceanothuses gives excellent results in the open ground in many parts of the country. In Miss Willnott's garden at Great Warley, Essex, there is a bush 30 feet high, while there are several fine bushes at Kew, the largest of which was destroyed by wind a few years ago. The blue flowers, produced in dense inflorescences, each 2 inches or 3 inches long, are at their best during late May and June. Introduced from California in 1837, it is by no means such a common shrub as its beauty warrants, and it might well be substituted for one of the commoner evergreens, which are all too often seen in our gardens. Even where it will not succeed in the open it might well be grown against

a wall. Given well-drained, loamy soil, and a position sheltered from rough winds, it grows rapidly, and soon forms a bushy specimen 12 feet or more high and as far through. In the variety *C. t. griseus* both leaves and inflorescences are longer than those of the type, whilst the flowers are lilac in colour. It appears to be rather more tender than the type, but gives excellent results with a little shelter. Both the type and variety can be increased by cuttings inserted in sandy soil in a close fraue in July.—D.

Mistakes as to quantity.—I have been getting together a few plants of the beautiful Geum, Mrs. Bradshaw, hoping to make a group of it, and lately I went to a great garden and saw there hundreds of yards of it in a straight line. In the same place hundreds of other plants were seen in the same way. No greater mistake in emphasising a plant could be made. It takes away all chance of admiring a plant for its beauty which a group of a dozen or less would have well shown.—W.

A charming combination.—In the garden of Sir Herbert Maxwell at Monreith, Wigtonshire, a very beautiful effect is produced by a large bush of a white Rhododendron, above which rises a tall Tamarisk, whose sprays of pink, feathery flowers droop over the Rhododendron and produce a cloud-like appearance. The combination is an exceedingly beautiful one which has pleased me on former visits, and which had lost none of its charm to me when I saw it again on July 1st.—S. ARNOTT.

Rosa rugosa in a seaside garden.—This Rose does well in a garden on the edge of the cliffs in Bournemouth. The plants are growing at the edge of the cliff and are exposed to the strong winds that blow from the sea. The winds bring drift sand with them and deposit it on the beds, the roots of the Roses in some cases being deeply buried in the sand. The foliage is healthy and the flowers pure in colour. Owners of gardens near the sea may plant this Rose freely in the most exposed positions, and if they cut them hard back the resultant shoots will be very strong.—BOURNE VALE.

A good plant of Daphne Cneorum.—It is always pleasing to see a good plant of *Daphne Cneorum*. Mr. W. D. Robinson-Douglas has a very good one in his garden at Orchardton, in the south of Kirkeudbrightshire, where it is thriving specially well. The plant in question is fully 3 feet across each way, and not only looks healthy but blooms well. The branches are layered in the same way as Carnations, and stones are laid over them to keep them in position. As the branches extend they are again layered. No special soil beyond that for other rock garden shrubs is employed.—S. ARNOTT.

Cupid Sweet Peas.—I thought that these dwarf Sweet Peas had, long ago, been relegated to obscurity—from which they ought never to have emerged—and I was rather surprised the other day to come across a batch of them in bloom in a greenhouse. They were growing in 6-inch pots, and, I must in fairness admit, they had done very well. The variety was a pink and white flowered one. The seeds were sown in March and thinned down to a couple in each pot. I was told that by very careful watering the old failing of the Cupid Sweet Pea—bud-dropping—could be avoided, and that to further that end no liquid or artificial manure ought to be given. I would be loth to devote pot-room, not to speak of time and trouble, to these capricious and insignificant members of a meritorious family.—W. McG., *Balmoe*.

Solanum crispum in Scotland.—The beauty of *Solanum crispum* has often been referred to in your pages, but it is not generally known that it is quite hardy in some parts of Scotland, particularly the south-west and the more favoured portions of the east coast. At Culzean, where there is a noteworthy collection of uncommon shrubs, *S. crispum* does well and blooms very freely. Its purple-blue flowers are welcome, and give an effect not commonly met with among the hardier climbing shrubs.—A.

Ourisia coccinea in sun and shade.—The curious ways of *Ourisia coccinea* are well illustrated by two plants growing in the moraine of Mr. W. D. Robinson-Douglas, at Orchardton, Castle Douglas, Kirkeudbrightshire. They are within a yard of each other and are both growing in little basins in the rocks which crop out of the moraine. One is slightly shaded by the small boulder against which it is planted, while the other is in full sun. The slightly shaded one is a picture of health and beauty, with long stems, from which hang the brilliant scarlet flowers. I have never seen this plant finer than at Orchardton. On the other hand, the plant in full sun does not look nearly so happy, and there is not a single flower. Possibly there may be a little difference in the moisture retained in the basin, but the slight shade seems to be the cause of the difference.—S. ARNOTT.

Our native Lady's Slipper (*Cypripedium calceolus*).—On a recent botanical expedition it was my good fortune to come upon a patch containing upwards of twenty plants. A party of Yorkshire botanists and myself had been searching for the plant for a whole day; indeed, our search had been continued for upwards of thirty years, but this was a special day set apart to see if we could find the plant in one of its well-known habitats. The evening was getting far spent, and my two well-known friends had to return home to Thirsk. Not having any urgent calls upon my time, I determined to continue the search. At last I was rewarded with a sight of not one, but at least twenty robust, healthy plants. A friend of mine has also found it wild in one of its old habitats near Answick, near Settle.—WILLIAM STANSFIELD, in *Gardeners' Chronicle*.

[It is to be hoped these interesting localities will be guarded with care against thieves of roots for sale or of specimens for herbaria, neither object nearly so important as keeping safe these last localities of the most charming of our native Orchids.—ED.]

Rosa gallica Kizanlik.—From the Royal Nurseries, Exeter, we have a bunch of this, from which the attar of Roses is distilled. In a very useful work published in 1871, entitled "Pharmacographia: A History of Drugs," we find the following: "The chief locality for attar of Roses, and that by which European commerce is almost exclusively supplied, is a small tract of country on the southern side of the Balkan mountains in the Turkish province of Rumelia. The principal seat of the trade is the town of Kizanlik, in the fine valley of the Tunja. The other important districts are those of Philippopolis, Eski Zaghra, Yeni Zaghra, and Tchirpan, which, with Kizanlik, were estimated in 1859 to include 140 villages, having 2,500 stills. The Rose is cultivated by Bulgarian peasants in gardens and open fields, in which it is planted, in rows as hedges, 3 feet to 4 feet high. The best localities are those occupying southern or south-eastern slopes. Plantations in high, mountainous situations generally yield

less, and the oil is of a quality that easily congeals. The flowers attain perfection in April and May, and are gathered before sunrise. Those not wanted for immediate use are spread out in cellars, but are always used for distilling the same day."

Mimulus Whitecroft Scarlet.—This, referred to in a note by "W." on page 293, is worth growing. "W." states that "these flowers have in my soil a way of leaving without notice. They may want frequent division." I have had the same experience, and this is specially the case in dry soils. In such it is not only safer to divide up the plants every two years at least, but it is frequently advisable to remove them to another place in the garden or to give them fresh soil. Moisture is all important, but I think the scarlet varieties derived from *M. cupreus* are not so long lived as those with the blood of *M. luteus* in them. Some of the latter I have very fine by the margin of a little pool with their feet in the water.—S. ARNOTT.

A modest rock garden.—The illustration of the rock garden on page 299, with the accompanying note by "W.," should be of considerable service, especially at the present time when elaborate rock gardens, requiring large quantities of stone and soil, and costing a good deal for labour, are out of the question. It can never be too strongly emphasised that rock plants of most kinds can be grown satisfactorily on low rockwork, and frequently far better than on some of the elevated piles upon which they are placed without much consideration for the well-being of the plants. A friend of mine grows his plants on a low rockery—more correctly a rock bed—which at no part is 3 feet above the level of the surrounding ground, being simply a mound of good soil edged with stones and with larger blocks set in the ground here and there and rising above the level so as to give shelter and shade where required. Here he grows many choice alpine plants with much success. His plants look well, both in respect of their health and beauty. They are much more easily attended to than on large, high rockwork, and the whole rock bed cost him only a few shillings for material and cartage.—S. A.

The Partridge Berry (*Gaultheria Shallon*).—This fine dwarf evergreen shrub from Western North America is very useful as a carpet between trees in the foreground of shrubberies, or in any open position where a taller growing plant would be out of place. I have used this beneath Pine and Birch trees in the warm, sandy soils of Surrey, where it quickly became a dense carpet of healthy growth. Here (Sussex) it is growing in full sunshine on a poor piece of clayey ground, and in this position it has become a perfect thicket, and at the present time (June 5th) is a mass of large white, and in some cases pink, Andromeda-like flowers, which are freely produced in racemes each from 4 inches to 6 inches in length at the extremity of the past season's growths. When growing close together the growths draw each other up and are then very useful for cutting. In autumn these are succeeded by numerous large, purplish berries, juicy and not unpleasant to the taste. I have seen this very happy in moist and cool, shady places near the water side, but whereas the plants were quite healthy, flowers and berries are not so plentiful as when it is grown fully exposed to sunshine. It is a splendid covert plant, spreading freely by underground suckers, and if left to itself will quickly over-run a considerable area and furnish excellent cover for small game.—E. M.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

CORONILLA IBERICA.

THIS, when seen in a broad spreading mass, as shown in the illustration, is very attractive, the bright yellow flowers being well set off by the deep green foliage. It is indifferent to periods of dry weather and shows no signs of weariness in a very hot season. It is not suitable for the small rock garden, as it grows very rapidly and requires a considerable amount of space, but where the rock garden is of considerable extent it is valuable. It is a capital plant for a dry bank or very dry, sun-burnt spots, where little else will thrive. T. P.

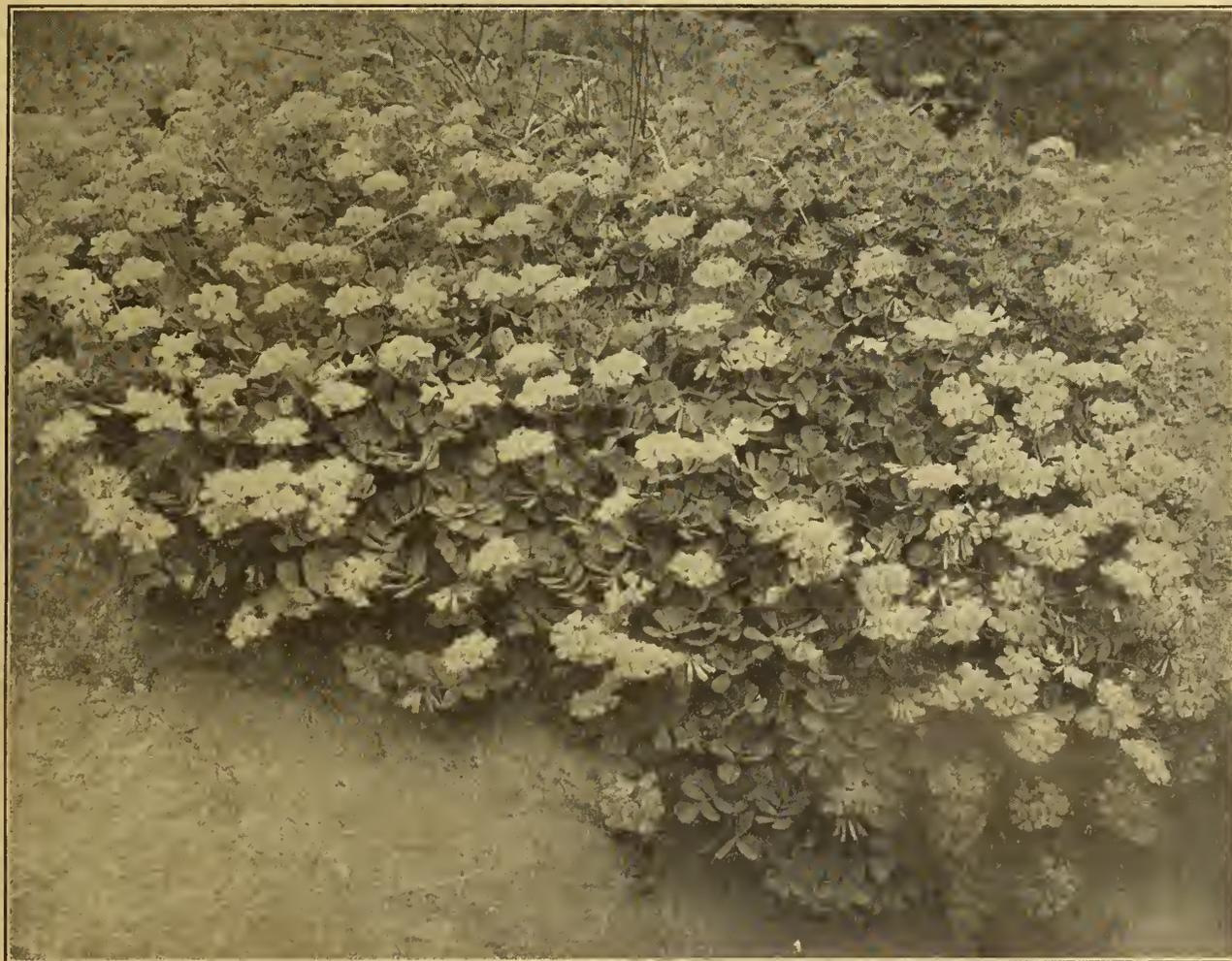
passes on his way from Western Szechuan to Tibet. According to Wilson, these valleys, though watered by the Tung, Yalung, Dre, and Min rivers—caveshoots for the snows that slip off the roof of the world as soon as the sun begins his annual round, are almost desert-like because of an abnormally warm, dry climate, yet boast a flora limited in extent, it is true, but of extraordinary beauty and interest. Of them he writes: "To garden lovers everywhere these valleys are of especial interest, inasmuch as they are the home of many beautiful Lilies. Each of these valleys has species or varieties peculiarly its own, which range up to about 8,000 feet altitude; yet while very local, these Lilies are, numerically, extraordinarily abundant. In late June and July it is possible to walk for days through a

there is probably nothing to fear for it on the score of cold. *L. regale* is unique in many ways, but in none more than the wonderful germinating power shown by the seed, and I have noticed that seed sown in any month of the year germinates quickly and comes up like Cress. Unless it develops some constitutional weakness not at present apparent, *L. regale* may be regarded as the type of a perfect garden Lily.—A. GROVE in *Country Life*.

NOTES AND REPLIES.

Bedding plants.—What bedding plants can I put in now besides *Violas*, *Pelargoniums*, and *Asters* in a warm, exposed position? Is it too late for *Lobelia cardinalis*? I like scarlet best for colour.—BUTLER, *New Forest*.

[If you can obtain the plants, which is rather doubtful, seeing the season is so



Coronilla iberica.

LILIUM REGALE.

HAVING been introduced as *L. myriophyllum*, this is still often referred to under that name, furnishing one more illustration of the confusion that follows in the wake of a mistake in the nomenclature of a plant once it has been launched on the sea of horticultural "literature." *L. speciosum* and *japonicum*—both old garden friends—are other examples of this, for they are frequently referred to by slipshod horticultural scribes as *lancifolium* and *Krameri* respectively. E. H. Wilson, whose discovery of *L. regale* alone must surely leave gardeners for ever in his debt, stumbled across it in the Min Valley, one of several long and comparatively narrow defiles in that no man's land—as yet but vaguely indicated even on the latest Mission maps—across which the traveller

veritable wild garden dominated by these beautiful flowers."

Of *L. regale* it can be said that no other Lily has taken so spontaneously and so quickly to conditions so entirely different to those obtaining in its native wilds. It seems happy enough in decent loamy soils and is not seriously crippled either by prolonged drought or, what is more wonderful still, the winter wet that of late years has been so regular a feature of our island climate. At any rate, the plant has had more than a taste of each since it has been our guest, and seems none the worse. *L. regale* has had no opportunity of showing us how it will fare in an Arctic winter, because there have been no prolonged frosts worth recording of recent years, but it has come unscathed through several rigorous winters in the United States, so

far advanced, there are *Zinnias* and *Phlox Drummondii* to be had in various shades of scarlet. Fire King *Antirrhinum* would also please you if you could purchase young plants and grow them on, as they would bloom abundantly in autumn. Tuberos *Begonias* of the desired colour should be obtainable, and no doubt *Lobelia cardinalis* also. This last would have to be kept well supplied with water, seeing the position is warm and exposed. Then there are *Fuchsias* and *Petunias*, which would make a fine display in such a position, although the flowers would not be scarlet. The dwarf forms of *Nasturtium* are to be had in a colour approximating more nearly to scarlet than the last two named plants. Although *Pelargoniums* are mentioned, do you include the Ivy-leaved section, as several varieties of

these of the desired tint are to be had? The single Aster Scarlet Southcote Beauty is a gem, and would please you if you have not already got it.]

Crambe cordifolia.—This makes a fine specimen plant if given plenty of room, and never fails to attract attention when in blossom. It is a very vigorous grower, and the inflorescence, when well developed, will often measure several yards in circumference. It is of graceful habit and does well for cutting, the sprays of small white flowers looking very pretty either by themselves or mixed with others. Although of such vigorous growth it does not quickly exhaust the soil as many strong-growing plants do, but sends its long, thong-like roots far afield. Its main flowering is in June, but it often blooms again in September. One excellent point in its favour is that the flower-stems are so strong that they require no staking.—W. O.

Single Dahlias.—To a great extent single Dahlias have lost the popularity which they enjoyed in recent years. Yet, even with the later acquisitions in the way of the Collarlette varieties, there is still room for the older favourites. It is sometimes alleged that they are not suitable for cutting for indoor decoration, but this may be traced to an improper way—or, rather, stage—of cutting the blooms for that purpose. Let them be taken from the plant when the buds are on the point of expanding, and it will be found that they will open quite naturally in water and last for quite a considerable time. Many of the single Dahlias are much more graceful than the Cactus varieties, and they have an equally wide range of colour, while, in addition, they bloom much more freely.—KIRK.

Dianthus hybridus "Cæsar's Mantle."—I think this is one of the most beautiful of the single hybrid pinks. The flowers are of such a brilliant crimson and are borne so freely that the plants make quite a vivid splash of colour in the rock garden. The flowers are borne on stiff stems, too, which is another point in its favour, and the whole habit of the plant is neat. It has not seeded with me, and it blooms so freely that it makes very few shoots for cuttings. I have found that the cuttings do not root quite so readily as those of most other Dianthus.—N. L.

Night-scented flowers.—In the cool of the evening the perfume of many flowers is accentuated, and, as many are debarred by business considerations during the day from enjoying the more brilliant flowering plants, those which are fragrant at night are doubly enjoyable. Among these may be mentioned *Nicotiana affinis*, *Lothian Stocks*, the white and coloured Pinks, *Schizopetalon Walkeri*, *Mignonette*, *Martynia fragrans*, *Matthiola bicornis*, *Heperis tristis* (the night-scented Rocket), the white *Campion*, and *Silene pendula*. It is a curious fact that nearly, if not quite, all of the scented flowers of the evening are white or pink in colour. Doubtless this and their perfume attract the insects which are abroad after dusk, and thus assist in the work of fertilisation.—KIRK.

The Martagon Lily.—This, I think, is a most accommodating Lily. It does not appear to be at all particular where it is planted, in shade or in sun, in a dry or a damp position. One of the finest clumps I ever saw was growing in Grass, and it certainly looked quite at home. The spikes were by actual measurement over 4 feet high, and I counted blooms to the number of seventeen on one of them.—K.

The Dittany of Crete (*Origanum Dictamnus*).—This, mentioned by "K. R. W." on page 294, does not appear to be nearly so plentiful as at one time. It is not so hardy as *O. hybridum*, which is quite as pretty. The pinkish Hop-like flowers, though small, are interesting.—S. ARNOTT

GARDEN PESTS AND FRIENDS.

SUMMER SPRAYS AGAINST AMERICAN GOOSEBERRY-MILDEW.

PROFESSOR B. T. P. BARKER, M.A., AND A. H. LEES, M.A., University of Bristol, have summarised in the present note the work on the summer treatment of American Gooseberry-mildew on which they have been engaged during the past two years. The results of this work, in the course of which liver of sulphur was used with varying effect, confirm generally the conclusion of Messrs. Eyre and Salmon which was given in the last number of this *Journal* (February, 1916) in an article on "A New Fungicide for Use Against American Gooseberry-Mildew." In that article an account is given of experiments conducted during the past two years on means of controlling the American gooseberry-mildew. Messrs. Eyre and Salmon conclude that "Solutions of liver of sulphur of the strength generally recommended for use as a fungicide are quite inefficient against the American Gooseberry-mildew: at a concentration at which the solution becomes fungicidal, such severe scorching injury is caused to the Gooseberry bush as to preclude its use." This conclusion is of considerable importance, since, as is pointed out, liver of sulphur has hitherto been considered by many investigators as efficacious against mildews in general and American Gooseberry-mildew in particular.

Trial has been made of a mixture which does not appear to have been previously used—a mixture of liver of sulphur and a soft-soap-and-paraffin emulsion, which has given most promising results. How far the liver of sulphur is the active fungicidal ingredient has not yet been determined. Probably each of the three constituents is required for full effect. In any case the preliminary results have been so satisfactory that it is desirable to test thoroughly the effect of liver of sulphur used in this way before finally rejecting this substance for the treatment of the mildew, especially in view of the frequent use of this substance as a fungicide, and its convenience and cheapness for this purpose. The primary object of this note is to call attention to this mixture, as used in the 1915 experiments, in the hope that it may be tried by other workers during the coming season and its actual value tested under a variety of conditions. The work was started at Long Ashton during the summer of 1914, in consequence of a slight outbreak of the disease in the plantations at the Research Station. It was decided to attempt to ascertain to what extent the disease could be controlled by summer spraying, the point of view taken being that if the summer stage of the disease could be adequately controlled the amount of the winter stage formed would be so limited that, with the further reduction of the latter by tipping, the outbreak the following season ought to be reduced eventually to insignificance. Details of the 1914 experiments having already been published,* only a short summary need be given here. The procedure adopted in the first set of experiments on the affected bushes was to apply, firstly, a spray which would kill by direct contact so far as possible the mycelium and conidia present on the bush, and, secondly, a protective spray to keep the parts on which the fungus had thus been killed free from infection from external sources. A number of fluids of the first type, i.e., "hitting" or "contact" sprays, was tested, including one composed of 4 lbs. of liver of sulphur and

20 lbs. of soft soap in 100 gallons of water. To each of the plots thus treated a series of protective or "cover" sprays, such as Bordeaux mixture, lime sulphur, etc., was applied. The applications were made at the end of July, the outbreak being a very late one. None of the results was entirely satisfactory, the mildew re-appearing fairly generally, although only slightly. In the course of this experiment it became evident that the "hitting" sprays were all more or less ineffective, because they failed to wet the fungus uniformly, owing to the presence of air between the conidiophores and the conidia. The importance of this point has also been emphasised in the paper by Messrs. Eyre and Salmon, who, owing to this difficulty, used their test fluids made up with 1 per cent. of soft soap. The writers, however, found that twice that quantity of soft soap did not suffice to give complete wetting, when the fluids were tested on a practical scale. Under those conditions liver of sulphur in the 0.4 per cent. solution mentioned above proved inefficient. Messrs. Eyre and Salmon found that it failed in soap solutions of half that strength, when the percentages of the sulphur compound used were about the amount stated. It is, therefore, probably correct to conclude that liver of sulphur used at the rate of 0.3 per cent. to 0.4 per cent. in aqueous solutions or in soft soap solutions is, at the most, of only limited value against mildews. (It is possible that a 1 per cent. solution might wet the less floury mildews, such as Pea-mildew, but fail with American Gooseberry-mildew.)

(To be concluded next week.)

NOTES AND REPLIES.

Grubs in Carrots.—I enclose two specimen Carrots from my bed of same this year. Will you kindly tell me if they are infested with Carrot-fly larvæ or wireworm? Hardly a plant has escaped in a bed about 8 feet by 40 feet, and I have had to destroy the lot.—EAST ANGLIAN.

[Your Carrots have been attacked by the grubs of the Carrot-fly (*Psila rosea*), a small black fly about $\frac{1}{4}$ inch across the wings. It appears in the spring and lays its eggs in the Carrots just below the surface of the ground. There are two or three broods during the summer. If the flies are noticed on or about the Carrots the latter should be sprayed with paraffin emulsion, or sand, wood-ashes, fine cinder-ashes, or sawdust should be soaked in paraffin and strewed between the drills with a view to keeping the flies away. Everything possible should be done to prevent the soil round the roots being disturbed so that the less the Carrots have to be thinned the better. The presence of the grubs is usually shown by the foliage turning yellow, and when this is noticed the roots should be examined, and those which are found to be attacked should be carefully removed, so as not to break them or leave any grubs in the soil.]

Destroying slugs.—I believe I have discovered a very effectual preventive against slugs. It is common rock salt, preferably broken in pieces about the size of a thumb-joint. I made experiments by surrounding some slug traps baited with bran with the salt and leaving others not surrounded. The traps that were not surrounded had plenty of slugs in and those that were surrounded had hardly any in. I have also tried various other experiments, which all go to show that slugs will not face this. The advantage is that in wet weather, when slugs are more active, the rock salt is not destroyed like lime and soot. I am not sure, of course, what effect salt would have if permanently left on the ground, but there is no need to do this, as it could be taken off when the plants were out of danger, and during that time the amount dissolved and entering the soil would be very small.—T. F. HAIGH.

* Annual Report of the University of Bristol Agricultural and Horticultural Research Station, 1914.

INDOOR PLANTS.

THE TASMANIAN LAUREL
(ANOPTERUS GLANDULOSUS).

This is a very handsome shrub, which, at least in most parts of the country, requires the protection of a greenhouse. In especially favoured districts, however, it is more or less hardy, with, in some cases, a certain amount of protection in winter. The specimen herewith illustrated comes from Nymans, Sussex, where so many presumably tender plants may be found flourishing in the open air. The handsome white blossoms are borne during the spring,

the growing season. These features should also be borne in mind in selecting for it a suitable sheltered spot out of doors.

W. T.

NOTES AND REPLIES.

Increasing Clematises.—Please let me know how to propagate Clematises—what kinds can be grown from seed?—C. H. B.

[The Clematis is readily propagated from cuttings. In doing so select a shoot with side growths that have flowered. Remove the side growths when a little more than half ripened. Insert closely together in a 6-inch pot, using a compost of loam, leaf-soil, and sand in equal pro-

over with a very little of the same. New growths will push up, roots be made, and the young plants can be severed after the shoots are 6 inches or so high. Of course, pay due care to ascertain whether roots are formed in sufficient number or not before removal. Clematises are also increased by grafting, but this we do not recommend. You will find an article dealing with the raising of Clematises from seed in our issue of March 27th, 1915, a copy of which can be had from the publisher post free for 1½d.]

Treatment of pink Spiræas.—Would you please tell me how to treat a pink Spiræa after flowering? Should it be kept in the green-



A flowering shoot of the Tasmanian Laurel (Anopterus glandulosus). From a photograph at Nymans, Sussex.

and the general aspect of a flowering shoot is well shown herewith. The leaves are of a firm, leathery texture, and of a rich deep green tint, while the blossoms are somewhat wax-like and remain fresh for a considerable time. It was introduced from Tasmania in 1823, and at one period used to be stocked by most nurserymen who made a speciality of New Holland plants. Now it is rarely met with. This Anopterus is not at all a difficult plant to propagate by cuttings of the half-ripened shoots, taken during the summer, inserted into pots of sandy soil, and kept in a close frame. Potted in a mixture of loam, peat, and sand, they will grow away freely, and, with reasonable drainage, require a liberal amount of water during

portions. Water well, and keep under a cloche or bell-glass until rooted. A temperature of 60 degs., with care to avoid any rapid rise beneath the glass from sun-heat, is most suitable. You can also use younger shoots, but these are more apt to damp off than those made as first recommended. Another method is by layering. Take a shoot at least three parts ripened, and lay this down in the ordinary way. Beneath each pair of eyes, or each second pair, make a "tongue" by cutting half-way through the growth, and slipping the knife up some inch or two towards the base of the eye or joint. In this, place a small piece of charcoal or sandstone to assist in keeping it open. Peg down upon a light compost of sandy loam, and cover

house growing on or dried off and later on repotted? I presume with good treatment it will flower again next year.—ELEANOR PAIN.

[The Spiræa should by no means be dried off till growth is complete and it goes naturally to rest. Presumably your specimen has just done flowering, in which case we should advise you to cut off the old spikes in order to prevent the development of seeds, which weaken the plant. Then it should be repotted (most likely a larger pot will be needed) in a mixture of loam and well-decayed manure, with, if the loam is very heavy, a dash of sand. The best place for it after that will be plunged out of doors in a sunny spot. A liberal amount of water is very essential, especially when the roots have taken

possession of the new soil. The pot, of course, must be well drained, but this should not be overdone. As autumn advances and the plant goes to rest it may either be allowed to remain plunged outside or taken into a cold frame. No doubt it will flower again next year, but whether the display will be equal to that of the present season is, to say the least, problematical. The year is now so far advanced that the period for growing and building up the crowns for next year's display is not a long one. We should not attempt to force it, as the flowers will develop much better when allowed to come on gradually. A good light position is very necessary to bring out the pink shade at its best.]

Injury to Aspidistra leaves.—Will you be so kind as to give the name, cause, and cure of this blight which has attacked my plant of Aspidistra?—ALICE M. BAMFORD.

[There is no blight or anything of that kind the matter with your Aspidistra. The brown spots look very much like the effects of the sun shining full on a leaf that has been generally shaded. If the leaf happened to be wet the damage would be more readily done. There are other possible causes, in proof of which we may mention that we were at one time consulted as to the presence of Aspidistra leaves going in the same way as yours have done. We saw the plants, and the position they occupied in a room where no gas was used, and were completely puzzled. Finally, after repeated investigations we learnt that the room was very little used in the evening. When necessary to go there a lighted candle was taken and usually stood on the same table as the Aspidistras. Occasionally the flame came too close to a leaf, and the damage was quickly done. Knowing all the conditions, it rests with you to discover the cause of the brown patches, which are certainly not due to any disease. It must be borne in mind that the Aspidistra is a shade-loving plant, but at the same time as much light as possible is beneficial.]

Hippeastrum Snowdon.—It is now a dozen years since this Hippeastrum was first shown, when it was given a first-class certificate by the Royal Horticultural Society. It was raised by Mr. C. R. Fielder when gardener to Mrs. Burns, North Mymms Park, Hatfield, and was obtained only after a long period of cross-breeding and selection. It must be regarded as one of the finest white-flowered Hippeastrums ever seen, an opinion freely expressed by those who saw the vase of flowers shown by Mrs. Burns at the meeting of the Royal Horticultural Society on June 6th. The flowers are large and of good shape, with just a suspicion of green in the centre. Every year the Hippeastrums become greater favourites. However much the generic name of Hippeastrum is used the old one of *Amaryllis* frequently crops up. This shows how difficult it is to eliminate an old-established name, which botanists, who are so fond of chopping and changing, might well bear in mind.—K. R. W.

Perpetual-flowering Carnations intended for flowering in winter are now well rooted, and the earliest batch will be top-dressed with Bentley's Carnation manure, and given alternate waterings of clear diluted soot-water. It is not advisable in this locality to pinch any of the flowering-spikes later than the first week in July. Staking is now being attended to, each shoot being carefully looped to the centre stake, and further tying will be attended to at regular intervals as the flowering-spikes develop. Malmaisons are now at their best. As the plants pass out of flower (if circumstances permit) layering will be carried out in a cool pit. The best of the one-year-old plants will be reserved for re-potting into larger pots for cultivation another season.—G.

GARDEN FOOD.

RASPBERRIES.

RASPBERRIES are, perhaps, the most delicious of fruits, but so dearly loved by the birds that it is difficult to secure a good supply. To secure the real flavour of the Raspberry it should be gathered the instant it is perfectly ripe, on a fine morning as soon as the dew has dried up. Look the fruits over carefully, for tiny grubs are fond of lurking in them, and place them in a glass bowl. Crush slightly with a silver spoon, sprinkle with caster sugar, and set aside in a cool larder for an hour. Another way of serving the fruit in a natural, uncooked method, is to take a pint of Red Currants and place in a basin. Sprinkle with a tablespoonful of caster sugar, and crush with a wooden spoon. Turn into a fine sieve, and allow the juice to strain over a quart of Raspberries which have been sprinkled with two tablespoonfuls of caster sugar. Chill slightly and eat with whipped cream.

RASPBERRY PIE is a pleasant way of cooking Raspberries. Butter a deep pie-dish rather thickly and cover the bottom with a layer of fine breadcrumbs. Next add a layer of Raspberries sprinkled with sugar; repeat alternate layers of Raspberries and crumbs until the pie-dish is full. The last layer should be of crumbs; sprinkle a little dissolved butter on top and bake in moderate oven for twenty minutes or until the top is nicely browned. Send to table either hot or cold.

RASPBERRY CUSTARD is rather an unusual way of serving Raspberries. Sprinkle some freshly-gathered Raspberries with a little caster sugar and stir well; place the fruit in a jar and stand in a warm oven until the juice commences to run. Strain through a sieve, and take a pint of the juice and mix very gradually with the well-beaten yolks of three eggs. If not sweet enough add a little more sugar, and turn the mixture into a jug, and stand this in boiling water. As soon as the Raspberry-juice and eggs thicken remove the jug and pour the mixture several times from one jug to another. When quite cold stir in two tablespoonfuls of cream. Half fill custard glasses with the preparation. Whip the whites of the eggs to a stiff froth, add sufficient sugar to taste, and a few drops of Lemon-juice; finally fold in two tablespoonfuls of stiffly-whipped cream. Fill the custard glasses with the whipped mixture and decorate with whole Raspberries.

Red Grod is a Danish dish made by mixing $\frac{1}{2}$ pint each of Raspberries, Red Currants, and Cherries, and simmering them with $\frac{1}{2}$ pint of water. Sweeten to taste, and stir in 3 oz. of ground Rice. Let the mixture simmer for twenty minutes, adding a little Red Currant juice if it becomes too thick. Pound 1 oz. of sweet Almonds, and add to the mixture. Finally stir in $\frac{1}{2}$ oz. of isinglass, and pour into a wetted mould. When cold, turn out and serve with thick cream around the dish.

H. T. C.

SOME RECIPES.

THE following recipes are sent us by Mrs. Philip Martineau, who is a student of the greatest of all reforms—food reform:—

STUFFED AND BRAISED CABBAGE.—Take one young Cabbage for each person. Remove a few outer leaves in order to thoroughly free the Cabbage from insects and slugs. Place a layer of sausage or other forcemeat between the leaves, which should be replaced and tied in. Slightly fry in a saucepan with butter or dripping till light brown; then season with pepper and salt. Place the lid on the saucepan and allow to cook slowly for an hour. Serve in its own brown gravy.

CABBAGE AU GRATIN.—Braise the Cabbage as in other recipe. When nearly cooked, place on a fireproof dish with a covering of breadcrumbs or powdered biscuit, a few bits of butter, and a slight sprinkling of Parmesan cheese. Set it in the oven or before the fire till the gratin is light brown, and serve in same dish.

CLEAR SOUP WITHOUT MEAT (FRENCH RECIPE).—Lightly fry in some good fat or butter to a good golden brown the following:—Two sliced Onions, two sliced Carrots, one Leek, one small Turnip cut up, one Parsnip cut up, small bouquet of Parsley and herbs; salt and pepper to taste. When fried, add 1 quart water; cover closely and simmer four hours after it has just come to the boil. Strain and serve either with freshly-cooked vegetables in dice, croutons of fried bread, or vermicelli. More water can be added if desired.

The Dandelion.—In America considerable attention is being paid to the cultivation of the Dandelion. It is used as a vegetable and for salads, and the roots are dried and sold for medicinal purposes. I find that the cultivated Dandelion is only pleasantly bitter, and if eaten when the leaves are quite young the centre rib of the leaf is not at all unpleasant to the taste. When older, the rib is tough and not nice to eat. I have not tried the Dandelion as a boiled vegetable, but eat it freely in salads, either alone or in combination with other saladings. It makes delicious sandwiches, the tender leaves being laid between slices of bread and butter, and sprinkled with salt. The addition of a little Lemon-juice and pepper varies the flavour. If the flower-buds are removed and the leaves carefully cut, the plant will last through the whole year. It can be blanched in the same way as Endive, and is then very delicate. If covered with an ordinary flower-pot during the winter and then buried under some rough stable litter the young leaves will sprout when there is a dearth of saladings and prove a welcome change in the early spring.—H. T. C.

Whole cereals.—Advocating the use of whole cereals as food in war time, Sir James Crichton-Browne, at a conference held recently by the Bread and Food Reform League, in the Queen's Hall, said that to some extent he was there as "a patriotic Scotsman" in defence of oatmeal. It was the most nutritious of the cereals, and certainly the most economical. Probably the people were better fed now in war time than in any previous period, but it was evident that cheaper foods would require to take the place of beef, eggs, and milk. Whole cereals would supply the necessary requirements, but it was essential that they should not be robbed of their principal constituents. Good digestion did not rest on appetite, but on mastication, and the prevalence of dental decay might be traced to the use of soft foods. He or someone whose voice is heard might well speak of the way this good food is spoiled by many cooks. It is reduced to an offensive pappy mess, whereas it may be cooked in an almost dry state—the right one. The larger oatmeal is served the better. I use the whole grain, which eats like Nuts and may be taken without milk or other adjunct if need be. It is called white groats in Scotland.—W.

Flavourings.—No allowance has been made in the Budget for any ready-made essences, sauces, or condiments. These things are as dear to the heart of the average English cook as they are abhorrent to the French one, and they account for much that is detestable in our national cookery. Not only will economy be effected but a great improvement in the *cuisine* will result if all flavourings are restricted to the ordinary garden herbs, including tarragon and chervil and the most usual culinary vegetables, and the simple natural spices and fruits of the earth.—*Patriotic Food Economy.*

TREES AND SHRUBS.

THE ROCK ROSES (CISTUS).

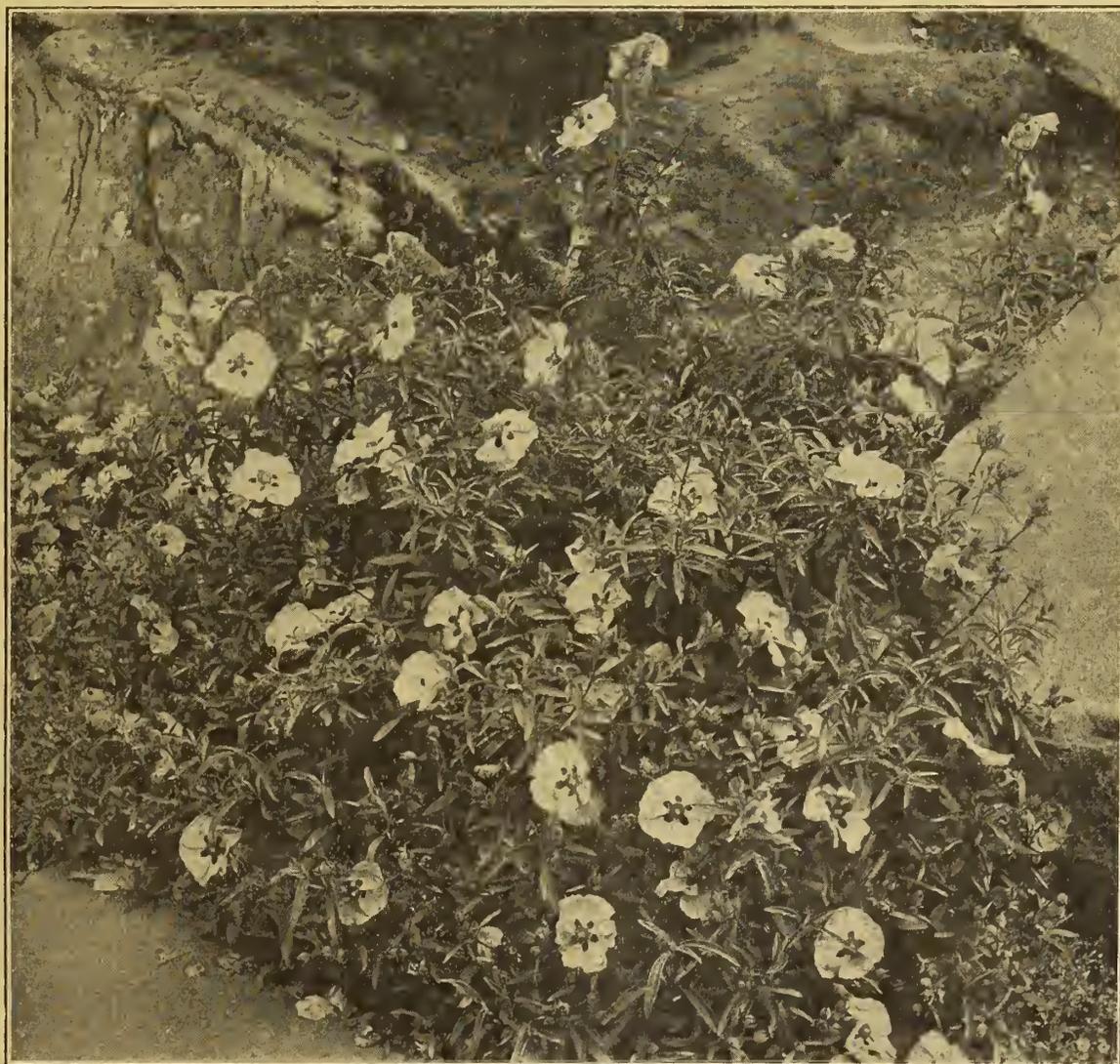
THE various species of *Cistus* or Rock Rose are amongst the most beautiful and free-flowering of summer-blooming shrubs, and the hardier ones should be planted wherever they can be grown. They are essentially sun-loving shrubs and are peculiarly well adapted for planting in prominent places in the rock garden or for covering bare banks with an exposure to south or west. As they are natives of South and South-West Europe and N. Africa many of them are tender, but there are others that withstand the severity of average winters in many parts of the

ground preparation required in forming a plantation is to remove all coarse weeds, dig the surface over, and insert the plants 2 feet to 3 feet apart, keeping the ground clean until the plants cover the space. During early life it may be advisable to remove the points of the shoots occasionally to induce a bushy habit, although the majority bear side branches freely without pruning. All later pruning is centred in the removal of flower-heads after the blooms are over. The majority can be increased by cuttings inserted in sandy soil in a close frame in July, but the species can also be easily raised from seeds sown in spring. Plants should be grown in pots until they can be planted permanently, for Rock Roses are difficult to transplant.

C. CORBARIENSIS forms a dwarf bush 1½ feet to 3 feet high, of dense habit, bearing white flowers over a period of two months in summer. It is one of the hardier hybrids, very free-flowering, and neat in habit.

C. CYPRIUS is less hardy than the previously-mentioned kinds, but it is a very beautiful plant, growing 6 feet or more high. It bears a profusion of white flowers, each petal marked at the base with a deep crimson blotch.

C. LADANIFERUS is very like the last-named, except that its flowers are borne singly, whereas those of *C. cypricus* are in small clusters. The flowers are, perhaps, a little larger, but each petal bears a simi-



Cistus purpureus in the rock garden at Friar Park.

country, and about London three or four species or hybrids withstood the severe winter of 1894-95 in the open ground. When, however, any doubt is entertained regarding the hardiness of any particular species it is a good plan to put in some cuttings during the summer, and winter them in a cold frame, or save a few seeds for spring sowing, then, if the parent plant is killed, stock is at hand and good-sized flowering specimens may be had in the course of a year or two.

Rock Roses do not need rich soil; in fact, plants grown upon poor loam or sandy gravel often give better results than those planted in good ground, for growth is arrested earlier in autumn and the wood becomes better ripened. As a rule, the only

A great many species and varieties are known, but the following will be sufficient for most gardens. The hardiest of all is

C. LAURIFOLIUS, which grows 6 feet or more high and bears during June and July large inflorescences of white flowers, each nearly 3 inches across.

C. LORETI is another very free-flowering, hardy sort. Its parents are said to be *C. ladaniferus* and *C. monspeliensis*. It grows into a dense, shapely bush 3 feet to 4 feet high, with ample dark green leafage. The flowers are each about 2½ inches across, white, with a crimson blotch at the base of each petal, several flowers appearing together in loose clusters. Where but one *Cistus* is wanted this should be selected.

lar blood-red or crimson blotch. It is not quite so hardy as *C. cypricus*.

C. PURPUREUS, the subject of our illustration, is one of the most beautiful of all Rock Roses. Forming a bush at least 4 feet high, it bears handsome dark green leaves and wonderfully pretty flowers, each 3 inches across, the colour a very pleasing shade of reddish-purple with a dark crimson blotch at the base of each petal. Although it is not very hardy, it thrives in many places, notably in Sir Frank Crisp's garden at Friar Park and in Miss Willmott's garden at Warley Place.

C. VILLOSUS, also rather tender, has greyish leaves and rose-coloured flowers.

C. MONSPELIENSIS grows from 1½ feet to

3 feet high and forms a dense bush, the flowers white and borne freely during June and July.

C. ALBIDUS and C. FLORENTINUS are two other white-flowered sorts of moderate growth, while the rather tender C. crispus is conspicuous by reason of its greyish leaves and light red flowers. D.

Moving a Laurel hedge.—Is it possible to move safely into an adjoining trench a well-grown Laurel hedge? We are having much rain.—BUTLER, *New Forest*.

[You cannot with safety lift and transplant Laurels at this season of the year. Better wait until November next, when there would be no risk whatever attending their removal.]

Magnolia macrophylla.—A few years ago a very fine plant of this handsome Magnolia was to be seen in Messrs. Veitch's nursery at Coombe Wood, where, during the summer, it was a very conspicuous object by reason of its large leaves and fine flowers. An even finer tree and, perhaps, the best in the British Isles grows in H.R.H. the Duchess of Albany's garden at Claremont. Three or four years ago that tree was nearly 40 feet high, with a good-sized trunk, and it flowers well every year. *M. macrophylla* is a native of the south-eastern United States, and was introduced to European gardens over 100 years ago. Its rareness at the present time is doubtless due to its being rather fastidious regarding soil and position, and by its being tender in a young state, more especially when growth is very rapid. The leaves often each measure between 1½ feet and 2 feet in length and 9 inches in width, the length being sometimes exceeded by a foot and the width by 3 inches or 4 inches. The cream-coloured or buff, fragrant flowers, each often between 9 inches and 12 inches across, are produced during summer, usually after the leaves are fully grown. Altogether it forms a most striking and beautiful object in the milder parts of the country. It should be planted in a position sheltered from rough winds in light, loamy soil fairly free from lime and containing leaf-mould or a little peat. It is usually propagated by imported seeds.—D.

"Witch's Broom" on the Willow.—This curious growth, which is caused by the insect *Eriophyes triradiatus*, is unfortunately more plentiful this season than ever. In the London area Willow-trees suffering severely from repeated attacks are to be found, and nowhere probably is it more plentiful than in some of the larger parks and on Hampstead Heath, where hardly a tree has escaped. Willow-trees that were quite free from the insect last season are now seriously damaged, and two at least of those on which the growths appeared nine years ago have succumbed to the annual attacks. With the exception of the Goat Willow (*Salix caprea*), most others, both species and hybrids, are attacked, and not only in the metropolitan area but far into the country as well. Spraying with several kinds of insecticides has done little good, but pruning off and burning all attacked shoots in the autumn have been followed by good results. This is difficult, especially in the case of large trees, but at present it is the only known way of keeping the insect in check and is to be recommended.—A. D. WEBSTER in *Gardeners' Chronicle*.

Abutilon vitifolium in Scotland.—This, in a few places in the south-west of Scotland, is quite a success. Probably the finest specimen in the south-west of Scotland is that at Logan, Wigtownshire. That on the wall of the old garden at Monreith is probably the next in point of size and health. The latter stands the winter and flowers annually.—S. ARNOTT.

FRUIT.

GRAPE CULTURE.

THERE is much truth in the article dealing with the culture of Grapes which appeared in the issue of June 17th. In many instances, as "Byfleet" says, a gardener achieves a reputation as a champion Grape grower. He maintains this reputation for a few seasons and then vanishes into obscurity. "Byfleet" is correct in assuming that, in the majority of cases, this is due to the early vigour of the Vines having become less, their constitution weaker, and that, consequently, the bunches are no longer up to exhibition form. There is, however, no reason why Vines of considerable age should not, given proper treatment, produce bunches which will hold their own in any company. There is a case in point in the neighbouring county of Wigtown. I refer to the Vines in Sir Herbert Maxwell's well-known gardens at Monreith. To my knowledge these canes must be close upon forty years of age; at any rate, well over thirty. Even in their early stages they were somewhat heavily cropped, and it was a subject of comment at exhibitions that these rods would soon collapse unless they were eased up. What are the facts? Scottish exhibitors will unanimously agree that Mr. Gordon, Sir Herbert's gardener, is a formidable man to meet in competition at our principal Scottish shows. If my memory serves me rightly, in September, 1913, Mr. Gordon took the premier place for a collection of Grapes at the Royal Caledonian Society's Exhibition in Edinburgh. This feat he again repeated in 1915, and, in addition, he took the leading awards for bunches of separate varieties—no mean feat at an Edinburgh show. His last achievement was admitted upon all hands to be thoroughly deserved, and a verdict such as that from the Waverley Market critics speaks for itself. Mrs. Pince, occasionally difficult to finish, was shown magnificently, Black Hamburg was almost as fine, Madresfield Court was never staged better, and Muscat of Alexandria was noteworthy. Nobody will class Alnwick Seedling as being equal to these varieties in flavour, but as a specimen bunch it was, perhaps, the best in the show. I have referred at some length to this particular case, but I know of other gardens in which similar, if not quite such striking, results have been attained by bunches from Vines which might have been judged to be past their prime, judged by the years which have elapsed since they were planted. The whole question resolves itself into the close and intimate personal supervision which the grower gives to his Vines, to his knowledge of the requirements of each variety, and to strict and unceasing vigilance to detail. The man who is not prepared to sacrifice his own convenience, and, at times, his leisure hours, will never be a successful grower or exhibitor of Grapes, and it is easier by constant attention to maintain Vines in a high state of bearing than to restore that condition when the canes have been, even for a season, comparatively neglected. W. MCGUFFOG.

Balmoe Gardens, Kirkcudbright.

NOTES AND REPLIES.

Peach-tree leaves falling.—Kindly tell me what is wrong with a Peach-tree I have (indoors)? You will see by the enclosed that the leaves are affected, and fall freely. It is a Dr. Hogg. A Princess of Wales next to it and in the same border is quite healthy.—W. T. DEEKS.

[The leaves of the Peach-tree in question appear to us to be infested with

"Leaf Rust," which attacks the foliage of several other species of fruit-tree also. The effect of an attack is to cause a premature fall of the leaf, which corresponds exactly with what you mention in your note. These fallen leaves should be gathered up and burnt, and the whole of the tree sprayed at once with liver of sulphur, dissolving 1 oz. in 3 gallons of warm water in which 3 oz. of soft soap have been previously dissolved. Another season spray the young leaves after the tree has flowered, and set its fruit with ½ oz. solution of the same chemical. As the leaves develop and become firmer and less susceptible to harm increase the strength to 1 oz. per 4 gallons of warm water. Spray at fortnightly intervals, from three to five sprayings being necessary.]

Treatment of Vine.—Owing to alterations, my Vine in cold-house has been moved. The Grapes are ruined for this year. It is making long, inconvenient growths. May I cut them, leaving, of course, the few bunches showing?—BUTLER, *New Forest*.

[The laterals on the Vine in question would be the better for being shortened back to the seventh or eighth leaf—counting from the rod—as it will strengthen the buds at the base of these growths, which, when spurred back in due course in winter and started again next year, will produce infinitely better bunches than if they are left unstopped now.]

Peach Early Grosse Mignonne.—In this we have a variety which is not only early, but which carries fine, handsome fruits as well. These, in addition, are well coloured if a little attention is given to exposing them to the sun by removing obtrusive foliage. *Grosse Mignonne* makes an excellent succession to *Hale's Early*, also a good and early Peach. Even when the former is somewhat sharply forced, the flavour is first-rate. A vigorous grower, over-luxuriance has to be guarded against, for overcrowding is distinctly against the proper maturation of the wood. Firm planting will, of course, do something to check gross wood, although it is noteworthy that *Grosse Mignonne* will fruit upon much stronger and coarser wood than, for example, *Waterloo*. I have noticed the same thing in *Violet Hative* and one or two others of the early Peaches.—KIRK.

Figs.—Trees which are developing the second crop of fruit must be treated to liberal supplies of diluted liquid-manure, and the mulch, if that last applied has with frequent waterings become deprived of any further nutritive properties, should as far as possible be removed and fresh material substituted for it. All this is necessary if the fruits are to attain any size. A humid atmosphere must be maintained until the fruits begin to ripen, and the trees, except when the flowering period is reached, be vigorously syringed morning and afternoon. If closing is done early enough to secure a temperature of 90 degs. little, if any, fireheat is required at night now.—G. P. K.

Pear Louise Bonne of Jersey.—There is this year a full crop of this very fine Pear. In our northern latitude *Louise Bonne* must be given a wall, and, generally speaking, the variety is among the surest croppers. It seems to require double grafting, for if on the Quince it is rather shy in respect of growth, and in unfavourable years the fruits are apt to crack. As regards flavour, there are few who do not appreciate a thoroughly ripe *Louise Bonne* with its vinous flavour and crisp flesh.—W. MCG.

Apricots.—Stoning is now sufficiently advanced for the final thinning to be done. Although more fruits may be left in a given area than is usual with Peaches, this rule should not be carried to the extreme, as is sometimes seen, as the energies of the trees are then overtaxed and their cropping powers crippled for the next season or two. Unless the soil next the wall is found on testing to be really moist, the alley portion of the border should receive a good soaking of water directly thinning is finished.

ROOM AND WINDOW.

CLEMATIS FOR THE HOUSE.

Among the good qualities of the hardy Clematises one of the very best is their value for the house. Where freely grown, as they should be in every good garden, it is a pleasure to see the long, graceful shoots when cut—the firmer they are the longer they will keep, depending from mantelpieces, tables, and vases with a charming grace. Most of the species and varieties are useful in this way, and their season of bloom lasts as long as from May until the autumn. The one here shown I have used for years with great success for its effect in the garden and the house.



Sprays of Clematis Perle d'Azur in a jar.

It is on its own roots, *i.e.*, not grafted in the usual trade way, and produces thousands of flowers every year. W.

Green insects on various plants (F. T.).—The little green insects which you found in the little masses of froth on various plants are immature specimens of the common Frog-hopper (*Aphrophora spumaria*), a small dark brown insect, which springs away when disturbed in a very rapid manner. When in its immature state it injures the plants which it attacks to a considerable extent, for not only does it draw from the plant enough of its juice to feed itself, but also to form the froth covering with which it is surrounded. The best way of destroying this insect is to take a cup of water and a small stiff brush—an ordinary gum brush does very well—remove the insect with the brush, and wash the brush clean in the cup.

VEGETABLES.

REMOVING ARTICHOKEs.

WHAT would be the best time to remove Globe Artichokes (large plants); also Jerusalem Artichokes and Seakale plants (that have not been forced and are about three years old); also strong plants of Thyme about two years old?—ANON.

[Globe Artichokes are best lifted and transplanted in spring, say, the end of March or early in April, according to the weather. As the plants or stools, as they are termed, are large they should be divided, leaving from two to three suckers or young growths on each division. Plant on deeply-worked, well-

length of root attached to them, can then be forced and afterwards thrown away, as they would be of little or no further use. The cuttings, if planted on well-manured ground, and supplied with stimulants during the growing season, will, or should, make very fine crowns by the end of the season. If required to be lifted for forcing they should be set out in rows 18 inches apart, and if space is available allow the same distance between the sets. Plant the cuttings with their tops or upper portions level with the soil, and cover each afterwards with a handful of fine cinder ashes. When they commence to grow remove all but one shoot on each set, leaving as a matter of course the strongest. If the Seakale is required for a late supply, and the blanching is to be done either with pots or by means of fine soil or ashes formed into mounds over the crowns, then plant the cuttings in groups of three, triangular-wise, and 9 inches apart, allowing a distance of 3 feet between the groups. The rows in this case should be 4 feet apart, which provides space for the disposal of the ashes or soil when not in use.

The Thyme roots may be transplanted either in autumn or spring, whichever may be the more convenient. When sending queries please sign each one.]

HOLLAND HOUSE SHOW.

JULY 4TH, 5TH, AND 6TH.

ALPINES.

THE greater wealth of alpine plants is not usually reserved for this show, and this year fewer collections were forthcoming.

Mr. Reginald Prichard, West Moors, Wimborne, had, however, some good novelties, more particularly *Cyananthus incanus leicalyx*, a novelty of distinctive if not attractive shade, *Campanula Kolenatiana* and *Silene Prichardi*, hybrids from *S. Hookeri* and *S. virginica* which have a colour range in salmon and scarlet. In the group from

Mr. J. Box, Lindfield, Sussex, outstanding subjects were *Ourisia coccinea* (scarlet tubular flowers) and *Anemone demissa*, which bears handsome clusters of bluish-white flowers on foot-long pubescent stems. It is obviously a plant of merit. Messrs. T. S. Ware, Limited, Feltham, J. Cheal and Sons, Crawley, and Pulham and Son, Eelsenham, had extensive collections of alpines rich in Thymes, *Dianthi*, Cobweb Houseleeks, and other plants. Messrs. Whitelegg and Page, Chislehurst, also had many good things, their notables, the lovely blue and white *Campanula garganica* W. H. Paine and *C. pusilla* Miss Willmott, whose silvery pale blue bells appeal to all.

Mr. Clarence Elliott, Stevenage, sheeted a rock bank with *Campanulas* Miss Willmott, *cenisia*, *pulla*, *pulloidis*, and *G. F. Wilson* among others, arranging them in informal colonies to represent the established article in the garden. *Campanula Raddeana* was also shown, its lax habit, taller growth, and distinctive bells quite an attraction. *Thymus Serpyllum coccineus*, *Saxifraga aizoides atrorubens*, *Pink Firefly*, and *Pink Octavius Ferry* (rosy-crimson, maroon centre) afforded a touch of brightness to a pleasing whole.

Mr. G. Reuthe, Keston, Kent, had some lovely patches of hardy Heaths, the most brilliant of which was *Erica cinerea pygmaea*. *Rhododendron daphnoides*, an alpine bush of 15 inches high, was smothered with pale pink flowers, and quite a gem in its way. *Ononis fruticosa* (rosy-scarlet), *Saxifraga squarrosa*, *Campanula Raddeana*, and *Polygonum*

manured ground in rows 4 feet asunder, and allow the same distance between the plants. Jerusalem Artichokes should not be lifted until the tubers are mature—*i.e.*, either in late autumn or during the winter. Planting in a fresh site may be done during March—using medium-sized, well-shaped tubers for the purpose, and in rows 3 feet apart and 1 foot between the sets. The three-year-old Seakale plants will not pay to transplant. The best way to deal with them would be to lift the crowns in November, saving all the strong, thong-like roots that will be found attached to them, and making them into cuttings some 7 inches or 8 inches in length, cutting the top part flat and the lower ends in a sloping direction to serve as a guide when planting in March next. The crowns, with a certain amount and

sphaerostachyum were all attractive and good.

Prominent items in a group from

Mr. Maurice Prichard, Christchurch, were *Campanula mirabilis*, a rare species seldom seen, *C. arvensis*, a lovely miniature, and the brilliant hybrid *Geranium Russell Prichard*. *Orchis foliosa*, *Genista tinctoria humifusa*, and *Alstroemeria revoluta*, of rich red tone, were others of merit and importance.

SWEET PEAS.

QUITE a notable lot came from Messrs. Alex Dickson and Sons, Newtownards, their new orange-scarlet variety *John Porter* being given an Award of Merit. *Hawmark* (cream), *May Unwin*, *Blue Picotee*, *Melba*, *Royal Purple*, and *Phyllis* were others in a particularly good lot. Excellent flowers, too, were shown by

Messrs. S. Bide and Sons, Farnham, such as *Constance Hinton* (purest white) and *Fiery Cross* affording a sharp colour contrast. *Golden Glory*, *Edward Cowdy* (orange-scarlet), and the handsome deep mauve *Queen of Norway* were a few that appealed strongly.

Messrs. E. W. King and Co., Coggeshall, arranged a central column with pillars of smaller size disposed around, linked together, as it were, by trails of *Asparagus*. The arrangement was effective. The firm's notable varieties, *Anglian Crimson*, *Anglian Orange*, *Anglian White*, and *Anglian Fairy*, were noteworthy. Messrs. R. Sydenham, Limited, Birmingham, and J. Piper and Sons, Bayswater, also had large collections.

ROSES.

Some eighteen exhibitors showed collections of these, either alone or in conjunction with other flowering plants, the leading growers being well to the front. To three of these gold medals were awarded. Messrs. Alex Dickson and Sons, Newtownards, Ireland, arranged their superb lot adjoining their collection of Sweet Peas, and rarely have they shown better in either section. We regarded *Margaret Dickson Hamill* (rich golden-yellow), *Donald MacDonal* (reddish-scarlet), *Red Letter Day*, *Christie MacKellar*, and *Mrs. W. Quinn* as among the finer sorts staged. Mr. Elisha J. Hicks, Twyford, displayed on pillars and arches and in other ways some of his leading novelties. In this way the single crimson *Princess Mary* afforded a brilliant mass of colour, the creamy semi-double *Joanna Bridge* (very fragrant) being in sharp contrast. The new *Pink*, *Chas. E. Shea*, one of the two "gold medal" roses at the National Rose Show, was in strong force, together with a wealth of other sorts. Mr. Chas. Turner, Slough, arranged a particularly effective group, in which pillars of *Wichuraiana* and weeping standards dowered with blossoms made an imposing picture above the wealth and variety seen in stands and epergnes.

Messrs. Wm. Paul and Son, Waltham, also had an imposing display, making much of their new pillar *Rose*, *Scarlet Climber*. *Goldfinch* was also most effective, whilst masses of *Ophelia*, *General MacArthur*, and *Queen of Fragrance* entered freely into the arrangement.

Messrs. Paul and Son, Cheshunt, also showed magnificent blooms; indeed, we considered these the *élite* of the whole exhibition. Their stands of *Lemon Pillar* and *Mme. Edouard Herriot* were grand, and surely nothing finer in pillar *Roses* than the first-named could be desired. *Rosa lucens The Premier* (*lucens* x *Mrs. A. R. Waddel*) was beautiful among white cluster *Roses*. *Naiad* (Hybrid Briar) opens out its big cream-white blossoms

Magnolia fashion, and, with gold anthers and red filaments, constitutes a picture of rare beauty. The finest thing in a group from

Messrs. W. and J. Brown, Peterborough, was the arches of their new single *Mrs. Rosalie Wrench*, a semi-double of a most attractive shade of rose-pink.

Messrs. H. Cannell and Sons, Eynsford, Kent, also showed a collection in which *Lyon*, *Sunburst*, *Rayon d'Or*, *Molly Sherman Crawford*, *General MacArthur*, *Mme. Melaine Soupert*, *Mme. Jean Dupuy*, and *Sweet Lavender* were excellent.

Messrs. B. R. Cant and Son, Colchester, contributed fine stands of the yellow *Iona Herdman*, together with *Sallie* and *Cupid*, varieties to which we have previously directed attention. In a group from Mr. George Prince the white semi-double *Una* was very good; also *Seagull* and *Goldfinch* among free-flowering cluster *Roses*. Messrs. Stuart Low and Co., Enfield, had in vases and epergnes many of the finer *Roses*, as *Lady Pirrie*, *Lyon*, *Mme. Edouard Herriot*, and *Juliet*. In Messrs. Chaplin Bros.' group from Waltham Cross we thought the new white *Mrs. A. W. Atkinson* the finer and more distinct. In that from Mr. Walter Eastlea, Eastwood, the fragrant flesh-pink and white full double novelty *Dr. Joseph Drew* attracted attention; Messrs. F. Cant and Co. making a good display of *Mrs. C. E. Salmon*, *Vivid*, *Blush Queen*, and others. *Edward Mawley*, *Rayon d'Or*, *Marquis de Sinety*, and *General MacArthur* were some of the best in a fine assortment from Messrs. G. Jackman and Son, Woking.

CARNATIONS.

Mr. James Douglas, Great Bookham, was alone in showing border varieties, the stand also including a few varieties of *Pinks*. The crimson-flowered *Hercules* was very fine.

Messrs. W. Cutbush and Sons, Highgate, N., made an imposing display of their new scarlet perpetual-flowering *Malmaison Sabina*, while such as *Enchantress Supreme*, *Marmion* (scarlet and white), and *White Wonder* afforded variety. In the group from

Messrs. Stuart Low and Co., Enfield, the new white-flowered *Malmaison Charles Blick* was quite a feature, the blooms large and of excellent quality. *Princess of Wales*, *Mrs. Myles Kennedy*, and *Countess of Wilton* were some others in the group. Mr. A. F. Dutton, Iver, Bucks, showed a general collection of perpetual-flowering sorts, *Louvain* and *Lady Meyer*, among others, being remarked, while conspicuous in a group from Mr. Chas. Turner, Slough, were many handsome flowers of the *Malmaison Princess of Wales*. Messrs. Laxton Brothers, Bedford, showed a dozen or so handsome vases of their new salmon-pink flowered *Bedford Belle*, which, while richly coloured, is also very free-flowering and sweetly scented.

BEGONIAS.

Messrs. Blackmore and Langdon, Bath, had the finer display of these, the new double orange-scarlet *Mrs. C. F. Langdon* standing out well from the rest. Other good sorts were *Chrystabel Spry* (salmon) and *White Venus*.

Messrs. T. S. Ware, Ltd., Feltham, and J. Peed and Sons, West Norwood, S.E., also contributed of their fine strains of these valuable greenhouse subjects.

STOVE AND GREENHOUSE PLANTS.

The most extensive collection of these was that from Mr. L. R. Russell, Richmond, whose examples were chiefly of specimen size and particularly well grown.

A well-flowered example of the rarely seen *Medinilla magnifica*, whose pendent racemes of pink always attract, was among good things, while bright-coloured examples of *Dracena Victoria*, well-developed *Alocasias*, and much more assisted in the display. *Gloriosa Rothschildiana*, in flower, was very telling, while many well-fruited examples of *Nertera depressa* also played a part.

Messrs. J. Peed and Son, West Norwood, S.E., showed a particularly good bank of their unrivalled *Caladiums* margined with *Streptocarpus* in variety.

Messrs. R. and G. Cuthbert, Southgate, N., had a most attractive group of *Streptocarpus* and *Gloxinias*, both families containing many fine varieties. In the first named *Rose Queen* and *Southgate White* received Awards of Merit, both being great advances upon existing varieties. The strain generally was of high excellence.

Messrs. W. Cutbush and Sons, Highgate, N., in a miscellaneous group showed the new Ivy-leaved *Pelargonium Radiance* well. It is particularly effective in colour and a great bloomer. Messrs. Godfrey and Sons, Exmouth, Devon, had a large group of *Regal* and *Fancy Pelargoniums*. Messrs. J. Piper and Sons contributed an interesting lot of *Cacti*. *Zonal Pelargoniums* were shown by Messrs. Jarman and Co., Chard, and Mr. Vincent Slade, Taunton.

TREES AND SHRUBS.

In this section the exhibit in the open from the Donard Nursery Co., Newcastle, Co. Down, Ireland, was that most replete of interest and novelty. In this connection the newer *Leptospermums* held pride of place, the rich red of *Nicholli*, the larger if paler flowered *Chapmani*, and the quite new *Donard Beauty*, a rosy-crimson form of the first and which obtained an Award of Merit, being conspicuous. Another plant of importance, *Escallonia Donard Seedling*, also gained an Award of Merit. It is a hybrid between *E. Langleyensis* and *E. Philippiana* having starry, pinky-white blossoms profusely borne upon a bushy-habited, glossy-leaved plant. *Rosa Moyesi*, *Spirea Henryi* (a white-flowered species), and a series of *Olearias*, which included *O. chathamica*, *O. semi-dentata*, and *O. ilicifolia*, were also on view among much else of merit and interest.

Mr. J. C. Allgrove, Middle Green, Langley, Slough, displayed at one end of a most interesting series of hardy plants some well-flowered branches of the golden-cupped *Fremontia californica* and the white crimson-centred *Magnolia parviflora* backed by a mass of *Philadelphus Virginal*, the purest and best of its tribe. *Rosa Moyesi* gave a brilliant display of its coppery-crimson flowers.

Messrs. J. Watqer, Sons, and Crisp, Bagshot, had a fine group of *Kalmia latifolia*, with an edging of *Eurya latifolia*.

Mr. L. R. Russell, Richmond, contributed freely of *Ivies*, *Escallonias*, *Clematis* in variety, species of *Vitis*. A group from Messrs. Piper included several species of *Viburnums*, also *Rubus Veitchi* and *Giraldiana*. In that from Messrs. J. Cheal and Sons, Crawley, *Escallonias* occupied some prominence, together with *Veronicas*, *Philadelphus*, and much else in season. Dwarfed Japanese trees were shown by Messrs. Barr, Covent Garden, and the *Yokohama Nursery Company*, Kingsway.

HARDY AND GREENHOUSE FERNS.

A great bank wholly of hardy Ferns and in well-grown specimens for the most part came from Mr. Amos Perry, Enfield, the collection rich in the plumose forms of *Polystichum* and containing very fine ex-

amples of *Athyrium*. *Scolopendrium crispum nobile* was grand.

Messrs. H. B. May and Sons, Edmon- ton, had a most effective and tastefully- arranged group of Ferns, hardy and exotic, the former very rich in the crested and tasselled Hart's Tongues and plumose and crested *Athyriums* among many others. Among tender sorts the red-tinted *Adiantum Veitchi* was very beautiful; not less striking the all too rarely seen *Pteris tricolor*, which was in excellent health. Silver and gold *Gymnogrammas*, with *Lycopodiums* and *Selaginellas*, assisted in making a very interesting whole.

ORCHIDS.

These were not seen on so grand a scale as usual, though good novelties were fairly plentiful. In Messrs. Charles- worth's group a big centre was formed of the finer *Miltonias*, *Odontioda Chanticleer* (brilliant scarlet) and *O. Brewi callisto- glossa* (glossy maroon, golden crest) being very striking.

Sir Jeremiah Colman, Bart, Reigate, had the rare *Sarcochilus Cecilie* with pink flowers on 6-inch-high sprays, *Cattleya Warscewiczii* King Edward VII., and *Nanodes Medusæ*, the fringed flowers of crimson-maroon very striking. *Disa Luna* (rose-coloured) was very good in a group, and there were some choice *Lælio- Cattleyas*.

Messrs. Sander and Sons, St. Albans, showed *Cirrhopetalum robustum*, *Anguloas*, *Miltonia Isabel* Sander Brilliant, *M. Hyeana Colossus*, and *Cattleya Warscewiczii Sanderiana* were very bright and good, the new *Odontioda General Brussio- loff* of exceptional colour richness.

Messrs. Stuart Low and Co., Enfield, had a big lot of *Cattleya Warscewiczii*, together with *Phalenopsis Rimestadiana* and *Renanthera Imschootiana*. *Cattleya Warneri alba*, some fine *Lælio-Cattleyas*, and *Odontoglossum Lambeauianum* were also remarked.

Messrs. Mansel and Hatcher, Rawdon, Yorks, showed *Miltonia vexillaria Virginal*, *Lælio-Cattleya Aphrodite* (a very hand- some batch), *L.-C. Cora*, and the white *Phalenopsis Rimestadiana* among many others. The outstanding subject in a group from Messrs. J. and A. MacBean, Cooksbridge, was *Odontoglossum Hye de Crom*, one form of which, in maroon and gold, was very telling. *Odontoglossum Leviathan* was noteworthy.

Messrs. Armstrong and Brown, Tun- bridge Wells, had a few of the choicest kinds, most prominent being the new *Miltonia J. Gurney Fowler* (white, rose- tinted, darkest maroon centre, and much the largest yet raised). *Cattleya Mendelli* (new white form) was very chaste and beautiful. *Odontioda Seymouræ* (almost vermilion), *O. Joan* (crimson-red), and *O. Henryi* (a blend of apricot and terra-cotta, with yellow crest, having the handsome spike and proportions of the best *Odonto- glossum crispum*) were much admired.

NATIONAL SWEET PEA SOCIETY.

JULY 11TH, 1916.

The sixteenth annual exhibition, held in the Royal Horticultural Hall on the above- named date, must, from every point of view, be accounted a great success. True, we have seen the hall fuller of flowers, but we remember no exhibition equal to that under review, judged by the quality of the flowers, with which, naturally, are incorporated refinement and the reduction to a minimum of that grossness which in the past, in leaf as in flower, has robbed the Sweet Pea of not a little of its grace and charm. Hence to-day, while we re-

gard this year's display favourably from the quality standpoint, we think it also makes for progress in the direction indi- cated. To bring out all that is best in a flower, be it what it may, is one of the aims both of exhibitions and exhibitors; to do so while retaining its chief charac- teristics represents the highest cultural skill. That is the stage which we consider the best Sweet Pea cultivators have reached at the present time, a stage which, while clearly indicating that the grower is learning more about his subject, also shows that such knowledge is being put to the best use. Leaves like Coleworts and much flower grossness have in the past found their way into this important show; in that recently held they were con- spicuous by their absence.

Here and there were seen a few vacant places for which, doubtless, the recent severe storms, sunless days, and cold nights were largely responsible. This notwith- standing, there was considerable competi- tion in all the leading classes and a show of which any society might feel justly proud. For the flower the day approached the ideal, and if fuller sunlight would have added great brilliance to the whole, its absence so assisted lasting properties that the flowers were as perfectly fresh at the close of the day as when first set up. Moreover, the visitors were enabled to enjoy the feast at leisure. To-day we have to regret that exigencies of space and other matters over which we have no control preclude our giving a detailed report of so good a show, hence the briefest references thereto must suffice.

The Henry Eckford Challenge Cup this year goes to Shrewsbury, Mr. W. H. Hollo- way being the winner. The Sutton Cup for eight varieties was won by Mr. H. H. Lees, Polsloe Road, Exeter, who showed admirably. The John King Challenge Cup also goes to Shrewsbury, Mr. W. Philip Astley being the winner. In the leading classification class Mr. Henry D. Tigwell, Greenford, Middlesex, won with a superb lot. The seedling class for three bunches distinct not yet in commerce brought but one exhibitor, Mr. J. Stevenson, Wim- borne, whose Faith (sky-blue and mauve) and Royalty (reddish-purple) were good.

Mr. E. W. Broad, Trezinger, Fowey, secured the E. W. King Challenge Cup with a handsome lot of flowers, the Burpee Cup for a display of waved Sweet Peas on a space 8 feet by 3 feet worthily falling to Mr. E. G. Mocatta, Woburn Place, Addlestone (gardener, Mr. T. Stevenson), for a most artistic arrange- ment. Thirty vases were set up, each dis- played to advantage; an object lesson in skilful work. In the special division (amateurs) for the new Hawlmark Chal- lenge Cup Mr. Thos. Jones, Ruabon, was an easy first, his flowers good and well staged.

NON-COMPETITIVE EXHIBITS.

These were in strong force and materi- ally assisted the show from the spectacular standpoint as well as affording evidences of skilful arrangement. Gold medals were awarded Messrs. Dobbie and Co., Edin- burgh, Mr. J. Stevenson, Wimborne, Messrs. Alex Dickson and Sons, Belfast, Messrs. E. W. King and Co., Coggeshall, Messrs. Piper and Son, Bayswater, and Mr. Robert Bolton, Warton, Carnforth, for collections of the highest merit and excel- lence.

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THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JULY 12TH.—*Androsace lanuginosa*, *Ethionema coridifolium*, *E. grandiflorum*, *Campanulas* (in great variety), *Potentillas* (in variety), *Sedums* (in variety), *Sempervivums* (in variety), *Aubrietias*, *Dianthus* (in variety), *Ourisia coccinea*, *Delphinium nudicaule*, *Veronicas* (herbaceous and shrubby) (in great variety), *Santolina viridis*, *S. alpina*, *Omphalodes cappadocica*, *Primula Bulleyana*, *P. Cockburniana*, *P. capitata*, *Onosma tauricum*, *Lithospermums* (in variety), *Convolvulus Cneorum*, *C. mauritanicus*, *C. sylvaticus incarnatus*, *Erodiums*, *Gypsophilas*, *Meconopsis*, *Thymes* (in variety), *Glossocomia clematidea*, *Orchis foliosa*, *Cypripedium spectabile*, *Vinca minor variegata*, *Heucheras* (in variety), *Helianthemums*, *Cistus* (in great variety), *Geums* (in variety), *Aquilegias* (in variety), *Linarias*, *Ononis fruticosa*, *O. Natrix*, *O. viscosa*, *Tradescantia virginiana*, *Arenaria*, *Sagina glabra*, *Phygelius capensis*, *Spiræas* (herbaceous), *Erigerons* (in variety), *Romneya Coulteri*, *Indigofera pendula*, hardy *Fuchsias* (in variety), *Hypericums* (in variety), *Spiræas* (shrubby), *Nandina domestica*, *Hedysarum multijugum*, *Menziesias*, *Ericas*, *Rhus*, *Ceano- thus* (in variety), bush and climbing *Honey- suckles*, *Calycanthus floridus*, *C. occidentalis*, *Carpenteria californica*, *Styrax japonica*, *Tricuspidaria dependens*, *Abutilon vitifolium*, *Andromedas*, *Vaccinium pensylvanicum*, *Stranvæsia undulata*, *Philadelphus*, *Viburnum Henryi*, *Metrosideros floribunda* (this has stood the winter and is now flowering freely), *Genista tinctoria*, Spanish Broom, *Robinias*, *Ozothamnus rosmarinifolius*, *Grevillea sulphurea*, *G. rosmarinifolia*, *Solanum crispum*, *Hydrangea hortensis*, *Clematis* (many species and hybrids), *Roses* (many species and varie- ties), *Eryngiums* (in variety), *Acanthus*, *Eupa- toriums*, *Verbascums*, *Delphiniums* (in variety), *Phloxes* (herbaceous), *Chrysanthemum maxi- mum*, *Galegas*, *Enotheras*, *Scabious*, *Berga- mot*, *Lavender* (in variety), *Tritomas*, *Alstræ- merias*, *Gazania splendens*, *Pentstemons* (in variety), *Calceolaria amplexicaulis*, *C. mexi- cana*, *C. plantaginea*, *Salvia patens*, *Stocks* (in variety), *Antirrhinums*, *Canterbury Bells*, *Anchusas*, *Forgeloves* (in variety), *Achilleas*, *Leptosiphons*, *Sweet Williams*, *Phacelia cam- panularia*, *Godetias*, *Clarkias*, *Carnations*, *Tufted Pansies* (in variety), *Liliums* (in variety), *Lupinus arboreus*, annual *Lupins*, *Sweet Sultan*, *Candytuft*, *Nepeta Mussini*, *Sweet Peas*, *Heimercollis* (in variety), *Butomus umbellatus*, *Polygonum polystachum*, *Cyperus longus*, *Rodgersia podophylla*, *Rheum acu- minatum*, *Nymphæas* (in variety), *Iris*es (in variety).

WORK OF THE WEEK has been largely of a routine nature. The Rose garden is now at its best, and the plants require frequent atten- tion in removing the old flowers, cutting back to a strong bud, thus inducing the plants to make fresh growth that will flower in the autumn. Many varieties of Hybrid Teas are excellent for autumn flowering, and these are encouraged to grow as much as possible by keeping the beds well supplied with water in dry weather and occasionally spraying with *Quassia* extract to keep aphid in check. Early-flowering *Chrysanthemums* have been looked over and all weak shoots removed, so as to allow sufficient room for the stronger ones to develop. Neat stakes have been placed in position, and the plants secured to them. Further looping in of the shoots will be neces- sary as the plants grow. Neglect of this often means ruin to the plants when sudden winds spring up. The herbaceous borders have been looked over, staking where necessary and securing shoots that need tying. All old flower-stems and any unsightly shoots were re- moved. The Dutch hoe is used freely to keep down weeds and promote a fine tilth. The old blossoms and seed pods are removed from *Tufted Pansies* in order to prolong their flowering. Neglect of this soon causes a total cessation of blooming, and the plants look starved and untidy. During drought it is necessary to afford copious waterings. Beds of herbaceous *Phloxes* have been given a good mulching of leaf-soil, and the growths of the plants supported where necessary. In the

rock garden the groups of each plant are regulated as soon as the flowering season is past. Seeds of all the choicer subjects are gathered and sown as soon as ripe. The watering of small alpine plants in the crevices of the rock garden is practised regularly, for into many of these positions rain seldom penetrates. The mowing of lawns occupies considerable time, while the cutting of Grass verges also requires frequent attention.

Lilford Hall, Oundle. F. W. G.

SOUTHERN COUNTIES.

Late Muscats.—As these are now stoning, close stopping of sublateral growths will, until the ordeal has been safely passed through, be suspended. By then the bark on the laterals will have assumed a nut-brown hue, thus affording outward indication that the perfecting of the seeds is complete. All berries which contain their full complement or nearly so of seeds will then commence visibly to swell again, but those which are seedless or contain but one seed either lag behind or fail to swell. This furnishes a safe guide when the usual scrutiny of the bunches takes place after the stoning is past as to which of the berries should through this defect be removed. Surplus but sound berries should also at the same time be nipped out wherever there is a likelihood of their being too close together as they approach maturity. This is the stage, too, at which the final dressing of artificial manure should be applied and washed in with a good soaking of tepid water.

Other late Grapes.—These, too, have begun stoning, and for some little time care is necessary to avoid scalding taking place. The principal cause of this malady, if such it can be termed, is a low night temperature, which causes the berries to turn cold and become covered with condensed moisture. Then when the sun strikes them in the early morning each globule of moisture acts as a lens, and scalding of the skins follows. The remedy is simple, and consists, firstly, in keeping the hot-water pipes warm throughout the night, which prevents moisture condensing and keeps the skins warm and dry. A chink of air at the apex allows moisture to escape, and at the same time tends to keep the internal atmosphere in circulation. Another thing is to avoid damping too heavily, and in extreme cases to omit doing so both at closing-time and first thing in the morning. Extra attention can then be paid to these matters during the day for the time being. The roots must not be allowed to feel the want of water, and when necessary to apply it choose a time for doing so when the ventilators are fully open. When the stoning is complete the bunches of varieties whose berries attain a large size should be looked over and a further thinning given where necessary. If very much growth has been made while stoning was in progress, stopping must be cautiously done, as the removal of a great quantity of growths at one time tends to paralyse the root-system and oftentimes leads to shanking. Where there is room for doing so, some of these shoots may with advantage be tied down to the trellis, as these tend to encourage further activity, and the greater the number of feeding roots the finer the berries and more perfect the finish.

Other vineries.—Houses in which the Grapes have just started colouring may be freely ventilated both at the top and front in warm weather. When very hot, the door or doors of the house may, in addition, be stood open also. Until the colouring becomes more advanced the house may be closed for an hour or two in the afternoon, but a little air must be admitted again at seven o'clock, both at front and top, and left on throughout the night. The object in closing is to facilitate the swelling of the berries, which, if all conditions are right, proceeds at a rapid pace when this stage is reached. Whatever is necessary in the shape of damping must in this case be done during the forenoon now. Vines in a less advanced stage must still be treated as mentioned in former notes.

Late Melons.—A house should shortly be cleaned and got ready for a late crop of Melons. In the meantime the plants to rather more than the required number should be raised by sowing seeds singly in small 60 pots,

Wall trees.—Young growths on Peach and Nectarine trees must be kept tied in or otherwise fastened back to the wall, as described in a former note. Extension growths on other trees should also have the same attention as they are difficult to deal with if once the wood is allowed to become crooked and deformed. This matter, important as it is in regard to trees which are fast becoming established, is still more so where young trees are concerned, as no after attention will remedy neglect in this direction.

Rose garden.—For the next few weeks this will be looking its best, and, as far as existing conditions will allow, such matters as the removal of spent blooms, stirring the soil to preserve a neat appearance and to a certain extent preventing mildew attacks, should have attention. A. W.

MIDLAND COUNTIES.

Vines.—As soon as the Grapes in early houses are cut the Vines are syringed copiously to cleanse the foliage. Later houses where the Grapes are swelling need looking after very closely during hot weather. Maintain a humid atmosphere by damping all places thoroughly several times a day. Air should be admitted freely when the weather is favourable, and as soon as the fruit commences to colour a little should be left on all night, as this tends to a more perfect finish. Keep the roots well supplied with moisture, and feed with an approved Vine manure or farmyard liquid at a reasonable strength to assist the Vines to perfect the crop.

Peaches and Nectarines.—Established trees bearing full crops of fruit are given occasional applications of liquid manure and Le Fruitier. Healthy trees in full bearing with their roots in a properly drained border require large quantities of water, particularly during the time the fruits are swelling. Continue to train the shoots and pinch the lateral growths so that the fruits will be the better exposed to sunshine. If any shoots are noticed to be extra strong it will be better to cut these out, as their presence is apt to rob the weaker growths.

Schizanthus.—A sowing of this will be made during this month in order to raise plants for spring flowering. Care must be taken to sow the seeds thinly, as overcrowding at the start is detrimental and may result in failure. When the seedlings are large enough to handle they are transferred to pots or shallow pans, placing them in a cool frame as near to the glass as convenient.

Cyclamen seed will be sown within the next few days. I prefer to sow the seeds in 6-inch pots, half filling these with crocks, placing over these a layer of Moss and then some of the rougher portions of the compost, finally filling to within 1 inch of the top with that portion of the compost that has been passed through a 3-inch sieve. Equal parts of loam, leaf-soil, and a little coarse sand form a suitable compost. Before sowing the seeds soak the soil with water applied through a fine rose. Sow the seeds thinly and press them well into the soil, being careful afterwards not to cover them too deeply. Give a final watering through a fine rose, and place the pots in a close, moist position in a temperature of 65 degs. to 70 degs.

French Beans.—The latest sowing of these has been made on a warm border and where it will be possible to afford protection at night in the autumn. Plants from this sowing will yield supplies late in the season, when those in exposed situations have been cut off by early frosts.

Winter Spinach.—A good sowing of Prickly Spinach will be made about the 20th of this month for use in late autumn, and another sowing about ten days later for winter and early spring supply. It is better to make two or three sowings during the month than to sow a large quantity at one time. The ground for this crop should be in good condition to ensure a free growth. If it has been manured for the previous crop it will require to be deeply dug and allowed to remain untouched for a few days until the surface is dry enough for treading, previous to which a good dressing of soot should be given, so that by treading and

raking the bed it may become thoroughly mixed with the surface-soil. When the bed has been made level draw drills at 18 inches apart and 2 inches deep. A careful watch for slugs must be kept over the plants raised this month, for if this crop is destroyed the season may be too far advanced to replace it.

Tomatoes in the open air.—The unsettled weather has been much against Tomato cultivation out-of-doors. The plants must be kept free from side-shoots to enable the light and air to pass freely among the blooms. When a few trusses of fruit have set on each plant the tops should be taken out. At this stage a top-dressing of artificial manure pricked into the soil with the point of a digging fork will encourage the development of the fruit.

F. W. GALLOP.

SCOTLAND.

Cœlogyne cristata.—Among the more accommodating Orchids, where there is not a special house for them, *C. cristata* is very useful, rivaling in that respect the *Cyripediums*. Just at the present time the young growths are coming away very strongly, and care ought to be taken that these are encouraged in every way. No hard-and-fast rules can be safely laid down with regard to the requirements of these plants much depending on the temperature of the house in which they are grown, the period during which the plants are exposed to sunshine, and the suitability of the compost in which they are grown. Every endeavour by means of regular attention in respect of moisture, light, and correct ventilation should be provided, and if the plants are kept clean and in good health excellent growth will be followed by plenty of bloom, the latter coming in very useful during winter or early spring, according to the temperature to which the plants are subjected as the time of blooming approaches.

Cytisus racemosus.—No one, I think, can have too many plants of this. Good specimens are useful for furnishing large houses, but equally valuable in early spring are small bushy pieces in 5-inch pots. During the week a quantity of strong cuttings was secured from old cut-back plants and inserted in Cocoa-fibre in the propagating-pit. Kept close, these, when well rooted, are put straight into their flowering pots. They are then gradually inured to a lower temperature, until, in September, they are put into a cool pit, in which they remain until removed to the greenhouse where they are to bloom. Naturally, being of vigorous growth and restricted to 5-inch pots, these plants appreciate plenty of liquid-manure given at close intervals, but in a weak state. Other plants which were potted off or repotted during the week included *Libonia floribunda*, Balsams for late autumn work, a good number of brightly-coloured *Coleuses*, *Lorraine* and other *Begonias*, *Tradescantias*, and some young pieces of stove and greenhouse *Thunbergias*.

Chrysanthemums.—Excellent growth is maintained in the case of winter-flowering *Chrysanthemums*. These are fewer in number than has hitherto been the case, and, with but few exceptions, they will all be grown in bush form, which, after all, is the most satisfactory way, except, of course, where exhibition is being contemplated. In the course of the week a beginning was made with the staking of the plants. At their present stage of growth the succulent young growths are very brittle and apt to be snapped by heavy rain. The final pinching has been given to such plants as required attention in that respect. Earwigs are at times apt to be troublesome, more so in some seasons than others, and a sharp look out must be kept in order that damage may be avoided.

Hardy fruit.—In many gardens the crop of fruit will be thin, always excepting Gooseberries, Currants, and Raspberries, which are fairly plentiful. Strawberries are in this district much later than usual, owing chiefly to the inclement spring and the continuance of unseasonable weather. In the case of wall-trees and fruit-trees in the open in general, the question of feeding will now be considered. A tree which is making luxuriant growth needs no assistance, but when the right season comes the roots may with advantage be

checked. It is the free-bearing tree which ought to be encouraged, and whatever manure is given, let it be given from the surface, either as a mulch or in liquid form. So far as the removal of useless wood is concerned, Peaches may be pruned at any time, and any naked branches dispensed with without delay. This is especially true of trees in pots. Stone fruits generally ought to have a firm root-run, but their roots must be well nourished. When fruit-trees are grown in the garden round the edges of vegetable quarters nothing should be planted within 4 feet of the trees, and the spade should not under any circumstances be permitted to encroach within the same distance.

Ferns under glass.—At no season of the year are Ferns under glass more attractive than now. The fronds of all the species have now reached their fullest development. Shade is necessary. In a general way it is not recommended that a lavish supply of chemical manure in solution be given to Ferns. The indiscriminate or careless use of concentrated stimulants is apt after a time to react upon the plants; and so, preferably, weak soot-water at fairly close intervals is, I consider, of more and lasting service. Highly fed plants never last long, and where good, sound loam forms the staple of the potting compost, but little artificial manure is necessary for everyday specimens. W. McGuffog.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Calceolarias failing (Ayton).—The disease that has killed your Calceolarias is of a fungoid nature, the seat of this being in the bark at or about the collar of the plant. The only remedy is change of soil, with cool treatment at all stages, to secure strong, healthy plants to turn out early in the spring. In a few words, grow the plants hardily, lift with good balls, plant carefully, water well during dry weather, and mulch freely.

Thrips on Rose (F. Marshall).—Your Rose has been attacked by thrips and red-spider, the cause of which is dryness at the roots. You ought to give it two or three soakings of water, and at the same time a heavy mulch of good, rotten manure. Syringe it freely every day for a time, and if the weather is dry water freely. This will get rid of the pest, and with due attention the plant will in time recover.

Ivy-leaved Pelargonium sporting (Mother of Thousands).—The white flowers that have appeared on the pink-flowered Ivy-leaved Pelargonium are known as a sport. If you put in cuttings of the shoot on which the white flowers are borne the young plants will in all probability bear white flowers. The Wistaria will, no doubt, flower in time, but it would be far better to plant it out against a wall in the open air, so as to allow it more freedom of growth.

Seedling Zonal Pelargoniums (D.).—Seedlings of these plants are almost always gross growers. The best way to get them into flower fairly early is to shift them into 5-inch pots, and let them remain in these and grow as tall as they like, not pinching them at all. The first object is to see colour and quality of flowers, and plants so grown usually give these at the first in good form. If not liked, the plants may be thrown away. If they are pretty good, then tops should be taken off and rooted as cuttings in small pots, and these will later show the exact character of the variety.

Fuchsia buds failing to develop (W. J. S.).—You give us no clue whatever as to your treatment of the plant. An excess of stimulants, with too much water at the roots and a close, stuffy atmosphere, will often cause Fuchsias to behave as yours are doing. Discontinue manure-water, if you have been giving the plant any, give plenty of fresh air, and your Fuchsia will soon recover. You are keeping the Ivy-leaved Zonal Pelargoniums too close; what they want is more air. We found traces of green-fly on the leaves of the Ivy-leaved plant, and this pest, if allowed to gain the upper hand, would very soon ruin the plant.

FRUIT.

Peach-trees unsatisfactory (J. Ross).—Your Peach-tree leaves are what is known as blistered, the result of either frost or cold winds on the tender foliage. There is also green-fly on the leaves. First go over the trees, remove all the worst leaves and burn them, then syringe in the evening with Tobacco-water or Quassia extract. Repeat the syringing in a few days in case any insects escape.

SHORT REPLIES.

Tipperary.—1, Your Potatoes have been attacked by the Potato disease (Phytophthora infestans). The variety is evidently one very liable to disease. Had you sprayed the haulm when first noticed, it is just possible that you might have checked it. 2, Your best plan would be to get the list of some maker, and make a selection for yourself. The prices vary. You can get a very good one suitable for your purpose for about 21s. 3, Of very little value to a practical gardener.—**F. E. A. V. B.**—The best way is to pound the egg-shells up and feed them to the fowls.—**J. B.**—Do you mean summer pruning? If so, this should be attended to at once.—**Margaret Hills.**—The Rose you send is one of those that refuse to open well, and we should advise you to destroy it and replace it with one of the many fine Hybrid Teas now to be had.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**Thos. M. Skinner.**—Hydrangea petiolaris.—**J. F. G.**—1, Inula glandulosa; 2, Helixine Solieroli.—**Mrs. Oliver.**—Arum Dracuncul.—**T. Butler Cole.**—Platyedon grandiflorum.—**W. Grant.**—1, Polystichum angulare; 2, Lithospermum purpureo-crenulatum; 3 and 4, Specimens insufficient.

Name of fruit.—**Gilbert.**—Apple: Reinette de Canada.

Roses.—What is the name of the carmine sport of Mrs. Laing (H.P.)? What are the two best strong-growing H.T.s? Coppery colour, free-flowering, and fairly full flowers wanted.—**G. H. R.**

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

It having been found inadvisable to hold the usual festival dinner this year in aid of the funds, the Committee of the Gardeners' Royal Benevolent Institution have issued the following appeal:—

May we plead for your practical sympathy on behalf of the Gardeners' Royal Benevolent Institution, a most deserving national horticultural charity, the immense benefits of which we can vouch for to many most worthy and necessitous men and widows. We hope you will kindly cheer the Committee by sending a subscription or donation to help them to maintain the good work which has been of such great value during the last seventy-eight years. The demands on our resources are ever on the increase, but never more so than at this present crisis in our nation's history. We urgently need funds to support the 265 annuitants, and there are no less than forty-two applicants anxiously awaiting aid, of whom sixteen are widows, who cannot be assisted from lack of means, and which number is constantly being added to. We therefore earnestly appeal for your generous financial assistance.—We are, yours very faithfully,

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FALSE GARDEN DESIGN.

THERE is so much stupid and thoughtless work done in the name of garden design that part of the following protest made by Mr. E. Swale in the *Gardeners' Chronicle* deserves a thought. Such absurd work as carried out by people of the building order, who think that a garden should be adorned on the same principle as the decorations of a house, has given us the sham Italian garden. It is a survival of the old idea of the Dutch and Germans, who cut trees into the shapes of walls, and is as dead as a door-nail. The expense of it was a very great evil, apart from its ugliness, because so much money was spent on it that there was not much left for the true object of a garden, which is to grow beautiful living things. Among the unwise things done was cutting little canals quite near the house and tub-holes on the face of the garden, or even right against the house. These absurdities were ugly and dangerous, and served to increase the number of insect pests.

How often we find in the best regulated gardens of the present-day type some things as incongruous as those of "Cremorne" or "Rosherville" of long ago! It is surprising that in some gardens, otherwise beautiful, there still lingers a strong suspicion of those false Italian styles. We are rapidly losing touch with the garden, as a garden, and it is becoming a mere crowded place of artistically-placed vases, walls, pergolas, and Lily ponds, without meaning or reason, with only a secondary thought, if they are considered at all, to the flowers and shrubs to be grown there. The first consideration on laying out a site is where to place the imitation stone sundial, which is generally in a prominent place where the sun does not touch it. That is of no consequence if placed at the end of a long stone-flagged path, most artistically paved with broken slabs, so that small, creeping plants can be placed between the joints for the special purpose of being trodden on. No self-respecting modern garden would be without this absurdity. In looking over the pages of your contemporaries it has struck me that Lily ponds and troughs for water-plants are invariably death-traps to children and old people. There are two forms I take exception to. The one that is placed across a well-defined walk or

avenue, where the eye carries one beyond, and gives the assumption of a continuous safe path. The other where steps lead down from a summer-house or terrace and plunge you up to the neck among the frogs.

Everyone must have a rock garden nowadays, and one sees banks strewn with unsightly boulders, of all shapes and material, that would give any geologist fits, and of the most unlikely strata—often, of course, in the wrong position, and suggesting fearful earthquakes at a very recent period. A rock garden we will have at all costs, and yet we despise the old lady who saved up all the best bits of coloured china and glass to place on her rockery, because she said "it made it look so bright and cheerful." You have noticed, also, what a tendency there is at the present time to plant the garden with old oil jars and heavy terracotta vases, that look like the remnants of Belshazzar's Feast, or the overflow from the "Forty Thieves." I always have a great longing to play skittles when I see them. Near me there is a shed with a corrugated iron roof, on which is planted the blue Iris, the idea being to cover up the unsightliness—but can anyone, especially a lover of his flowers, conceive a more unsuitable place than this for an old favourite. The "vogue" for strong contrasts is responsible for the white garden furniture dotted about our lawns and now so fashionable, but to anyone with a sensitive eye this is as bad as newspapers scattered about. All objects that glare, or attract attention, other than flowers, should be avoided.

NOTES OF THE WEEK.

The Maiden Pink (*Dianthus deltoides*).—There are some bright forms of this native Pink as well worth a place on the rock garden as any of the race. I use it freely as an edging plant and also for low retaining walls.—W.

The Azores Forget-me-not (*M. azorica*).—Rich as we are now in the blue Forget-me-nots, it is a pleasure to see this fine dark purple *Myosotis*. It is easily raised, but, being a little tender, is often lost or forgotten. It should be raised from seed now and then to keep up a stock of one of the most interesting plants for the rock garden. From Sir Frank Crisp.

The Golden Flag (*Iris aurea*).—This fine Iris is happy in any moist border or among shrubs, but the best effects from it are among reeds and waterside plants. It is not there so strong as when grown in rich soil, but the effect is better, even though the flowers be fewer.—W.

Lonicera tragophylla in Scotland.—This Honeysuckle, first shown at the International Exhibition in 1912, is doing well against a wall at Monreith, Wigtownshire, Sir Herbert Maxwell considering it one of the best of the race. The flowers are large and yellow, but they have not the fragrance which we associate with most of the *Loniceras*. It is a rare plant in gardens and has as yet found its way into few books of reference.—S. A.

A fasciated Foxglove (*A. E. Tomlinson*).—The cup-shaped bloom you have on the point of the spike of the Foxglove is by no means uncommon. We have seen them frequently on plants of the garden strains of *Digitalis*. It is the product of two or three blooms fasciated or run into one, and has nothing to do with the Canterbury Bell. Seeds saved from the resulting pods have been frequently sown in the expectation that similar flowers would be produced, but no such thing has invariably happened.

Habranthus pratensis.—Sir Herbert Maxwell, Monreith (page 229), states that this fine *Amaryllid* is not admitted to the "Kew Hand List" of 1902. It is, however, to be found in both the "Hand Lists of Tender Monocotyledons," namely, in that published in 1897 and that of 1915. In both instances the genus *Habranthus* is referred to *Hippeastrum*, the species under notice being given as *Hippeastrum pratense*, Baker, Chili. In the 1915 edition the recently-adopted spelling of Chile is followed.

Pink Progress.—"E. B. S." had some interesting notes on Pinks in the issue of June 17th (p. 296), but he made no reference to the above, of which I have a nice display from a group of eighteen plants on a west border. Its peculiar colour, a magenta shade, makes it unsuited to be placed indiscriminately, but the large flowers look handsome near clumps of the old dark blue Spiderwort (*Tradescantia virginiana*). Some people, seeing it for the first time, think it a variety of border Carnation, but it has the true Pink scent, and flowers at the same time as other Pinks. Unfortunately, it has the drawback of Mrs. Sinkins and Her Majesty, a split calyx, though its tall habit—18 inches

—big flowers, and uncommon appearance make one almost willing to overlook this fault.—C. T.

Deutzia gracilis carminea.—We owe much to Messrs. Lemoine, of Nancy, for the beautiful shrubs they have raised and introduced to gardens. The Deutzias they have raised are numerous, but among the prettiest is *D. gracilis carminea*, which has all the grace of *D. gracilis*, with its elegant arching, slender branches. To this has been added the distinct colouring of the flowers, which are carmine-pink in the bud and clear rose when open. In one of the borders at Monreith I saw it lately in fine flower.—S. ARNOTT.

The Gentianette in 1916.—This (*Phacelia campanularia*), one of the most beautiful plants of the Californian flora, may often be sown in the open ground with success, but this year the seeds have not come up. It may have been due to bad seed, as last summer was not a good one for seed-sowing. Happily, some plants of last year seeded in a rose bed, and the result is now (in mid-July) a fine bloom on strong, sturdy plants. The spring-sown in normal years usually grows thickly together and the bloom is often short-lived. The best way I see now is to sow in autumn thinly in some bed or border not to be dug over. This plan need not prevent sowing in spring (April), and both may be carried out over a large part of the southern country.—W.

The Letton House Briar.—I think Mr. Arnott has confused this variety with some other. I received it several years ago from Miss Anderson, Barskimming, Ayrshire. Mr. Arnott describes it as an early bloomer, and that "Pink Arches" is a later variety. Now the variety we have as Pink Arches is passing away before the first flower opens on the Letton House Briar, which is now (July 12th) at its best. The latter is certainly not a variety of *R. alpina*, but it is a very choice subject to form an isolated bush on a lawn, requiring no pruning beyond occasional removal of old wood, growing about 8 feet high and about the same in diameter, well furnished all round, and producing a fine mass of single, deep pink blooms.—HERBERT MAXWELL, *Monreith*.

Repotting Ferns.—I quite agree with the reply at the end of Chas. T. Drury's criticism of the notes upon Ferns (p. 234). Mr. Drury is altogether wrong if he pots his Ferns while they are in a dormant state, and any success which he may have attained by following that method is more a matter of good luck than of good guidance. The correct time, of course, as the note indicates, is when the plants are well on the move, the reason being rightly given. No practical Fern grower would repot or divide his plants when dormant. Mr. Drury's petulant objection to the advice given in connection with turning the plants in order to induce symmetry is neither here nor there; the matter is entirely one of personal opinion, and one opinion is as good as another in such a trifling affair.—W. McG.

Saxifraga Dr. Ramsey.—This, one of the best of the silvery summer-flowering hybrid Saxifrages, is said to have resulted from crossing *S. longifolia* and *S. cochlearis*. There is practically no evidence of the *longifolia* influence, and one would rather have suspected, both from the leaf growth, the size of flowers, and their copious spotting of reddish-crimson, that *S. Macnabiana* had in this instance been wedded to *S. cochlearis*. The stature of the hybrid also agrees with these, as does the time of flowering. In any case Dr. Ramsey is too good to be absent from any collection of June-flowering varieties.

Besides being of a genial nature and easy to grow, it also seeds freely, the seedlings showing considerable variety of leaf-growth. The plant itself is not, however, slow of increase, and the offsets, pricked off in an inch-deep bed of pure sand, soon make roots, the single rosettes attaining 2 inches to 3 inches across. At flowering time the hybrid reaches 8 inches or more high, the graceful arch of the flower-sprays but adding beauty to a plant of distinction and merit.—E. H. JENKINS.

Gentians in Grass.—It is, as "W." justly remarks, hopeless to attempt to grow *Gentiana verna* in lowland Grass. We find no difficulty in growing it at the foot of a rock wall in gravelly loam with lime, provided that when the plants begin to thrust themselves out of the soil, and before they get leggy, fine gravel and loam are spread thickly round them and worked into the tufts. The common Stonecrop (*Sedum anglicum*) forms a pretty and helpful carpet for this Gentian. The Willow Gentian (*G. asclepiadea*) is easily naturalised in woods and meadows, where it seeds itself abundantly. I do not know whether it dislikes lime, but it certainly does not need it.—HERBERT MAXWELL, *Monreith*.

A Valerian-covered quarry.—Passing through Gravesend in early June I was struck with the beauty of an old disused quarry of considerable extent. The perpendicular walls, over 30 feet in height, were ablaze with both red and white Valerian, the soft grey of the walls peeping through at intervals giving additional effect and relief to this beautiful picture. The Valerian—evidently assisted by the air in the district—had found a foothold, and revelled under the conditions. The beauty of the Valerian in such a position is a striking lesson to those who possess one of these old quarries, and clearly demonstrates how, with a few plants put in along the higher ledges, time and Nature will do the rest. I noticed, too, that a railway ran past one end of this quarry, and in gorgeous masses on both banks, growing freely among the long Grass, was this plant. I have often seen the Valerian on low walls in Devonshire forming long, broad masses, but the magnificent display produced in this quarry and on the railway banks at Gravesend surpassed in effectiveness anything previously seen.—PRE. E. M., *64th Prov. Batt., Suffolk Regt.*

Alstroemeria aurantiaca.—I have been struck with the rapid growth which this makes from seed when in congenial surroundings. The seed takes a long time to germinate, but if sown in the autumn as soon as ripe it will germinate freely the following spring. The young plants then make rapid progress—more below than above ground, I think, for there does not seem much in the way of stem or leafage to show by the end of the growing season, but the following spring up come great strong-flowering stems, which grow several feet high and flower as freely as if the plants had been long established. I think the reputed capriciousness of this species arises from its intense dislike to being moved more than from any other cause, as it does not seem at all particular as to soil provided this be light and well drained and the position sunny. After being moved it seems to sulk for two or three years, as Mr. Cornhill describes (page 336), and it is therefore best, and saves time, to grow it from seed, which should be sown where it is to bloom if possible, or else one or two seeds in a pot, to be planted straight out subsequently without disturbing the roots in any way. It is worth taking some trouble over, for it is

a gorgeous subject either for the border or for cutting, and a large group in full blossom is a sight to be remembered.—N. L.

Mutisia decurrens in Scotland.—The handsome *Mutisia decurrens*, from the Andes of Chili, is rare in gardens. It has a habit of dying off and only a few appear to succeed in establishing it permanently. It has, however, been successfully grown even in Scotland, and I understand there is in an Edinburgh nursery a plant which has occupied its present position for quite a number of years. When Mr. T. Hay, of Greenwich Park, was at Hopetoun, it was cultivated there with success against a wall. At Monreith, Sir Herbert Maxwell has two good plants, one in a warm position against a wall, and the other in the partial shade recommended for it in gardening books. The former is the better of the two and looks as if it had become established, as it is sending up suckers round the original stems. From what I have seen of this *Mutisia* I consider its loss is often due to cultivators being too anxious to propagate it by removing the suckers instead of allowing most of them to remain.—S. ARNOTT.

Ozothamnus rosmarinifolius.—This pretty composite has been flowering uncommonly well this year, and large bushes white with the miniature clusters of starry flowers in May and June make quite an effective picture in the landscape. It is distinct, too, a fact which counts for much. The species seems far more hardy than is usually supposed, and while in the Isle of Wight I have seen it trained to a wall with very indifferent results, I recently saw a nearly 8 feet high bush of it in Lady Arthur Paget's garden on Kingston Hill sharing with Hollies and the hardiest of things the fullest exposure. The natural soil is light and warm, a fact which may, to some extent, account for the excellent health of so fine a plant. The "Dictionary of Gardening" gives its height (in Australia) as "8 feet to 9 feet," hence the plant referred to is of quite mature size, while such success so near London should tempt others to try it. The flowers possess a peculiar and distinct odour, and whiten appreciably after removal from the plant. A spray of it in a room and not in water for the past three weeks unmistakably proves this.—E. H. J.

The Silk Vine (*Periploca græca*).—This is well worth attention by reason of its luxuriant growth, purplish blossoms, and curious fruits. It is easily distinguished by its milky juice, for if a twig is broken or a leaf removed the milk-like sap exudes at once. The branches attain a height of more than 20 feet when growing near a suitable support. The flowers appear in June and July, each one being about an inch across, dull purple in colour, several being borne together in clusters 3 inches across. The cylindrical fruits, each about 5 inches long, are borne in pairs, the seeds, as is common in the Asclepiad family, being surrounded by silky hairs. The home of this climber is South-Eastern Europe, and it is one of the plants that attracted the attention of our soldiers in Gallipoli last summer, for fruits have on several occasions been received from them for identification. Like other strong-growing climbers, it is seen to greatest advantage when planted at the base of a large bush or small tree, over which it may ramble at will.—D.

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PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

NYMPHŒA COLOSSEA.

THIS is the noblest, so far, of the white Water Lilies raised by M. Latour-Marliac, and, if he had never given us anything else, it would have been of great service to our gardens. I have it in open water fearless and beautiful every year. The group shown is in a small pool where it does even better, the flowers being more protected by their surroundings. It is hardy under all conditions. W.

SAXIFRAGA CALABRICA.

I WOULD recommend every lover of choice Saxifrages who is not already possessed

flowers equal to those of the best *S. longifolia*; indeed, the flower effect is, that of the latter, the leaf growth that of an enlarged *S. lantescana*. Its chief garden value, however, lies in the fact that, given generous treatment, it is a perennial-flowering *S. longifolia*, hence good enough for all. In the open it flowers in June and into July. E. H. JENKINS.

NOTES AND REPLIES.

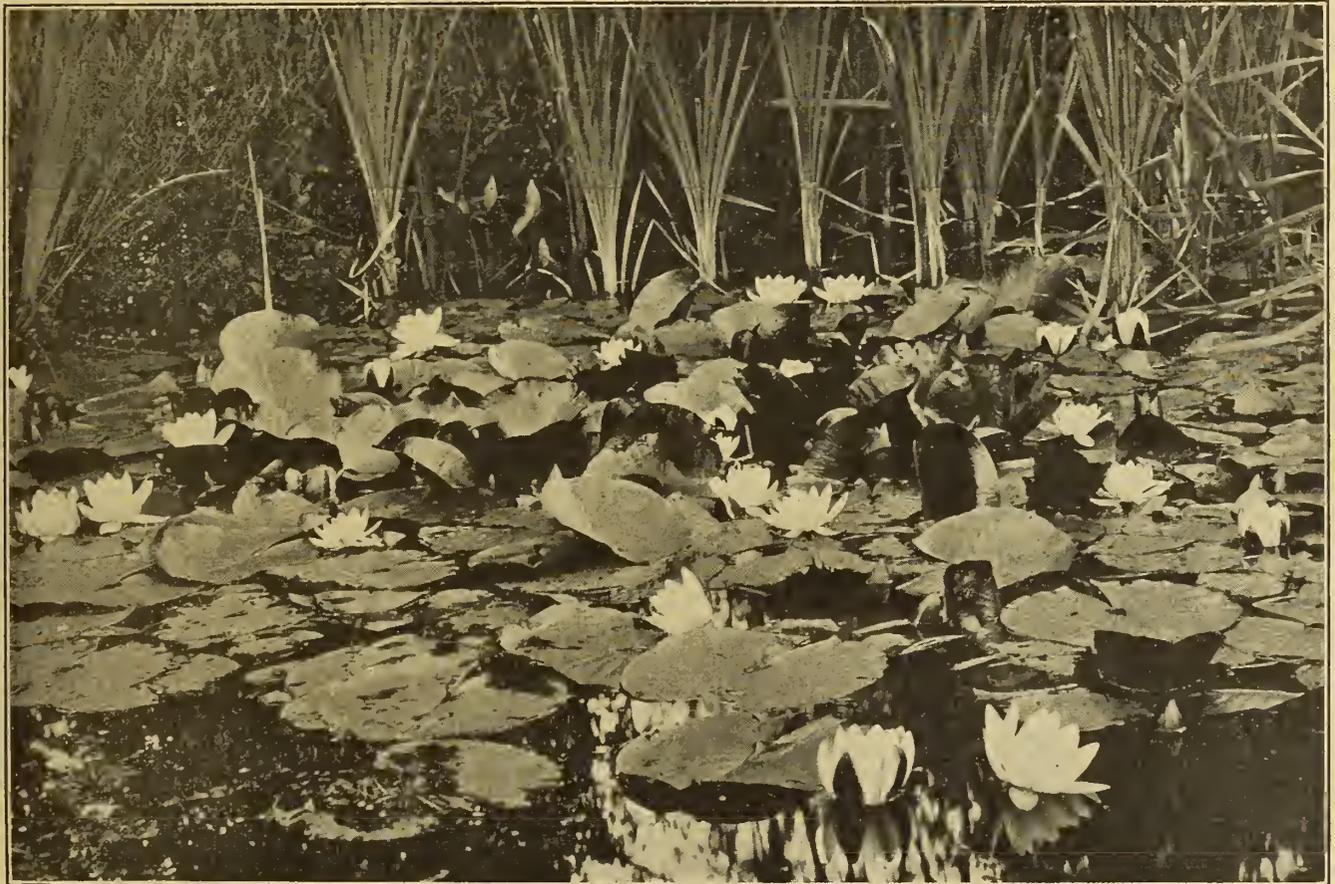
Wall plants.—I know the garden well from which "Kirk" writes, and can bear out what he says about *Erinus alpinus* on the walls thereof. *Centranthus ruber* I know well on many walls, while *Linaria Cymbalaria* is a nuisance in some places on walls, but gives a veil of beauty on others. I know some old gardens where *Campanula muralis* has become established on the walls, greatly to their adornment. A very uncommon wall plant, so

among the stones of a retaining wall in a hot, dry position in limy soil. I do not think it is particular about lime, as I have seen it growing like a weed in poor, sandy, peaty soil on the flat, under the shelter of a south wall. The flowers, which appear in August and September, are of a lovely shade of blue, and the foliage turns red in the late autumn, thus prolonging the charm of the plant. No rock garden should be without it.—W. O.

INDOOR PLANTS.

NOTES AND REPLIES.

Clerodendron fallax.—This is very useful for the greenhouse at this period of the year, for, though early in the season it requires a warmer structure, no fire-heat is needed during the summer. It may be readily increased from cuttings in early spring, and if the young plants are grown on freely, good flower-



Nymphaea colossea. Hillbrook Place, mid-July.

of this good kind to obtain plants of it without further delay. It came to me quite accidentally as *S. catalaunica* a few years ago when hunting for extra large plants of *S. Cotyledon pyramidalis* for an order. The firm had none of *S. Cotyledon pyramidalis*, but strongly recommended *S. catalaunica*, which they then grew in its place and found it better. Recognising there was something wrong, and knowing the firm would not be growing for market work anything of an inferior character, I ordered a few as a sample, and received what, in the solitary rosette, appeared to be a broad-leaved, vigorous-growing *S. longifolia*, and, for convenience and want of a better name for the moment, called it *S. longifolia latifolia*. Later I got its correct name, which is given above. It is supposed to be a hybrid between *S. longifolia* and *S. lantescana*, and there is much evidence of such a cross. From single rosettes (seedlings) I have had plumes of

far as my observation goes, is *Saxifraga Cymbalaria*, which I saw the other day in thousands on two walls at the old garden at Monreith. One of the walls was of the usual stone type on which fruit trees are trained, and in the crevices there was a host of plants of this little yellow Rockfoil. The other wall at Monreith is an old Moss-covered one, more likely, from an orthodox point of view to be covered with *S. Cymbalaria* than the other, and it, too, was the happy home of a wealth of flowers. The Saxifrage looked better against the Moss on the old wall, but it was very beautiful on both. In some places the Sedums are at home in these old walls.—S. ARNOTT.

Plumbago Larpentæ.—This can be propagated quite easily now by cuttings taken off close to the root and inserted in sandy soil in a cold frame and kept close for a week or two. It is said to be a wall plant, and it certainly is very happy with me planted

ing examples in 6-inch or 7-inch pots may be obtained. No stopping is needed, as the plant is most effective as a single stem terminated by a branching panicle of rich scarlet flowers. When growing, red-spider must be guarded against, and liquid-manure is very helpful when the pots are well filled with roots. Seeds of this *Clerodendron*, from which young plants can be raised, are often produced, but, as a rule, germination is very irregular.—W. T.

Hydrangeas.—Specimen plants having from five to seven shoots which are required for forcing gently into flower during May and June next season, having completed their growth, have been stood outdoors in full sun to get the wood well ripened. Until this is accomplished and the foliage ripens, watering must in no wise be neglected. For this reason, and they being such thirsty subjects, the pots should either be plunged to the rims in a bed of ashes or stood near to the water supply.

Statiche profusa.—This appears to be rather a difficult subject to propagate from cuttings, but for once in a way the percentage which has satisfactorily struck has been fairly high.

Although strictly speaking a greenhouse plant, this *Statice* appreciates the higher temperature and moister atmosphere of the stove in its early stages, and, accordingly, the young plants will be permitted to remain in that structure for some time. *S. profusa* is especially valuable for associating with Carnations under glass, a combination of this plant and such a variety as *Carola* being highly effective.—KIRK.

Zonal Pelargoniums.—These should now be fully exposed night and day and be fed with diluted liquid so soon as the pots become well filled with roots. Each plant must have ample space for development, on which account the whole of them should be stood widely apart. To ensure shapely and bushy plants pinching must, as required, be attended to.

GARDEN PESTS AND FRIENDS.

SUMMER SPRAYS AGAINST AMERICAN GOOSEBERRY-MILDEW.

(Continued from page 356.)

THE failure of soft soap used alone to give the spray fluids under trial the necessary degree of wetting power led eventually to the use of

SOFT-SOAP-AND-PARAFFIN EMULSION. From previous spraying trials against woolly aphis on Apple-trees it had been found that with the comparatively hard water at Long Ashton the most wetting combination was an emulsion of paraffin in soft-soap solution at the rate of 20 lbs. of soap and 2 gallons of paraffin to 100 gallons of water. With soft water not more than 15 lbs. of soft soap need be used. This emulsion, both when used alone and when various fungicidal substances were dissolved in it, proved capable of completely wetting the densest patches of mildew. Even when a fungicide was not added to it, it appeared to possess a marked toxic action on the mildew, the conidia, so far as could be judged in the original trials by a microscopical examination, being killed after contact with it. The results of subsequent experiments tended to show that the emulsion alone could not be relied on to kill the "summer stage" completely, and on that account it was eventually decided after trial to use it in conjunction with liver of sulphur for the main 1915 experiment. This experiment was an attempt to stamp out, if possible, the "summer stage" of the mildew from a fairly well isolated Gooseberry plantation in the neighbourhood of Weston-super-Mare, with the object of ascertaining if the disease would re-appear the following season after this treatment supplemented by winter tipping, and, if so, if the time of the outbreak was delayed sufficiently for the fruit to escape infection. The fungicide used was the soft-soap-and-paraffin emulsion referred to in a previous paragraph, with the addition of liver of sulphur at the rate of 3½ lbs. per 100 gallons of the fluid, *i.e.*, a 2 per cent. emulsion containing approximately 0.35 per cent. of liver of sulphur.* From the preliminary trials it appeared that, when applied with reasonable care, this fluid was capable of completely wetting and killing the mildew, and that at the same time it caused no scorching or defoliation and no disfigurement of the foliage or fruit. The

PLANTATION TREATED consisted of bushes of *Whinham's Industry* and *Keepsake*, and was situated 100 yards or more from the next plantation of Gooseberries, in which the disease also occurred. The outbreak appeared in May, and by the be-

ginning of June the berries and young shoots of the *Whinham* and the young shoots of the *Keepsake* were freely attacked. The fruit of the former variety was largely covered with the summer stage and remained ungathered on the bushes throughout the course of the experiment. When the disease appeared to be at its height about the middle of June the spray was applied, care being taken to wet the whole of the bushes thoroughly. An examination of the diseased shoots and berries a few days later showed that the production of new conidia had ceased, and that the fungus originally present had apparently been killed completely. It had originally been intended to spray the bushes again at intervals during the remainder of the summer, but, except for a very slight new outbreak on a few of the shoots of the outermost bushes of the *Whinham's* plot, no further growth of the mildew occurred. It was, therefore, considered unnecessary to give any further spraying. There was no damage done by the spray fluid to the bushes except in the case of a few *Keepsake* plants, which received the last portion of the fluid. In this instance some scorching appeared and was evidently caused by too great a concentration of emulsion, owing to lack of agitation in the knapsack machines used. On the few shoots which eventually showed the living "summer stage," the "winter stage" appeared also in due course. Very few perithecia were formed, and in none of those examined were ripe spores observed. The critical test of the experiment is, of course, the re-appearance of the disease and the time of the outbreak this summer. As to this, nothing can yet be said, but the experiment last year certainly serves to show that the liver-of-sulphur-soft-soap-paraffin emulsion is capable of drastically reducing the amount of the "summer stage" in an affected plantation and, provided that the spraying is administered as may be necessary, also of correspondingly curtailing the production of the "winter stage." Further than this conclusion it would be at present unwise to go. It is probable that the character of the weather last season and the heavy crop of berries carried by the bushes prevented the formation of the succulent young shoots on the bushes which are mainly the object of attack, and that the spread of the disease from the few shoots which bore living conidia after the spraying was accordingly hindered. On this account no satisfactory conclusion can yet be drawn as to the number of sprayings required to keep the "summer stage" under control. Trials in a plantation of young, vigorously-growing bushes are required for this purpose. The

COST OF THE MIXTURE at pre-war price per 100 gallons works out as follows:—

Soft soap, 20 lb. at 14s. per cwt.	2s. 6d.
Paraffin (Solar Distillate), 2 gals. at 7d.	1s. 2d.
Liver-of-sulphur, 3½ lb. at 8d.	2s. 4d.
Total	6s. 0d.

It should be remembered, however, that owing to its good wetting power less solution is used per bush than would otherwise be the case. With soft water 15 lbs. of soft soap per 100 gallons would be amply sufficient, thus reducing the price to 5s. 4d. per 100 gallons. As to the mixture itself, it is believed that, where the treatment of the "summer stage" of mildew by a "hitting" fluid is concerned, the employment of a wetting fluid of the paraffin emulsion type is essential, and, so far as trials to date go, none approaches the 2 per cent. soft-soap-paraffin emulsion for effectiveness and cheapness combined. The choice of an active fungicide to sup-

plement the toxic properties of this emulsion is still an open question, as indeed is the need for the inclusion of such a substance. Liver of sulphur was selected, to some degree arbitrarily, for the experiments which have been described, and appears to have acted very successfully, but further work may well show that there are better fungicides for the purpose. In this connection it will be interesting to test in its place ammonium sulphide, the substance which has proved so promising in the experiments of Messrs. Eyre and Salmon. It seems possible that the effective results with the latter fungicide may have been due not only to its action in the form of a "hitting" spray, but in part to its decomposition into volatile substances, which acted in a gaseous condition upon the fungus. Where "vapour" treatment is concerned the wetting properties of the fluid applied are not so vital, and 1 per cent. or less of soft soap in the mixture might then be adequate for effective distribution.

It remains to be added that the liver-of-sulphur-soft-soap-paraffin mixture probably possesses very limited protective properties against re-infection, and that renewed infection from outside sources can doubtless occur freely, even although the fluid may completely clear the plantation under treatment from the original "summer-stage" attack.—*Journal of the Board of Agriculture.*

—Experiments which have been conducted during the last three years at Wisley on the American Gooseberry-mildew have this year been productive of striking results. By the use of a modified form of Burgundy mixture an outbreak on the foliage and berries of over 100 bushes comprising several varieties of Gooseberry exposed to infection has been completely prevented.

The mixture was used according to the following formula:—Strength I.: Copper sulphate, 8½ ozs.; washing soda, 9½ ozs.; soap, 100 ozs.; water, 100 gallons. Strength II.: Copper sulphate, 40½ ozs.; washing soda, 45½ ozs.; soap, 100 ozs.; water, 100 gallons. The chemicals were dissolved separately, the solutions mixed when quite cold, and the soap added last. Both strengths proved effective. Spraying took place on May 20th at 6 p.m. (Willett's time), when the bushes were just dry after gentle rain in the afternoon. In the experiment the sprayed and unsprayed bushes were situated in a square of 100 square feet area, outlined at the angles by old bushes to provide sources of infection. There are within each square three unsprayed bushes and one sprayed bush of the same variety. Of the sixty squares over forty are now infested with mildew, some very heavily, the outbreak occurring chiefly in the berries. At the time of writing no mildew has been detected in any of the sprayed bushes, even when completely surrounded by infested ones. Whereas all the berries on the sprayed bushes are absolutely free from mildew, many on the unsprayed bushes are heavily infested with the early "white" stage of the disease. In a further experiment all the bushes in a small plot adjacent to the main experimental area were sprayed and are now also free from mildew.

Burgundy sprays leave a fine deposit on the berries, consisting of a mixture of the precipitates of copper carbonate and sodium sulphate. But since nearly the whole of this deposit can be removed by a sharp rinsing in tap water there should be no difficulty in devising a plan for thoroughly cleansing the berries.

DR. HORNE.

R.H.S. Gardens, Wisley.

* The mixture is made as follows:—In 5 gallons of boiling water 20 lb. of soft soap and 3½ lb. of liver-of-sulphur are dissolved by constant stirring. Two gallons of paraffin (preferably "Solar Distillate" brand) are forcibly sprayed into the hot solution, using a garden syringe with a rose attached for this purpose. For use add 19 gallons of water to every gallon of concentrated emulsion.

ORCHIDS.

THE MOCCASIN-FLOWER
(*CYPRIPEDIUM SPECTABILE*).

This, the finest of all the hardy *Cypripediums*, is one of the most amenable to cultivation in this country. The illustration depicts part of a group of this, planted in the autumn of 1914, thus showing how quickly it may be established, given suitable conditions. A somewhat shady and low-lying position in the rock garden was selected, the soil dug out to a depth of nearly 3 feet, a foot of broken bricks placed in the bottom for drainage, filling up with a mixture of rough peat, fibrous loam, well-decayed leaf-soil, a little sand and charcoal, and chopped *Sphagnum Moss*. In planting, wide holes were made and the roots spread out horizontally, with the crowns about 2 inches below the surface. The soil was well worked in between the roots, making the whole firm, taking care not to injure the crowns.

ture is a few degrees warmer, but such treatment is not really essential. If kept in the cool-house for the winter the atmosphere must be fairly dry or black-spot will attack the foliage. The most suitable time for

REPOTTING is a few weeks after flowering. Large examples that have become leafless in the centre should be broken up and each piece given a separate pot. In this way a young, healthy stock is maintained. Plants that are in a thriving condition, and require additional root space, may be moved on without much root disturbance. Pots or pans without side holes may be used, and both should be filled to one-half of their depth with drainage. The rooting material consists of *Osmunda-fibre*, peat, and *Sphagnum Moss* in equal parts, cutting the whole moderately fine, and after removing all the fine particles add a fair sprinkling of crushed crocks. Hard potting must be avoided, but the soil ought to be made sufficiently firm to keep the plant in position. When the repotting

may be done, using a mixture of the best fibrous loam and *Osmunda fibre* in equal parts. A moderate sprinkling of crushed crocks may be added. Ordinary flower-pots are chosen, these being filled to one-third of their depth with drainage. For a few weeks after potting, careful watering must be the rule, but once root action is evident the supply can be increased. This *Zygopetalum* must be treated liberally, and when the pots are filled with roots occasional supplies of liquid manure are beneficial. *Z. Mackayi* is readily raised from seed, which may be sown around the base of an old plant directly it is ripe. Germination soon begins if the compost is kept moist.—SADOX.

VEGETABLES.

NOTES AND REPLIES.

A weedy Asparagus bed.—How can Bindweed in an Asparagus bed be best destroyed without injury to the roots amongst which it has taken hold? The beds appear to require more soil on them, the surface is hard and has worn thin. What should I add—sand from sandhills near the sea, ashes from the rubbish-heap, manure from the fowl-yard? All the above are available, and in the winter burnt Seaweed.—N. MATTHEWS.

[It is of no use attempting to clean an Asparagus-bed so foul as yours evidently is. The best thing you can do is to lift the roots when the foliage has died down and force them, then throw away the roots; or, better still, burn them so as to get rid of the Bindweed. You should then, next March, purchase strong two-year-old roots and plant in soil which you should, in the autumn, have well dug and manured as soon as you have a piece of ground empty. If these roots are well attended to in the way of feeding you will have good heads the second year after planting. Do not cut any of the heads the first year after planting. On no account plant on the ground on which your present Asparagus is growing.]

Ridge Cucumbers.—Many amateurs who would like to grow Cucumbers are deterred from doing so by the fact that they do not possess a frame. For such, Ridge Cucumbers are especially valuable, as they require no glass at any stage of their growth. A simple way to raise a plant or two is to make a hole in a sunny border about a foot deep, and in this to place a moderately-sized lime shell, afterwards returning the soil. On the top of this soil sow the seeds about $\frac{1}{4}$ inch deep, the heat generated by the slaking lime being sufficient to give the young plants a good start. With the summer heat, growth will be rapid, and the details of culture are very much those which are needed by Vegetable Marrows.—KIRK.

Vegetable garden.—Any available material may now be used for mulching. Lettuces, Cauliflowers, Peas, and Globe Artichokes appreciate a mulch in dry weather. If material is scarce for this purpose, let the flat hoe be kept at work among the crops. Should the dolphin-fly make an appearance among Broad Beans, pinch out the tops of the plants without delay. There is yet time to sow French Beans. Such a sowing sometimes saves the situation at the end of the season, although at other times it is destroyed by frosts before the pods are available. An eye should be given to recently-put-out Brassicas, and any blanks made good without delay. If Celery needs watering, time is well spent in attending to its requirements, but, so far, no artificial watering has this season been needed in this district.—KIRK.

Carrots in frames.—The culture of Carrots in frames has begun at an earlier date than usual. Owing to indifferent germination in the case of maincrop varieties the lines are rather gappy, and as, in addition, there is the risk,



Part of a group of the Moccasin-flower (Cypripedium spectabile) at Lilford Hall, Oundle.

Water is afforded copiously in dry weather, and the bed given a dressing of leaf-soil and decayed manure each winter.

F. W. G.

Lilford Gardens, Northants.

MASDEVALLIA TOVARENSIS.

In this the flowers are pure white, and of a moderate size, two and three being produced on one stem. If the flowers are not cut, but permitted to decay naturally, the stems will continue green and fresh. These should remain on the plant, when flowers will again be produced at the apex of the stalk. This may even be continued for a third year, but all good Orchid growers refrain from taxing the plant to this extent. *M. tovarensis* should be grown at the warmest end of the cool or *Odontoglossum*-house, where plenty of air is admitted, and shade from the direct rays of the sun be afforded from March till October. During the winter a few of the *Masdevallias*, including the subject of this note, are removed to the intermediate-house, where the tempera-

is completed water must be afforded very carefully, an excess in this direction causing considerable loss of foliage. In a few weeks the plants will root freely; then water can be given more liberally and the atmosphere may be kept moist. If any slugs are in the house they will probably find *M. tovarensis*, and every effort should be made to trap these pests.

W. B.

NOTES AND REPLIES.

Zygopetalum Mackayi.—This desirable *Zygopetalum* was introduced from Brazil in 1826 by Mr. Mackay, of the Trinity College Botanic Garden at Dublin. The orthodox Orchid-house is not necessary for the successful cultivation of this species, very fine examples being often seen growing in a stove or warm greenhouse. The flowers, which are light yellowish-green marked with purplish-brown, the lips broad, white, and streaked with violet-purple, are produced during the autumn and winter. A few weeks after the scapes are removed any repotting

always present in these gardens, of losses by the attacks of fly, it has been considered quite as profitable to make a sowing in frames as out of doors. The variety used is Early Scarlet Nantes, a stump-rooted Carrot of some merit, and which is fit for use in a comparatively short time. The seed was sown on a spent hot-bed to which was added a couple of barrow-loads of light, sandy soil with the admixture of a proportion of wood ashes. The sashes, after sowing was completed, were returned to the frames, and mats will be used for shading until germination takes place, when, after the seedlings have been gradually inured to the outside temperature, they will be entirely removed.

Hick's Hardy White Cos Lettuce.—This old Lettuce of the Cos type still maintains its popularity. This Lettuce, which so many gardeners have known for many years under the above name, has been made familiar under other names. Whatever name it may appear under it is a good Lettuce for autumn sowing, and usually can be depended on to stand the winter. I have now (the last week in June) just finished cutting fine, crisp heads. The seeds were sown in September on a plot cleared of Potatoes, the seedlings being allowed to stand in the seed-bed until February, when they were transplanted to ground to be occupied later with Brussels Sprouts. It is found, however, that Lettuces deprive the soil of much of its fertility, and I intend giving a little surface dressing of burnt refuse, if nothing better can be found. There is, however, great value in freshly made "burn-bake."—W. STRUGNELL.

Celery.—The earliest plants are now sufficiently advanced for blanching. The most economical and simplest method of effecting this is to use strips of brown paper. In the case of early Celery especially it has many advantages over that of banking the plants up with soil. The blanching is more perfectly done, the stems are not liable to be injured by worms or slugs, and the plants can be fed and watered much in the same way as if blanching was not being done. Give the plants a thorough soaking of water at the roots, and in the middle of the day, when the leaves are dry, proceed to place the paper round each plant. The bands should be cut about 5 inches in width, and should be fastened securely, but not too tightly, round the bottom of the plant. A small quantity of fine soil should be placed round the base. In eight or ten days a further band should be added to the plant, the process being continued until a sufficient depth of blanching is secured.

Spring Cabbage.—This is one of the most important crops in the vegetable garden. I make two sowings—one during the second week in July and the other about a fortnight later. The bed on which the seeds are to be sown should be fully exposed to light and air, so that hard, short-jointed plants may be obtained. When the soil has been dug and made level it should be trodden lightly, and shallow drills drawn at 1 foot apart. The seeds should then be sown thinly, so that no crowding of the young plants may take place. A net should be placed over the bed as a protection from birds. As soon as the young plants appear a careful watch must be kept for slugs, which may be readily destroyed by dusting the bed with hot lime early in the morning. Favourite varieties are Harbinger, Flower of Spring, and Ellam's Early.—G.

French Beans.—These are always useful in autumn after Scarlet Runners are either over or the pods get tough. A few rows sown on a south border at this date can generally be depended on to yield good gatherings of succulent pods at the time stated. When they come into bearing provision can also be made, if weather conditions are unfavourable or frosts threaten, to protect them at night either with mats or canvas covers.

Spinach Beet.—Showery weather has provided ideal conditions for the thinning and transplanting of the surplus plants. Another sowing should be made now and a similar one about the same date in August for spring supply. This should always be grown wherever there is a difficulty in preserving true Spinach during the winter, as it is perfectly hardy and leaves nothing to be desired in the way of leaf production.

GARDEN FOOD.

DRIED FRUITS THE YEAR ROUND.

THE greater the amount of fruit one eats the nearer he comes to an ideal diet. There is no question about the hygienic value of fruit. Year by year people are consuming larger quantities of fresh fruit, and it is no longer considered a luxury or an occasional addition to a meal, but takes a prominent place in the planned menu. Dried fruits, while not so luscious, have far greater nourishing value than fresh fruits—three times as great. Fruits are largely water and carbohydrates, but in the case of the dried or evaporated fruits, the water has been removed and only the bulky and nutritious portion remains. In the case of evaporated Apples, Peaches, Pears, and Apricots, it is only necessary to soak them sufficiently long for them to re-absorb the original amount of water. They then have practically the consistency and value of the fresh fruit, although the process has changed the taste quality. From an economical point of view, thrifty housekeepers use the evaporated fruits in the making of desserts and as sauces. The laxative property of these fruits is of more value than that of the fresh fruits. The one great objection to the use of the dried fruits as sauces is that too much sugar is added to the fruit in cooking. The natural fruit sugar is digestible and is the normal sugar needed by the body—it is invert sugar. Cane, corn, and beet sugars have to undergo changes in the process of digestion before they can be utilised by the body. Wash thoroughly in boiling water all dried fruits before preparing them for the table. Such foods should be soaked for five minutes in a 5 per cent. solution of hydrogen peroxide. Many housekeepers do not realise that the juice from cooked dried fruits is a very palatable beverage, and with the addition of a little Lemon-juice will make a pleasing variety of fruit beverages. The craving for sweets in grown-ups, as well as in children, may be satisfied by dried fruits, because the fruit sugar answers the natural physiologic demand for sweets, and without the injury that accompanies the consumption of ordinary sugar foods. Many of the objections to pastry and sweets will be removed if more fruits are used in their preparation to the exclusion of sugar.

PRUNES.—Of all the dried fruits, the Prune is probably the one most generally used. There is no part of the world where Prunes are not used the year round, and in many families where hygienic diet amounts to a religion Prunes in some form appear at every meal. The Prune is one of the most laxative of foods, and the juice when boiled down to the consistency of syrup, without the addition of sugar, is a cathartic. Many people eat raw Prunes, after they have been soaked until they have absorbed all the water possible.

FIGS.—Figs are also both food and medicine, and should be used much more freely than they are. To some people the seeds are irritating, and in that case strained Fig syrup may be used on cereals or in any preferred way. By soaking dried Figs overnight they can be made almost like fresh Figs. It is better, however, to steam or stew Figs before eating them. A quantity of Figs can be steamed and then used when convenient.

DATES.—Dates also have a laxative tendency, and contain almost half their weight in sugar. Like Prunes and Figs, Dates are not only a concentrated food but combine the medicinal, laxative qualities with their nourishing properties.

There are two special classes of Dates, the soft and the dry. The dry Dates are moderately sweet and have a very delicate flavour. One can make a meal of dry Dates without being cloyed by them, while one can only eat a few of the very sweet, soft Dates that are found in our markets. Our Dates are eaten more as a dessert. The dry Dates in the Sahara are one of the principal foods of the people, and to a large extent take the place of bread.

CALIFORNIA RAISINS.—Formerly, Raisins were not used so extensively in the United States as they are at the present time. They were used as dessert, and with Nuts, and eaten occasionally out of hand, but now they are esteemed as one of the most valuable of the dried fruits, and when stewed or steamed make a most delicious sauce. Cooked Raisins are particularly good for growing children, and the child who will refuse Raisins in any form is probably not to be found. Since she can buy seedless Raisins, much labour is saved the housekeeper. There are no more delicious Raisins than are produced in California. This luscious fruit can be purchased in large or small packages, and comes clean to the consumer. It is well, always, to purchase dried fruits in small packages and not in bulk, because the sticky surfaces furnish a favourable lodging place for dust and germs of all kinds. Where fruits stand open in shops they are always unclean. Even the package fruits should be given the hot bath before being put to soak.

It is possible for one to live in full health and vigour for long periods when subsisting on a diet of dried fruits, Nuts, and a few grains and some of the fresh fruits. It is the dried fruits that furnish the bulk of the nourishment of fruitarians. In the summer, when both dried fruits and fresh fruits of all kinds are in the market, even those who are meat eaters in cold weather can plan a healthful and satisfying menu without flesh foods.—*Good Health.*

NOTES AND REPLIES.

Spoiling the Peas.—The following I find in a popular journal:—

Having melted 2 oz. of margarine in a covered fire-proof pot, add four breakfast-cups of shelled Peas, two young Lettuces shredded, half a teaspoonful each of sugar and chopped Mint, salt and pepper to taste, with two spring Onions and a sprig of Parsley. Cook over a moderate heat till done. Then dish the Peas, pour over them the liquor thickened with a roux of butter and flour, and garnish with sippets of toast or fried bread, or with crisp rolls of bacon.

[British Peas want no such ignorant aids. They are better without any of the things named.—ED.]

Turkish coffee is easy to make in an Etna. Boil the water with sugar. When it boils lift it off the spirit stand and throw in the coffee, as finely ground as possible. Then, with a spoon, stir vigorously to incorporate it evenly in the water, and replace over the flame as quickly as possible. It will almost immediately come to the boil again, and you must take care that it does not overflow. Lift it off for ten or twelve seconds, then put it on and bring it to a second boil. Lift it off again and put back, bringing to a third boil. Then put out the spirit lamp. Now, with a teaspoon, skim off the *kaimak* and put a spoonful of it into each cup. Fill up the cups with the liquid and there you are. You may remember that this coffee is drunk very sweet, but it is said to be far more wholesome than any other way. Ordinary coffee is a sealed book to the average English cook. They cannot make it at all.—J.

OUTDOOR PLANTS.

**A ROCK SNAPDRAGON
(ANTIRRHINUM ASARINA.)**

This plant, which I have known for long years lying about the mixed border, generally in a miserable state, and looking of very doubtful value, I saw in rather a noble way in the rock garden at Friar Park, just depending between two great rocks. This is the usual form of it. In the same place there were several others, including a bicolor form, showing that the plant is a really first-rate rock plant if given a good place. W.

HARDY FLOWER NOTES.

THE GOAT'S BEARD (Spiraea Aruncus).—The full value of this species can never be

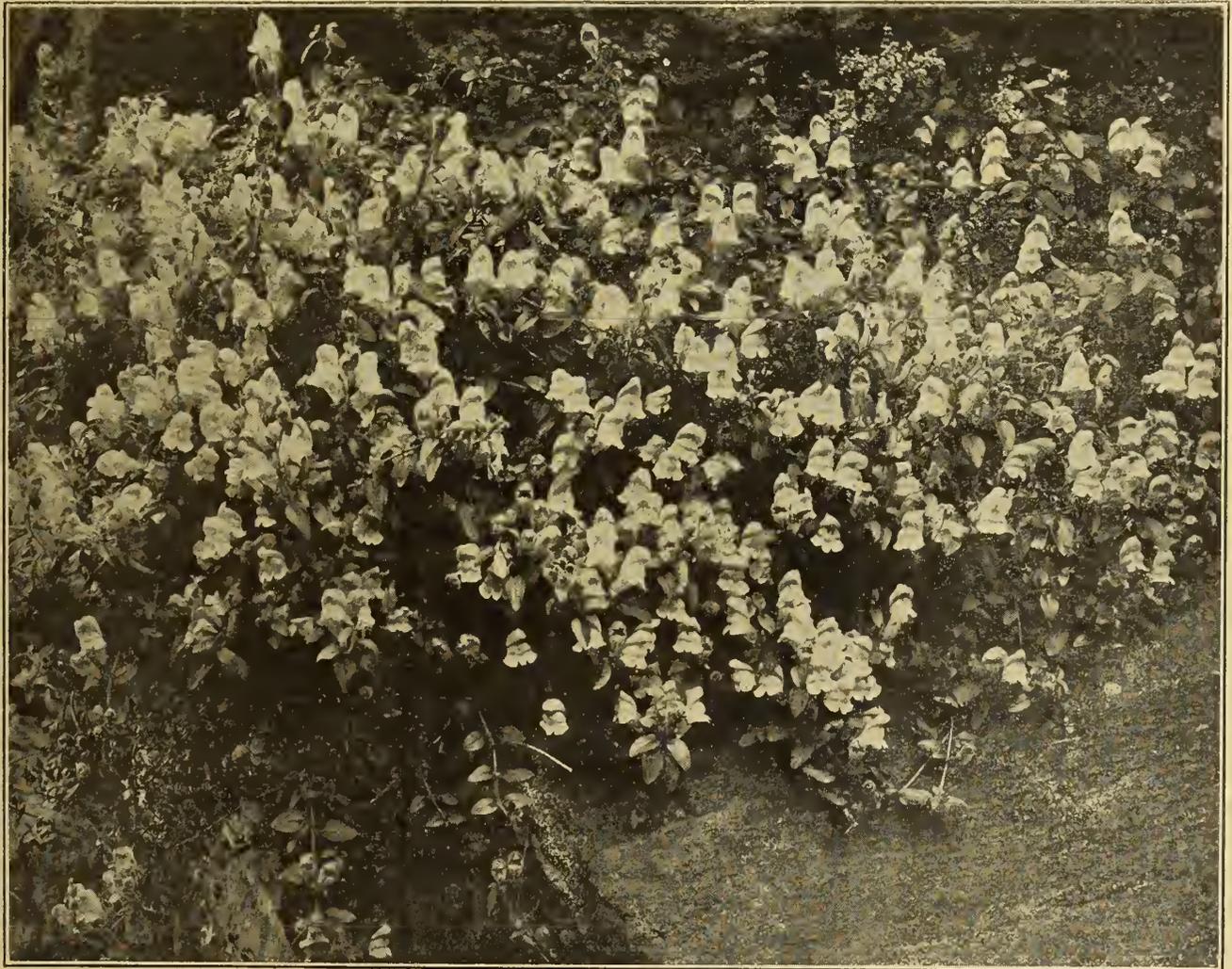
time that plant will be in healthy vigour. It is growing in soil that never gets manure.

GENTIANA VERNA IN THE GRASS.—With respect to "W.'s" note (p. 342) I distinctly stated that it was never likely to thrive in long Grass, and I also stated that it was a success in thin Grass at Wisley. I saw the plants, and they were in perfect health, and I also witnessed various failures when they were planted under different circumstances.

SALVIA TENOREANA has been very effective this season, and, like the *Spiraea* above mentioned, it requires space, and will last for some years in good condition without disturbance if it gets plenty of light, air, and sunshine, without which it will be more or less a failure. Fully ex-

and a portion worked through between the plate and the wall forming a patch about a foot square. I was surprised to note the vivid colouring of this Thyme. Thus situated, it was certainly very fine and very different from what it had been hitherto. Those who need wall plants should make a note of this Thyme.

OXALIS FLORIBUNDA.—I am told that in some places this will not take on permanent vigour. A skilful grower of hardy plants says that it will not last more than a couple of years with him, whereas with me it grows in weed-like fashion and has, in fact, become thoroughly naturalised, springing up all over the place, but always, with a kind of instinct, in situations favourable to its well being. It loves a well-drained position, and does not mind



A rock Snapdragon (Antirrhinum Asarina) in the rock garden at Friar Park.

realised where it is crowded up with other things. It requires a certain amount of isolation and good, well-stirred ground. Although the growth of this *Spiraea* is compact it is saved from formality by the much-divided foliage. In planting this *Spiraea* consideration should be given to the fact that it is one of those things that are best grown on the let alone principle, therefore a position should be chosen which can be occupied by it indefinitely, with space for development, and by reason of its inherent vigour it will thrive and increase in blooming power where other members of the family would fail. I have a specimen some ten years old which is about 6 feet high and as much across, and which this year carried fifty or more fine flower-heads. I believe that in ten years'

posed and in well-drained soil it has a much higher decorative value than when closely surrounded by tall-growing things, where it has a loose, weedy appearance and the flowers are much paler. The free-branching habit is only displayed when it gets a certain amount of isolation.

THE BRIGHT-FLOWERED THYME.—One may grow a hardy plant for some years, and through not being placed in a favourable position or not getting a suitable rooting medium it fails to come up to expectation. The terms *ruber* and *coccineus* are too often applied without good reason, and although I have had the variety of Thyme named *coccineus* for some years, until this season I could never see that this term was well applied. I have had it on a mound close to a row of frames

how hot and dry it may be. In one place, in front of some old *Yuccas* and where the soil is extremely poor and dust dry for weeks together, there is a group of the typical form, which, surrounded by the white variety, is very effective in the bright sunshine. It is curious that where this species refuses to take on permanent vigour that beautiful kind, *O. eucnaphylla*, flourishes, whereas with me it dies away. This is one more instance of the eccentricities of some hardy plants.

MORINA LONGIFOLIA.—Some hardy plants are almost worthless unless they are thoroughly well grown, and this *Morina* is one of them. In poor soils that parch in summer it has no value, but under good culture it is very attractive and is very distinct. In a soil of medium texture and

where there is a certain amount of moisture in summer it will throw up flower-stems from 2 feet to 3 feet high, the Thistle-like growth and the parti-coloured whorls of bloom being very effective. In the enjoyment of perfect health this *Morina* is decidedly a handsome and attractive hardy plant. J. CORNHILL.

THE BELLFLOWERS.

The majority of the many varieties of *Campanula* will soon be at their best, and, whether tall, medium, or dwarf, they rank, so far as the whites are concerned, among the purest of hardy flowers. The note in a recent number as to the rather miffy habit of the double form of *C. persicifolia* many growers will doubtless agree with, one seldom finding it in a thoroughly thriving condition. It likes a fairly rich, open soil, and pays for annual lifting and replanting, doing this directly after flowering.

A colony of Bellflowers in variety is a most interesting feature of a garden, a likely spot being a slightly sloping border in a partially shaded position, a frontal arrangement of occasional stones some 2 feet or 3 feet in depth affording opportunity to show off the dwarfest kinds like

be included if space permits, but I should hardly recommend them. They make a very attractive display during the comparatively brief time they are in flower, but the somewhat thick, heavy appearance seems hardly in keeping with the graceful character of the majority of the perennial forms. E. B. S.

Hardwick.

A WATER LILY GROWN IN CALIFORNIA.

For the lover of Nature and the plant enthusiast, life in California is almost a perpetual holiday. I have a fair-sized garden and grow an enormous number of good plants besides the Water Lilies. I take a very great interest in our native flora and have a collection of the plants growing in my garden. Water Lilies do well here and the period of blooming here is longer than in the Eastern States. Just now I am enjoying greatly *N. Mariacea*, *N. Mrs. Richmond*, *N. virginialis*, and *N. Escarboucle*. I have a hybrid of my own which has flowers of a rich deep pink with carmine shadows between the petals, and the rich fragrance of *Nymphaea odorata*. The rhizome is of the *N. candidissima* type. It is very

of 6 inches. I replanted them in good leaf-mould, but they have not yet shown above the ground. This is quite five weeks ago. I followed the instructions given in *GARDENING ILLUSTRATED* for 1880, but, of course, the deep planting was the gardener's mistake. Can you advise me? Should the tubers be left or would it be better to take them up?—K.

[Seedling *Alstrœmerias* make but little top, i.e., stem and leaf growth, in their early years, and doubtless the little that was made—if, in the circumstances, made at all—quickly perished, owing to the great depth at which the tubers were planted. The depth was, of course, a mistake, 6 inches or 8 inches being ample to ensure safety. You say the tubers, when lifted, were quite healthy, and, if so, there should also have been the evidence of a crown bud to each plant, but of this you say nothing. As the season of growth in these plants is now past, no further development in that direction is likely this year, but if all is well, a few inches of growth should appear next year, though not sufficiently strong for flowering. You erred in your haste to plant out such small seedlings, which would have made more rapid progress had they been transplanted and grown in boxes or pans for a year longer. As you appear convinced of their healthy condition, and as no growth would now ensue, even though you lifted the plants, they had better remain where they are, covering the bed with a few inches of litter or leaf-mould in the event of severe frost during the ensuing winter. We regret this reply, owing to pressure on space, has been unavoidably held over.]

A handsome hybrid *Primula*.—A very handsome hybrid *Primula* has appeared in Sir Herbert Maxwell's garden at Monreith. It is believed to be a cross between *Primula Bulleyana* and *P. japonica* or *P. pulverulenta*, probably *japonica*. It is more ornamental than even the beautiful hybrids sent out by Messrs. Bees, its beauty being increased by its taller stature. In this it comes between *P. Bulleyana* and *P. japonica*. It bears handsome whorls of flowers of a kind of buff with a touch of scarlet about them. It has seeded at Monreith, but it remains to be seen whether the seedlings will be like their parent or will revert to either of the species whence it has sprung. This *Primula* is distinct from any other hybrid I have seen, and Sir Herbert Maxwell is of the same opinion.—S. ARNOTT.

Michaelmas Daisies.—These are now being thinned out, and the growths retained staked out before they come to grief from rough winds. All the stronger-growing kinds are reduced to five growths each, the four outer ones being staked to lean away from the central one. Grown in this manner, a magnificent display of flowers results in autumn, and each plant is several feet through. When the staking is completed a dressing of an approved fertiliser will be given and hoed in.

Papaver umbrosum.—Twenty years or so ago I purchased a packet of seed of the annual *Papaver umbrosum*, and with the exception of a year or two after a severe frost in the spring I have never failed to enjoy an annual succession of its flowers. In a year or two, however, after I lost it, fresh plants appeared from seeds turned up in cultivating the ground, and again I have this Poppy, though in much smaller numbers. Its nominal height is about 18 inches, but it varies according to the soil.—S. ARNOTT.

Primula Beesiana in moisture.—At the margin of the little Water Lily pond in my garden *Primula Beesiana* is now in fine bloom. It is planted on a "shelf" of concrete which is below the surface-level of the pond, and in soil which rises about 9 inches above the water. Here, with plenty of moisture all the year round, this *Primula* thrives and flowers very freely. *P. Bulleyana*, *P. involucrata*, *P. farinosa*, *P. japonica*, and others thrive in a similar place.—S. ARNOTT.



Antirrhinum Asarina, bicolor form. (See page 373).

C. fragilis, *C. pulla*, and *C. pusilla* to the best advantage, from these working through with those of medium height and finishing up in the background with the giants of the family, like *C. lactiflora*, *C. latifolia macrantha*, and *C. pyramidalis*. There should be an endeavour so to distribute the different varieties that no considerable portion of the colony should be without flower at any time through the season. The only members of the family that do not appeal to me are the varieties of *C. glomerata*, the dense terminal heads being so different from the thin, wiry stems and graceful bells of other sorts. However, a clump or two of *C. g. dalurica* might be included in the collection, as it supplies the deep purple shade in that particular height. It may be noted in connection with the site recommended that partially sloping ground affording natural drainage is the best position for those members of the family like the double Peach-leaved, which, although liking a fairly rich soil, are decidedly averse to any situation from which the water does not pass quickly. The partially shaded position helps to a prolongation of the flowering season and prevents scorching of the more delicate shades.

The biennials, that is, the many varieties of *C. Medium* in different shades, may

be beautiful, but such a shy bloomer that I have never placed it on the market. I think it would do better in a lake with a natural earth bottom and a free run. I would like to learn how it would behave in England and would be pleased to send you a root for trial. I grow quite a number of semi-aquatic Irises, among them *I. hexagona La Mancei*, or, as it seems to be now called, *I. foliosa*. This is very beautiful, but would not bloom freely with me until I plunged the receptacle in which it was growing in water up to near the surface of the soil.

EDMUND D. STURTEVANT.
Hollywood, California.

NOTES AND REPLIES.

Alstrœmeria seedlings.—Can you help me in the following difficulty? In the spring of last year I raised some strong seedlings of a rose-coloured *Alstrœmeria* we have. After hardening them off, I placed them out-of-doors in July, and planted them out last October in a sheltered position. A small frame was placed over them and removed when the weather this year was warm enough. No plants appearing, I had the soil removed from the place where they had been planted. After clearing it off for about 1½ feet deep, I found the tubers perfectly healthy and sound, but no buds. I found the gardener had planted them a foot and a half deep, instead

TREES AND SHRUBS.

LONICERA ALBERTI.

THIS rather rare Honeysuckle belongs to the bush section of the family. It grows from 3 feet to 4 feet high and is made up



A flowering shoot of Lonicera Alberti.

of many slender, interlaced branches clothed with small, narrow leaves, and bears, during May or early June, small, pinkish, flowers in pairs from the leaf-axils. It is a native of Turkestan, and has been grown in this country for about thirty years. The illustration accompanying this note gives an idea of the manner in which the flowers are produced, and it will be seen that they appear from almost all the leaf-bases at the bottom of the current season's shoots. Like other members of the family it requires good loamy soil, which is constantly moist and cool without being waterlogged. A sunny position is desirable, for thorough ripening of the previous year's wood is essential to the production of flowers. Pruning is unnecessary, in fact the bush Honeysuckles are often spoiled by pruning. Cuttings root easily when inserted in sandy soil during summer, and soon grow into serviceable plants. D.

AZALEAS NOT FLOWERING.

COULD you tell me how to treat Azaleas which have been neglected for many years? They are growing in a glade on a south bank of peat and sandy loam, and the garden is 1,200 feet above sea-level, on the moors, about 7 miles out of Sheffield. They seem to like the position and the soil very much, but I believe they were put in many years ago (say, about fifteen), and I am sure something ought to be done for them. They have grown very straggly, and some bushes have had scarcely any blooms on them at all, though they are full of leaf. I also think they ought to be thinned and transplanted. I should be very much obliged for any information you can give me on the subject of outdoor-grown Azaleas and the best way of propagating them.—Mrs. M. D. MORSE.

[Your Azaleas are evidently suffering from lack of nourishment, which may be made up to them in the shape of a good top-dressing. It is also probable that they have been at times too dry at the roots. A good plan to renovate them will be to lightly fork over the surface of the bed and top-dress to a depth of 4 inches to

6 inches with a compost made up of loam, cow-manure, and leaf-mould in equal parts, the whole being thoroughly incorporated together. Though winter is usually looked upon as the most suitable time of the year for this, we should, in view of the fact that your plants are gradually getting worse, carry out the operation without delay. It is very probable that on examining the soil you will find it desirable to give a good watering and allow it time to soak in before applying the top-dressing. With regard to cutting back the straggling branches you must bear in mind that the old bare wood does not break very readily. This, however, may be done in moderation. The question whether they ought to be transplanted can only be answered by one who can see the plants, their condition, and surroundings. Provided the soil and other conditions are suitable, Azaleas give but little trouble. A fair amount of moisture at the roots, not stagnant water, is very necessary, and as soon as the blossoms are over, all old seed-pods should be picked off, and any straggling shoots shortened back.

The propagation of these Azaleas is, in the case of named varieties, usually done in nurseries by grafting, a very delicate operation. They may also be increased by layers, which will take about three years to be sufficiently rooted to detach them from the parent plant. Layers are best put down during the dormant season. Azaleas can, however, be readily increased by seeds, and although this method cannot be relied upon to perpetuate any particular variety, superior kinds often result therefrom. What is more, seedlings, as a rule, form more shapely specimens than grafted plants. The seed may be sown as soon as ripe in some light, suitable soil. The seeds, being very minute, are best sown in well-drained pans and stood in a cold frame. A little fine sandy soil will be all the covering needed. The compost must be kept moist and the frame close and shaded till germination takes place, when more air should be given. When large enough, the young plants should be pricked off, and, after a time, planted out. The only book bearing on the subject, that we know of, is "Rhododendrons and Azaleas," by William Watson, price 1s. 6d., through any bookseller.]

TREES AND SHRUBS AT ALDENHAM.

CRATÆGO-MESPILUS JULES D'ASNIERES.—This has been so covered with vivid white blossom that no foliage can be seen. It is, I think, more showy than any pure Cratægus, and certainly holds its flowers longer. It is a more beautiful tree than that other graft hybrid between Thorn and Medlar, Cratægo-mespilus Dardari, which, as many readers know, sprang originally from the same tree in a French nursery.

CORNUS BRACHYPODA, or, rather, *C. controversa*, as I believe we ought now to call it, is usually seen as a straggling bush, but I have pruned off the lower branches of the plant and have obtained a clean, straight stem of about 5 feet high, with a head of broad, flat branches loaded with white, Elder-like, upright-standing corymbs; the effect is very pleasing, and no one comes here without his attention being immediately attracted to it.

THE SYRINGAS, OR LILACS, are practically over, but some of Wilson's introductions, which have got old enough to flower freely this May, are quite worth growing. The best, in my judgment, is *S. reflexa*, with real rose-red, not purple-red flowers. *S. Wilsoni* (flowers white) is

already 10 feet to 12 feet high. *S. Sweginzowi*, though it was honoured with an Award of Merit when I exhibited it last year, is not, to my thinking, as good as either the old Persian Lilac or as the much less common *S. Juliana*, which was quite charming when in pale lilac flower a fortnight ago.

LONICERA CILIOSA.—Among creeping or climbing plants now in flower this is by far the most gorgeous, with deep orange clusters; a quite hardy plant which has been long ago introduced, and which flourishes in any decent soil and climate, but which is far too seldom seen. If this be just now our showiest climbing plant, I think the most interesting is

ARISTOLOCHIA HETEROPHYLLA, whose foliage is very much smaller and more refined than in the better known *A. Siphon*, and its chocolate-white flowers even more closely resemble those of the "Dutchman's Pipe."—VICARY GIBBS, in *Irish Gardening*.

OLEARIA MYRSINOIDES, VAR. ERUBESCENS.

FROM the general appearance of this shrub one might well question its right to close association with *Olearia myrsinoides*, for it is distinct from that species in its more vigorous growth, much larger leaves, and larger heads of flowers. *O. myrsinoides* is a loose-habited evergreen bush 3 feet or more high, with small, narrow leaves and flower-heads 1 inch across, borne singly from leaf-axils of the previous year's wood, during May and early June. The variety *erubescens*, on the other hand, has leaves each up to 3 inches long and 1 inch wide, which are more attractive than those of the species, the upper surface dark green and the under surface silvery. Moreover, the flower heads are larger and borne in clusters from the leaf-axils, a well-flowered branch being a decidedly



Part of a plant of Olearia myrsinoides erubescens on a wall in the Royal Gardens, Kew.

pretty object. It is a native of New Zealand and is hardy in the milder parts of this country. Elsewhere the protection of a wall should be provided. It is easily increased from cuttings of half-ripe shoots inserted in light soil in a close frame in summer. D.

NOTES AND REPLIES.

Silver Firs dying.—I enclose two pieces of a Silver Fir. Can you let me know what is the matter? I have had several trees go the same way—losing their tops altogether and dying.—H. LEWIS HAMMOND.

[The Silver Fir attacked by *Chermes abietis*. This insect, which is related to the green flies, passes part of its life on the Silver Fir, part on the Larch, feeding on the latter in summer, where it may be seen forming little patches of white on the needles through the waxy tufts that cover its body, and passing later to the Fir, where its presence sets up irritation, leading to the production of the galls which you see on the branches of the latter. The best place to attack the pest is on the Larch, where it may be destroyed by spraying with any of the more reliable washes used for aphides, and especially by paraffin emulsion or a nicotine wash.]

The poisonous Yew.—Please do not insert any more notes about the Yew on both or any side of the question. For people to sit on a fence on a matter of this sort is absurd. The tree is deadly for stock in all states, and if a record could be made of its destructiveness it would amaze people. I believe that many deaths of animals are wrongly attributed to other causes. The ignorance of gardeners about it is amazing. Worse still, that of the pretended landscape gardeners, who scatter it liberally about, even near the approaches to the house, where the poor horses can scarcely miss it. Every scrap of it in hedgerows should be cut out and burnt. I have lately done this in my own place. Hair-splittings as to whether male or female Yews or whether dried clippings or fresh shoots are the more deadly are a danger, as there is evidence that all are deadly. There is no need to have the tree where stock can touch it. Its place is in enclosed grounds, graveyards, and in the heart of woodland. A great source of danger is leaving the lower boughs, often old and wasting away, on the Yew-trees. I cut these away to a height of 12 feet or 15 feet, and the trees are all the better for it. The effect is many times better, as the lower and worn-out boughs often hide the stem of one of the most beautiful of our native trees. In some woods the Yew sows itself. These woods should be gone through and the lower branches of any Yews cut off. Then if cattle break through they come to no harm through the clean-stemmed trees. When this trimming is done light a fire near and burn every bit of the shoots.—W.

Escallonia langleyensis.—During June and July this is one of the most effective flowering shrubs, for during those months it is covered with rich, rosy-carmine blooms, and even later numerous inflorescences may be found. It is one of the hardiest of the *Escallonias*, being next in hardness to *E. Philippiana*, which, by the way, is one of the parents of *E. langleyensis*, the other parent being the evergreen *E. punctata*. The plant was raised by Messrs. Veitch at Langley rather more than twenty years ago and soon became popular as a trellis plant, its long, slender branchlets peculiarly fitting it for such a purpose. It also forms an excellent bush, as may be seen at Kew by two large masses growing behind the Palm-house. About twelve years ago two beds were planted with small plants, and in each case they have grown together, forming handsome masses 8 feet to 10 feet high and 20 feet across. The leaves are usually retained throughout the winter, but in the event of cold weather being experienced they may be deciduous, though the wood is not injured except in extreme frost.

The flowers, each about $\frac{1}{2}$ inch across, are borne with the greatest freedom in short racemes from the points of short growths. It grows well in ordinary garden soil and is easily increased from cuttings of soft shoots inserted in sandy soil in a warm frame in July. Plants grown against trellises require thinning after flowering, but bushes grown in the open do not need regular pruning.—D.

FRUIT.

GRAPE CULTURE.

I HAVE been much interested in the notes on "Grape Culture," by "Byfleet" and "W. McGuffog." I once heard a gardener say "he would rather renovate old Vines than plant young ones." As I have had some considerable experience of the planting of young, and the renovation of old, Vines during the past thirty-five years, perhaps a few notes on such experience may be interesting. Given my choice I would rather plant young Vines than restore old ones, if I could do as I wished in the matter of border formation, etc. I am sure that many cultivators fail with young Vines through overcropping during the first four or five years. I like to build up Vines gradually, and in doing this I prefer to have restricted border space, making up the border piecemeal, and not having a greater depth than 3 feet.

With regard to old Vines, when I took charge of one large garden the Vines had been condemned and preparations made for planting young ones. I decided to renovate the Vines in three houses and plant young ones in the fourth. One house contained Muscats. The annual shoots made were moderate only in strength, but one of our noted Grape growers, when paying me a visit, said he should never again believe it to be absolutely necessary to produce very strong wood on Muscats in order to secure fine bunches and berries. The first year I cropped rather lightly, then more heavily. Several persons told me the crop was too heavy and that I should not have any good Grapes the following year, but for ten years the crops were, each succeeding year, more satisfactory, and I left them so. These Vines had been brought to a bad state through a too high temperature and moist atmosphere, and continual syringings throughout the summer and insufficient air. I never syringed after the young shoots were 1 inch long, and grew them more hardily, admitting air freely in due season. The borders were surface-mulched and then covered with whole turves, Grass sides downwards, and under these a network of roots formed. Old rods were gradually cut out and young ones retained in their place. G. G. B.

SHORTNESS OF THE PLUM CROP.

It would seem, judging from reports from growers in various districts, that the Plum crop of 1916 is much below the average. Plums everywhere blossomed profusely, and hopes were entertained that the setting of the crop was assured. Such hopes were, however, dashed to the ground, as the young fruits began to fall freely, until at length very few remain. Some kinds are absolutely barren, while others have but a light sprinkling. Perhaps the only exceptions are the old and popular Victoria and Czar, the latter carrying a full crop. Early Rivers', or Rivers' Prolific as it is known to some, rarely fails, but this year on many trees there is no fruit while others have but a sprinkling. On wall-trained trees the prospects are but little better.

There is, as everyone knows, a great dearth of bees this year, due to the disease which has played such havoc with them, and it may be their absence to some extent accounts for this dearth of Plums. There are, I believe, in some districts, a fair crop. It is very unusual for open-air and wall-grown trees to exhibit such sterility. The weather was wet and cold, as it usually is in Plum-blossoming time, but there was no frost. Damsons are similarly short. Out of several trees I have, only one has a crop, and that very light. Others, mostly standards, have not a sign of fruit on them. It would be interesting to learn from some among your many correspondents scattered over the country whether this Plum shortage is universal or only local.

W. STRUGNELL.

Trowbridge, Wilts.

NOTES AND REPLIES.

Silver-leaf on Plum-tree.—Can you tell me what treatment to adopt for the blighted Plum-tree of which I enclose some sprigs? The whole tree appears to be dying. Is the trouble infectious and likely to injure other Plum and Apple trees growing near? The trees are all young standards, but only one has been attacked.—N. MATTHEWS.

[The piece of Plum-tree you send has been attacked by "silver leaf," for which there is no cure. The best plan is to grub and burn the tree. If you intend planting another Plum in its place then you should remove the old soil as there is the probability that the roots of the newly-planted tree will be contaminated with it. If you plant any other tree bearing a stone fruit, then there is no need to clear out the soil, but you must take care to remove every particle of the roots of the Plum-tree, as such, if allowed to remain, will breed fungus as they decay.]

Apple and Pear crops.—One of your correspondents at Chester (p. 317) speaks of these as being a failure this year in his district. Here in my North London garden, where I have a considerable number of trees, both standards and pyramids, the crop of Apples is very promising, most of the trees being loaded with fruit, though Pears are a failure. This latter is not surprising, however, as all the Pear-trees here cropped so heavily last year that a rest this year was necessary to prevent undue strain on the trees. As regards Apples, almost every variety is bearing exceptionally well, especially Devonshire Quarrenden, Allington Pippin, that fine old cooking Apple, Alfriston (which, as a standard, always has a good crop with me), Bramley's Seedling, Blenheim Orange, James Grieve (which seems to be a consistently good bearer), as also Pott's Seedling, Warner's King, and others. Some of the standards are quite old trees, and there are other similar old trees in the gardens around mine. Whether it is that the old trunks furnish abundant chinks for the Codlin moth to pupate in I do not know, but, anyhow, we suffer considerably from this pest, and lose a good part of the crops prematurely. Of course, we ought to wash the trunks and branches with caustic soda in the winter, but it is such a disfigurement to the garden, as the trees are scattered about in various parts, that we prefer to put up with the Codlin moth. The miniature fruits which fall are not wasted, but used for making Apple jelly, for which purpose they are admirable. Bush fruit here is doing very well this year, Gooseberries, Currants, Raspberries, and Loganberries all having heavy crops, though the absence of warm, sunny weather delays their ripening.—N. L.

ROYAL HORTICULTURAL SOCIETY.

JULY 18TH, 1916.

THAN the exhibition brought together on the above-named date nothing finer in the circumstances could have been conceived, all departments being represented. The outstanding feature of the meeting, however, was the magnificent collection of vegetables sent by the Hon. Vicary Gibbs from Aldenham, and certainly nothing so comprehensive or of such high excellence has been seen before. Grapes, too, and Strawberries from Cliveden were grand, the former particularly so. Of Roses there was a great feast, the National Rose Society holding a special exhibition. Among hardy flowers Phloxes were very fine. Orchids were not largely shown, though choice novelties were seen. Several novelties received recognition, nine new Roses being awarded the gold medal.

HERBACEOUS PHLOXES.

Messrs. H. J. Jones, Limited, Lewisham, S.E., staged these very finely, employing a low-placed table of double width, and using a white groundwork and background. Great stands of the leading sorts were imposingly displayed in upwards of fifty varieties. Dr. Charcot (best of the blue shades), Elizabeth Campbell (pink), Antoine Mercier (deep lilac, white eye, very distinct), Le Mahdi, G. A. Stroblin (scarlet), Europe, Meteore, and Evangeline were a few of the more conspicuous.

HARDY FLOWERS.

These were numerous and varied, demonstrating the wealth of such things at this season. Messrs. Blackmore and Langdon, Bath, arranged a floor group of Delphiniums, as Statuaire Rude, Alake, King Bladud (the self-coloured sport from Rev. E. Lascelles), and Mrs. Shirley, a rather effective uauve. The finest thing in a group from Messrs. G. Jackman and Sons, Woking, was a handsome gathering of *Scabiosa caucasica*, a particularly good plant in moderately light soils.

Mr. M. Prichard, Christchurch, arranged a full table of the best hardy flowers, Phloxes, Crinums, Iris Kämpferi, Astilbes, Alstromerias, and others. *Campanula arvensis* (a gem among the choicest alpinas), C. Stansfieldi, and *Genista humifusa* (prostrate golden Broom) were very good. Phloxes, Pentstemons, and Delphiniums were shown by Messrs. John Forbes, Limited, Hawick, Marvel, of the first-named and of violet-blue tone, being very distinct.

CARNATIONS.

Mr. J. Douglas, Great Bookham, exhibited choice border Carnations very finely. We thought Grey Douglas quite a novelty in lavender-grey. In Mrs. A. Brotherston a good freckled fancy was seen. Hereules (maroon) is of large size and very handsome. Elizabeth Shifner, Cecilia (yellow), Bookham White, and Bookham Clove still rank high, and, indeed, are indispensable to any collection.

ALPINES.

Messrs. John Waterer, Sons, and Crisp, Bagshot and Twyford, arranged many choice things in colonies, the best of which included *Gentiana scabra* (very fine blue), the pretty and rare pink Thrift (*Acantholimon venustum*), the charming *Hypericum cuneatum* (scarlet buds and golden blossoms, a most effective plant), *Spiraea digitata nana* (true, its pink-flowered cymes but 8 inches high), and *Tunica Saxifraga flore-pleno*.

Messrs. Thomas Grove and Sons, Sutton Coldfield, showed some of their new hybrid *Campanulas* very effectively. Norman

Grove was very beautiful. Abundance is a taller, paler-flowered companion. Chastity (white) and Meteor (bluish-white) are carpatia forms. A delightfully-flowered mass of *C. Waldsteiniana* (violet-blue), 3 inches high, was also noted. It gained an Award of Merit, as also did Chastity.

Mr. G. Reuthe, Keston, contributed the lovely *Campanula arvensis*, C. Stansfieldi, *Acantholimon venustum*, *Coronilla cappadocica* (golden), *Orchis foliosa* (very fine), and the quaint *Astrantia carniolica*. *Desfontainia spinosa* (tubular flowers in crimson and gold) and *Ononis fruticosa* were good among shrubby subjects.

GREENHOUSE PLANTS.

Messrs. H. B. May and Sons, Edmontou, had quite a notable variety of *Adiantums*, such as Veitchi (with red-tinted fronds), *Faulkneri* and *micropinnulum* (two of the most elegant), with *microphyllum* and *peruvianum*, being noted. In addition, silvery and golden *Gymnogrammas* were a feature, *Mayi* and *flavescens* being the most pronounced of the silvers. Messrs. W. Cutbush and Sons contributed well flowered plants of *Gloriosa rothschildiana* and a group of the new Ivy leaved *Pelargonium Radiance*.

ROSES.

These were in great array everywhere, and we regret our inability to refer to all. In a notable collection from

Mr. J. C. Allgrove, Middle Green, Langley, Rayon d'Or, Lady Hillingdon (richly coloured), British Queen (one of the finest pure whites), and Miss Alice de Rothschild (fine yellow) were among the best. In that from Messrs. Frank Cant and Co. Lady Pirrie (a lovely salmon shade), Mrs. H. Stevens and Mrs. Foley Hobbs (superb whites), and H. E. Richardson (intense velvety maroon, very fragrant) were some of the best. A big basket of Rayon d'Or in Messrs. Hobbies' group was particularly good, the colour glorious. Messrs. B. R. Cant's single shell-pink Cupid was an attraction, Lady Pirrie, Lady Hillingdon, H. V. Machin, Mrs. Foley Hobbs, and the handsome red A. Hartman all being strongly represented. British Queen, Candeur Lyonnaise, George Dickson, and Ophelia were the best in a nice lot from Messrs. Chaplin Brothers, Waltham Cross.

ORCHIDS.

Messrs. Armstrong and Brown, Tunbridge Wells, staged very fine hybrid *Odontoglossums*, also the remarkable *Odontiodas rosefieldensis* (rich orange) and *Bradshawia*, both very telling and distinct. *Miltonia vexillaria Dreadnought* (pink, with white centre) gained an Award of Merit.

Messrs. Charlesworth and Co., Haywards Heath, had the very distinct and rare *Dendrobium acuminatum*, *Laelio-Cattleya Momus* (first-class certificate), together with very fine *Miltonias*, *Odontoglossums*, and *Odontiodas*.

Messrs. Stuart Low and Co., Enfield, contributed handsomely of *Cattleya gigas* and the beautiful *C. Gaskelliana Fairy Queen* among others, two very distinct and beautiful forms of *Cattleya Sybil*, *C. aurea* and *C. iridescens*, coming from Messrs. Hassall and Co., Southgate.

FRUIT AND VEGETABLES.

Probably the best and most comprehensive collection of vegetables ever staged was that sent from Aldenham House, Elstree, by

The Hon. Vicary Gibbs (Mr. E. Beckett, gardener), and which, by reason of its excellence, received both the gold medal and the Lindley medal, the highest honours the Council can bestow. Comprising 102

dishes in ninety varieties, it was replete of the best, Edwin Beckett and Quite Content Peas being arranged pillar fashion and showing to advantage. Cucumbers, Scarlet-podded Beans, Table Dainty Marrows, Egg Plant, Capsicum, Tomatoes (red and yellow), Celery, silver Seakale, Beet, Carrots, Onions, and much else being shown. Excellent in quality and perfectly staged, the group commanded attention and received high praise from all.

A dozen bunches of Black Hamburgh Grapes of grand size and superb finish came from

Hon. Major Astor, Cliveden, Taplow, Bucks (gardener, Mr. W. Camm). Grand dishes, too, of Laxton's Latest and Waterloo Strawberries were also shown, both demonstrating the highest cultivation.

Messrs. W. Paul and Son, Waltham Cross, showed orchard-grown fruit-trees, Pears, Apples, Plums, Figs, Cherries, and other fruits being seen in considerable variety. A collection of Cherries (fruiting branches) came from

Mr. Charles W. Muir, Penn, Bucks, Elton Heart, May Duke, Black Heart, and Black Elton being noted. New Zealand Apples constituted a big exhibit, four leading growers contributing thereto. The fruits were unnamed.

Messrs. Sutton and Sons, Reading, showed a collection of culinary Peas, Alderman, Lord Kitchener, Duke of Albany (selected), V.C., and Up-to-date being remarked. Dishes of such half-century-old varieties as Yorkshire Hero and Champion of England were also on view.

A complete list of the plants certificated and list of medals will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JULY 19TH.—*Acantholimon glumaccum*, *Potentilla* (in variety), *Sedums* (in variety), *Ethionema coridifolium*, *E. grandiflorum*, *Androsace lanuginosa*, *Gypsophila*, *Oosma albo-roseum*, *O. tauricum*, *Dianthus* (in variety), *Sempervivums* (in variety), *Lithospermum intermedium*, *Banfia petraea*, *Corydalis pallida*, *C. lutea*, *Genista humifusa*, *Convolvulus Cneorua*, *C. mauritanicus*, *C. althaeoides*, *Gnotheras*, *Tunica Saxifraga*, *Mimulus* (in variety), *Erinus*, *Erodium corsicum*, *Astrichinum Asarina*, *A. glutinosum*, *Platycodon Marieti*, *Lotus Tetragnolobus*, *Linarias* (in variety), *Aubrietias*, *Anthemis*, *Veronicas* (in variety), *Primula capitata*, *P. Bulleyana*, *Campanulas* (in great variety), *Abronia umbellata*, *Lysimachias*, *Hypericums* (in variety), *Scabiosas*, *Salvias*, *Lavateras* (various), *Ostrowskia magnifica*, *Cypripedium spectabile*, *Thalictrums*, *Heucheras* (in great variety), *Viola gracilis*, *V. Rothomagcasis*, *V. bosniaca*, *V. lutea*, *Supuarias*, *Thymus* (in variety), *Glossocoma clematidea*, *Gnaphalium trinerve*, *Valerians*, *Geums*, *Mertensias*, *Bergamots*, *Liliums* (in variety), *Delphiniums* (in variety), *Herbaceous Phloxes* (in variety), *Anchusa Opal*, *A. italica Dropmore var.*, *Pentstemons* (in great variety), *Carnations*, *Erigerons*, *Eryagiums*, *Achilleas* (various), *Verbascums*, *Eupatoriums*, *Chrysanthemum maximum vars.*, *Chrysogonum virginianum*, *Morina longifolia*, *Galegas*, *Romneya Coulteri*, *Tritomas*, *Lupins*, *Linums*, *Lobelias*, *Anthericum Liliago* (St. Bernard's Lily), *Cimicifuga racemosa*, *Dictamnus Frarinella*, *Centaureas*, *Acanthuses*, *Gladioli*, *Sweet Williams*, *Canterbury Bells*, *Stocks* (in variety), *Antirrhinums* (in many colours), *Cosmos*, *Sweet Sultan*, *Mignonette*, *Phacelias*, *Poppies* (in variety), *Forgloves* (various), *Honeysuckles* (in variety), *Sweet Peas*, *Petunias*, *Ageratum*, *Heliotrope*, *Begonias*, *Calceolarias* (various), *Gazania splendens*, *Tufted Pansies* (in many varieties), *Candytuft* (in variety), *Verbena venosa*, *Godetias*, *Clarkias*, *Pelargoniums* (in variety), *Leptosiphons*, *Iris* (in variety), *Senecio japonica*, *S. Clivorum*,

Viburnum Henryi, *V. Carlesi*, *Cistus* (in variety), *Spiræas* (herbaceous and shrubby, in many varieties), *Teucrium fruticans*, *Daphniphyllum macropodum*, *Carpenteria californica*, *Grevillea rosmarinifolia*, *G. sulphurea*, *Nandina domestica*, *Olearia nummulariifolia*, *Escallonia*, *Hardy Fuchsias* (in variety), *Colutea arborescens*, *Weigelas* (in variety), *Philadelphus* (in variety), *Roses* (many species and varieties), *Clematis* (many varieties), *Solanum crispum*, *Nymphaeas* (in variety), *Butomus umbellatus*, *Hemerocallis* (in variety), *Cyperus longus*.

THE WEEK'S WORK.—Pinks, having passed out of bloom, all flower-stalks have been removed and cuttings taken. The cuttings are pulled off the old plants, and, after trimming off the lower leaves, inserted in boxes of sandy soil and placed in a cold frame, which is kept close for a week or two, lightly spraying them overhead two or three times daily. Clematises, Roses, and other climbing plants are making very rapid growth, and a good deal of training is necessary, at the same time removing all weak and superfluous growths. The seed-vessels have been removed from such as *Rhododendrons*, *Laburnums*, etc., to encourage the production of new growth. Sweet Peas have been looked over and all seed-pods removed. As the plants are making much growth, a few of the side shoots were thinned out. The shoots of *Alstromerias* have been thinned, removing all weak and superfluous ones, and placing twiggy sticks amongst the plants for support. *Gladioli* and *Hyacinthus candicans* are sending up their spikes, and these have been supported with neat stakes. Tulips which were lifted from the beds to make room for the summer occupants, and heeled in to ripen, are now well matured, and have been sorted and stored in dry cupboards until the planting season comes round. Cuttings of the following were put in during the week:—*Fabiana imbricata*, *Hypericum elatum*, *Piptanthus nepalensis*, *Genista pilosa*, *Mazus rugosus*, *Dwarf Campanulas* (in variety), *Anchusa myosotidiflora*, *Alyssum spinosum roseum*, *Saponaria Boissieri*, *Gentiana angustifolia*, *Geranium lancastricense*.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Strawberries.—The crop of early and main-crop sorts has been an abundant one, but the flavour has not been all that could be wished owing to lack of sunshine. Beds which have to stand for another season and from which runners are not required should be forthwith divested of their oldest leaves and runners, and with the mulch cleared away. This should be followed by a good hoeing, when the surface will then be in good order for the reception of a dressing of manure, which should be spread between the rows directly an opportunity offers. Other beds should be similarly treated so soon as the requisite number of runners has been layered and ready for severance from the parent plant. Where much forcing has to be done a certain number of layered runners should be planted apart from those which will be expected to fruit, to supply runners alone next season. More vigorous and earlier runners are by this method secured, while the delay arising in the clearing of the beds after gathering is over is avoided. When calculating the number of plants that will be required for the making of new beds allowance should be made for giving some of the newer introductions a trial, if that has not already been done.

Protecting fruit.—Nets which have been in use over Strawberry beds have been requisitioned for the protection of Raspberries and Red Currants. To save time when gathering, these are stretched over a rough framework at such a height that it is unnecessary to move them, ingress and egress being had at one corner. Loganberries, to which birds are very partial, must also be netted, and so soon as the dessert varieties of Cherries are cleared of fruit the nets now in use on them will come in for covering Morello Cherries and wall-trained Plums, particularly the early varieties. Gooseberries which are required for dessert have to be securely netted, otherwise blackbirds and thrushes will quickly devour

the fruit. These are best protected in a similar manner to Raspberries. If merely laid on the bushes the nets become torn and damaged to such a serious extent as to be of no further service.

Camellias.—The flower-buds being set, the plants are now the better for being moved outdoors for the next month or so to undergo a thorough rest. A semi-shady position suits them best. Watering must be strictly attended to.

Salvias.—Where planted out, stopping and watering must have every attention, otherwise the plants will be leggy and possessed of but few branches and the foliage fail to retain its colour. Pot-grown plants should not be placed in a too fully-exposed position, otherwise the wood is apt to become too highly ripened, and never flowers so well as when it is in a more succulent condition. Red-spider has also to be reckoned with under the before-mentioned conditions, and is difficult to eradicate once it obtains a good hold on the leaves. A good preventive is weak soot-water, which should be syringed on to the under side of the leaves just about sundown.

Gloxinias.—These will soon be looking their best, and that the flowers may last as long as possible in good condition, a not too moist atmosphere should be maintained and the house well ventilated in the day. Watering needs to be carefully done—in fact, water should be applied only when after tapping the side of the pots the latter emit a clear ringing sound. Some of the best may be marked for propagation by means of the leaves, but, as from a packet of seed saved from a good strain plants can be raised which produce flowers of the highest quality and of the most beautiful colours, it is hardly worth troubling about.

A. W.

MIDLAND COUNTIES.

Peach-trees.—Ripening crops require a warm and fairly dry atmosphere. During dull weather and on cold nights a gentle heat in the water-pipes, with top and bottom ventilation, is necessary to create a circulation of air, otherwise but little fire-heat is used. The trees are looked over daily for the purpose of gathering ripe fruits. This is preferable to placing nets under the trees, as the fruits are apt to be bruised by coming into contact with the net. Any leaves which obstruct the light are tied back so that the Peaches are exposed to the sun. In later houses where the fruit is swelling, attend to the watering of the borders as often as necessary, as neglect at this stage may seriously affect the crop. The surface of the borders is not always a reliable guide to the state of the roots, as frequent syringings tend to make the surface-soil wet. The surface should be pricked up occasionally with a fork, taking care not to injure the roots. Trees carrying good crops of fruit will derive much benefit from a mulch of well-decayed manure.

Summer pruning.—It is not possible this season to give as much time as usual to hardy fruit-trees, but summer pruning must be completed as soon as possible, so that the foliage on spurs and at the bases of shoots on Pear-trees may be exposed to sun and air to assist it to ripen perfectly by the end of the season.

Raspberries, Black and Red Currants are a very heavy crop, and much time is occupied in gathering fruit for preserving. As soon as all the Raspberries are gathered the old canes will be removed and the young growths tied to the trellis to prevent injury from wind, thinning out the weakly ones where they are too crowded. The recent rains have been most acceptable here, but sunshine is needed now for all fruit crops.

Pears are looking remarkably well. The rains have not only caused the fruits to swell, but have also cleansed the trees from insect pests. Trees that are bearing heavy crops have been thinned of superfluous fruits. This increases the size of those that remain and conserves the energies of the trees, so that they will be in a condition to bear again next year.

Amarylises (Hippeastrums) are now ripening up their growth in a cool, airy house. The soil in the pots is kept slightly moist so long

as the foliage continues green. During bright weather a shading of light tiffany is afforded to protect the foliage from the fierce rays of the sun. When more advanced in the ripening process they will be exposed to the full sun.

Cinerarias pricked off into boxes some weeks ago are now ready for potting up singly into 3-inch or 4-inch pots, according to the size of the plant. After potting, they will be placed on a bed of ashes in a cold-frame, having a northern aspect, keeping the atmosphere moist and shading the plants whenever the sun is powerful.

Violets for frames have been mulched with horse-manure from which most of the straw was shaken. All runners are kept cut off, the plants well watered in dry weather and occasionally syringed with clear soot-water as a preventive of red-spider.

Celery.—The Celery-fly has made its appearance, and constant hand-picking and frequent applications of soot are necessary to keep it in check.

Brussels Sprouts.—Strong, established plants from the first sowing have been earthed up and the soil made firm about them to prevent the wind blowing them about.

Globe Artichokes.—As soon as the Artichokes are cut the old stems will be removed and a good watering given. They will then be expected to provide supplies later in the season.

Carrots.—The latest sowing of Carrot Early Gem will be made on a south border at the end of the month. Earlier sowings have been thinned to 3 inches apart and a sprinkling of soot applied during showery weather.

Winter Greens.—The season has been a very favourable one for the transplanting of Brassicas, and failures are likely to be fewer than usual. Wood-pigeons have done a considerable amount of damage to the plants in these gardens. All vacancies that have occurred, in consequence, have been filled up, and in some cases it has been necessary to place nets over the plants. These green crops may still be planted on the various plots of ground as they become vacant, and although the plants to be used now will be the small ones that were left from the first planting, they will have made nice, sturdy specimens since the bed was thinned. If they fail to make such large plants as the earlier ones they may turn in at an opportune time when such vegetables are becoming scarce.

Potatoes.—Many of the early varieties will now have completed their growth and are ready for lifting. This must be attended to before the tubers have time to start a second growth, which will soon take place, especially after a heavy rain when the ground is warm. It then becomes a difficult matter to secure sufficient tubers for next season's planting. Potatoes intended for seed should be exposed to the sun for a few days before they are stored, a shed where the air can pass freely through being the best place to keep them until frosts set in, when they must be removed to a place of safety. The ground from which this crop is lifted will be utilised for other crops, such as Spinach, Turnips, Lettuce, and Endive. Sowings of

Lettuce are now made weekly in order to secure an unbroken supply. At this season I prefer to sow the seeds thinly, allowing the plants to mature in the same position rather than transplant the seedlings. In this way the plants will afford a succession of heads and grow better during the next few weeks, especially if the weather is dry.

F. W. GALLOP.

SCOTLAND.

Hardy Plant Borders.—*Lilium candidum* appreciates a mulch or some liquid manure. This fine Lily is, in these gardens, rather capricious, and occasionally refuses to flower for a season. When this happens the spikes during the ensuing year may be depended upon to be better than the average. Roses now require some attention. Suckers must be promptly removed, and if it is not possible to mulch the beds the surface can be kept hoed. As has been previously indicated, as little

tying as possible has been done among the dwarfer hardy plants. There have been several occasions upon which torrential rains have fallen, but these plants have not been very noticeably knocked about. Taller plants, of course, are being staked and tied as occasion requires.

Hedges.—The time is at hand when the annual summer trimming of hedges has to be attended to. In the case of Beech hedges of some size the work is done with the hedge-knife. The common Yew makes a close and good hedge, and so does Holly, but the former must be kept away from boundaries, or from places where cattle or horses can reach it, owing to its poisonous nature.

Vegetable garden.—The present season will, unless an improvement takes place, be noteworthy, not only for its excessive wet throughout June and the early part of July, but for the very heavy nature of these rains. The soil in these gardens is rather stiff, so that after an exceptionally wet day it is not advisable to tread upon it for a day or two. Nevertheless, in the early part of the week some progress was made. The bulk of the Leeks was planted, the variety used being the old Musselburgh. In planting, a 4-inch drill is cut out with the hoe. In these drills, which are 14 inches apart, holes about 10 inches deep are made with a crowbar, and into these the young plants are dropped. No soil is given at planting time. The roots soon take hold, and as growth progresses the drills are closed in. The Leeks obtained by this method are of quite a usable size and thickness, more so, I think, than those grown in trenches, while they are certainly hardier in the event of a severe winter. All available corners are being gradually filled with various kinds of winter vegetables—Curly Kale, Savoys, and Sprouts—while a good batch of Celery has been planted out on the level for flavouring. There is usually a demand for Celery for seasoning, and by putting in such a batch the plants in the trenches are not interfered with. Peas and Climbing French Beans were staked, the latter after being thinned. Weeds have been very much more troublesome than usual, for not only has there not been the time in which to attend to them, but the weather has been unfavourable for their destruction. A spell of bright, sunny weather would therefore be welcomed.

Plant-houses.—Double Petunias do not now seem to be so popular as was at one time the case. Their blooms are not suitable for cutting, but, nevertheless, the plants have a certain value for house work in vases, and last fairly well. Somewhat straggling in habit, they require to be staked neatly and as unobtrusively as possible. *Diplacus glutinosus* is also grown to a certain extent. It is another plant which is not now very generally met with, and its rather sticky nature (as in the case of the foliage of Petunias) rather detracts from its value. Still, it is very free flowering and lasting, and gives variety to a mixed collection of plants in a greenhouse. Zonal Pelargoniums and double Begonias, among other things, continue to be bright, and wall-grown plants of the former, and of Heliotrope, flower freely during the late summer and autumn. Watering, owing to the prevalence of dull and sunless weather, has been less exacting than is usual just at the present time. A practice is made of inspecting the plants every morning, for there is always something which dries up more rapidly than others. In the stove, the earlier lot of *Pancreatum fragrans* is throwing up spikes. The blooms of these are very showy and sweetly perfumed, but unless they are shaded their beauty is rather fleeting. *Eucharis Lilies* could, I daresay, be had in bloom practically throughout the year if plenty of plants were available and the correct treatment given. These fine bulbous plants, being of an evergreen nature, should not be dried off, but removed to a cooler house and given sufficient moisture to keep the foliage in a robust and healthy condition. After about a month of this treatment they may be returned to the stove, and, to carry them on, an occasional allowance of weak manure-water or of well-diluted scot-water can with advantage be given. Syringing is necessary to maintain these and other stove plants in good health

and free from insects—that is, except during their period of flowering.

Calceolarias can now be sown. The seeds are very minute, and care in sowing is necessary. Let the pans be made ready, levelled, and sprinkled with fine sand before the packet is opened. Sow very thinly and evenly, and press the seeds lightly into the soil. No covering with sand or soil is needed, and until germination takes place let the pans be covered with obscured glass and regularly inspected and watered as becomes necessary. As soon as the seedlings are fit to handle they should be pricked off into boxes or pans. Do not reject the smallest seedlings, for observation has shown that such sometimes develop into the best plants and carry the showiest heads of bloom.

Hardy fruit.—Netting has been done in the case of late varieties of Strawberries. These all over, owing to the lack of sun, will not mature at their usual date, and while Raspberries, too, were netted in the course of the week they will not be ripe for some little time. Altogether, in the case of fruit, it has now become quite evident that the season will be a late one. Wall fruit continues to make progress, if slowly. At this time the regulation of young wood has generally been begun, but the weather conditions are delaying such work. It is hoped, however, to make a beginning in the course of the ensuing week.

Cabbages for spring.—Small sowings of these were made during the early part of the week. Dwarf sorts, such as *Ellam's*, April, Flower of Spring, and Harbinger are preferred; but much more reliance is placed on plants from sowings at a later date. The seeds are sown in drills for convenience in cleaning, and the seedlings, when ready, are pricked off into nursery beds for a time. The sorts mentioned above, being all of small size, may be planted out closely, and if the ground is in good heart no manuring at present is necessary. To have stout, robust, young plants which will stand over the winter let the soil be made as firm as possible before planting.

W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Rose Yellow Banksian not flowering (*Miss McDouall*).—This Rose, as a rule, flowers on the wood of the previous year. These growths should never be pruned, but allowed to grow naturally, the only artificial aid afforded being to spread them out somewhat, so that the sun and air may reach them, and so assist in ripening the wood. If there exists a lot of shoots, and they are at all crowded, these should be cut out, taking care to preserve the long wiry growths of the present year. Your best plan will be to try and dispose of the Lavender flowers in your own district.

Diseased Hollyhocks (*W. W.*).—Yes, the plants are very badly affected with the Hollyhock disease (*Puccinia malvacearum*). There is no reliable remedy for it, therefore the best plan is to pull up and burn the affected plants at once. Those that do not seem to be attacked should, as a precaution, be washed with soapy water, in which a liberal proportion of flowers of sulphur has been dissolved. The sulphur will settle at the bottom of the vessel, and must be frequently stirred up when the water is being used. Sulphur is very effective in destroying almost any fungus, and may this one in its very earliest stage, but it will not do so when established.

Myrtle not blooming (*G. G.*).—Possibly though the plant is healthy and the shoots quite green, the plant may be too weak to flower, caused partly by its being pot-bound. We should advise you to have it repotted, using a compost of three parts good fibrous loam to one part each of leaf-mould, well-decayed cow-manure, and sand. Be very careful as to watering until you find that the plant is growing freely. As regards your Fuchsias, you made the mistake of not waiting until they started into growth before you repotted them. Had you done this the roots, if watering was carefully attended to, would have soon taken hold of the fresh soil.

FRUIT.

Raspberries failing (*Mrs. E. C. Daniell*).—The reason of the malformation of the fruits is, we think, due to the flowers, after they opened, having been injured by cold winds or frosts or a combination of the two. We have carefully examined the specimens you send, and have failed to find the slightest evidence of any insect troubles. The canes, too, are very weak and thin, showing plainly that the roots require feeding. Even the young canes you send are very poor. Your best plan will be to give the plantation a heavy mulch of manure, and, if the weather is dry, water freely. We have found fish guano a good stimulant for Raspberries. This should be thinly strewn on the surface at intervals throughout the season and washed in. Have you been digging the ground in which the Raspberries are growing? If so, this would account in great measure for the failure, as doing so destroys the surface-roots, which are indispensable to the well-being of the plants. The fruiting canes should be cut out as soon as the crop has been gathered, so as to strengthen the canes for the next year's crop.

VEGETABLES.

Cucumber plants failing (*J. Cheeseborough*).—It is just as we suspected. The stems of your plants are affected with causer, caused either through growing in an unsuitable soil or too much moisture near the affected parts. In your case the cause, if we may judge from the specimen of soil attached to the roots, is the soil, which is much too light and rich. The woodlice are not the cause of the trouble, but at the same time you ought to take steps to clear them out by pouring boiling water over them if you can find out where they congregate. You will find an article dealing fully with Cucumber culture in our issue of June 19, 1915 (p. 379), a copy of which can be had of the publisher post free for 1½d.

MISCELLANEOUS.

House slops as manure (*E. J. H.*).—This should have four times its proportion of water added to render it fit for use as liquid-manure. Before using it it is as well to expose it in a large tub to the atmosphere for a few days, adding the water when it is to be used. It is greatly helped if either a peck of soot or a couple of pounds of guano or other artificial manure put into a bag be soaked in the manure. There are really no growing crops that may not be benefited by it. If the artificial manure be added, then let the added water be as six to one of the other. The exposure softens the liquid. Great quantities of such valuable plant food are wasted, which if put into a large tub in an out-of-the-way place in the garden would prove most valuable manure. We do not reply to queries by post.

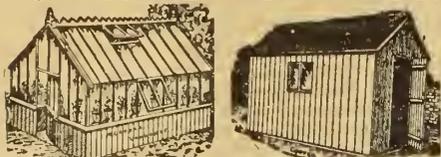
SHORT REPLIES.

W. M. Crowfoot.—Your Carrots have been attacked by the grub of the Carrot-fly. See reply to "Anglian," in issue of July 22nd, page 356. Kindly send some further particulars as to your Celery and Onions. The trouble is evidently in the soil, and it would be well to get the advice of a practical gardener who could see the plants.—*James Kirk*.—See reply to "Ayton," in our issue of July 22, page 365, re "Calceolarias failing."

NAMES OF PLANTS AND FRUITS.

Names of plants.—*M. R. Hearn*.—1, *Leycesteria formosa*; 2, *Statice Suworowi*.—*T. P., B'head*.—Flower quite dry and dead through being sent in cotton wool, the worst thing to use. Kindly send another specimen packed between paper.—*Charles T. Digby*.—1, *Leptospermum lanigerum*; 2, *Indigofera* species, apparently *I. Bungeana*, but the specimen was too poor for correct identification.—*A. M. L.*—A, *Salvia Horminum*; B, *Deutzia crenata flore pleno*; C, *Malva moschata alba*.—*R. Greening*.—The Maiden Pink (*Dianthus deltoides*).—*A. Robertson*.—1, *Hieracium* sp.; 2, *Sonchus* sp.; 3, Specimen insufficient; 4, *Linaria* sp.

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AUGUST 5, 1916.

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THE APPLE AND ITS FUTURE.

THE Apple, the noblest fruit of the North, deserves our best care, but our growers are confused with too many kinds in fat catalogues and exhibitions, in which fifty kinds may be shown out of season, that no good progress is made with the very best kinds for general use. Americans and Colonials are not so mistaken as we are. They send us vast quantities of their best kinds. As fine might be grown in the warmer parts of Great Britain and Ireland. Some of our Apples are as good as any grown in the northern world, with the gain of freshness. The energy that should carry us through is dissipated by growing too many kinds. What might be done by a Society, if we had a good one, would be the encouragement of the growth in orchards of one of each of the best kinds of Apple, such as, say, Blenheim, Ribston, and Sturmer.

Growers should be encouraged to make an orchard of one such standard kind, of which we cannot well have too many. When we grow a first-rate kind in quantity all that concerns it is better attended to—culture, cleanliness, gathering, and so on. A great point would be to promote the natural form of the tree, far too much attention being now paid to dwarfing stocks and ways of pruning. Over-pruning and bad pruning are far too common, reducing the amount of fruit and doing infinite harm in other ways. A rigid choice of kinds should be made. Diseases are far too rampant, American blight perhaps worst of all. With our present knowledge of washes we should be able to control these. In this way our own growers might compete with those of any country, but never so long as we cultivate a great number of poor kinds instead of those of finest quality. Now our Horticultural Society promotes a delusion by encouraging the exhibition of many kinds often out of their true season of use. We can never compete with the Pacific coast and other growers without a complete change of system, and such as Keswick or Mank's Codlin, Ribston, Blenheim, Sturmer, Roundway Magnum Bonum, Bramley, Alfriston, Wellingington, and Lane's Prince Albert, grown well, orchard fashion, would be worth more than ten times the number we now have.

Some control of the issue of new kinds might well be in action. Of recent years new Apples have been sent out which are no improvement on old kinds (some quite inferior). This evil might be

lessened if we have a revision of a standard fruit list every three years, as is done by the Pomological Society of France, with power to exclude from it any worthless new kinds arising from time to time. Controlled in that way the trade would be more cautious about bringing out new kinds before they were well tried.

NOTES OF THE WEEK.

Gentiana Przewalskii.—This Gentian, of prostrate habit and rich purple flowers, keeps well in the house. Some buds brought to town kept for over a week, and buds gradually opened in water. It may vary from seed. The form I have is as good in colour as *G. verna*.—W.

Rose Effective.—A Rose no garden should be without is Effective. It is a good doer in a poor soil; colour crimson, which does not die off magenta, sweet scented, good in the bud and in the open flower; long stalks for cutting; strong, healthy foliage; excellent for pillar or wall.—TOCKENHAM, WILTS.

Snapdragons of the day.—These are now very fine in colour and often distinct. Such a gain in a hardy plant is notable, all the more so as in some soils certain flowers, like Stocks and Asters, give a poor result. They are now very fine at Peekham Rye Park, planted in groups of one colour. Sweet Williams in the same place are fine, especially the self-coloured ones. Both races are full of interest for flower-gardeners.

Arum Lilies in ponds.—In the gardens at Great Ballards, New Milton, near the New Forest, an old gravel pit has been utilised for water-loving plants, and here the Arums do very well in water from 1 foot to 3 feet in depth. They are left undisturbed through the winter, and do not appear to suffer from the frosts. At Pylewell Park, Lymington, Arum Lilies are planted in the Grass at the edge of a large pond, and do remarkably well. They are also planted in the water itself, but I think the clumps at the edge of the pond have the better effect.—BOURNE VALE.

From Ashbourne.—Would it not be advisable for your correspondents to note down any combination of pleasing colours which arises in their gardens, often the result of chance, but useful to others if noted? For example, the Anchusas, both Dropmore variety and Opal, when grouped are apt to produce an effect too overpowering in blue, but when combined with the

larger forms of Daisies the mixture of white and blue is good and light. Both these plants flower at about the same period in July. Escallonia langleyensis looks well in a mass, but a better effect can be produced if some of the softer rose-coloured forms of the Wichuraiana Roses are allowed to ramble through and over the Escallonias.—RICH. H. BEAMISH.

Antirrhinum gibraltarium.—A very graceful plant I had not seen before: colour, a bright rosy-purple. It seems hardy on my rock border. This genus seems to have more interest for us than it used to have, though we have long enjoyed the Snapdragon, now so rich in colours. At Kew it is thought to be a narrow-leaved form (*angustifolium*) of the common Snapdragon.—W.

Moss Roses.—All of these, especially the white sorts, are well worth growing. The white kinds are less frequently met with than the pink varieties, but if not quite so showy, they are equally charming. Among them may be mentioned Reine Blanche, easily recognised by its foliage, which at times approaches to a golden-green—if a colour may be so described. Somewhat similar, but quite distinct upon comparison, is Comtesse de Murinais. Other good white Moss Roses may be found in Blanche Moreau and White Bath. It seems a pity that these old-time favourites have been almost eclipsed by the introduction of the popular Hybrid Tea Roses.—KIRK.

Rock Roses in Wales.—Will your correspondent "D." tell me where Cistus Loreti is to be had? I am surprised to read that *C. cyprius* is less hardy than some other kinds. The winter of 1894-95 did no harm to plants at that time about four years old. Two of these now cover a space of 9 yards and are about 8 feet high. I always cut them back in August and September, and again in March. There is not more than 1 foot of soil above the solid rock where they grow. The true *C. purpureus* was planted here in 1895. It was given me by the late Rev. W. Kingsley, of South Kilvington, Yorkshire, who grew this and other species in a glass-house. *C. purpureus* and *lusitanicus* are more particular than any others here as to the position where they grow. A south-west aspect is best. Though the *Cistus* family always does well here, I never before saw them in such perfection as during the present season, and the flowers never before lasted so long. *C. purpureus* opened its first flowers on June 5th, and there is

still plenty more to come (July 23rd). A very beautiful variety of *C. algarvensis* was discovered by Mr. Bowles last autumn at Woodbridge. I think it is the most beautiful I ever saw.—E. CHARLES BUXTON, *Coed Derw, Bethus-y-Coed.*

Nomocharis, a new Chinese Lily.—A new genus, intermediate between *Lilium* and *Fritillaria*, is among the most recent additions to garden plants from China. A plant of it in flower was shown recently at a meeting of the Royal Horticultural Society by Professor Bayley Balfour, who has been most successful in the raising and growing of new introductions from China. Two species of *Nomocharis* have been described, namely, *N. meleagrina*, found on the Mekong in Szechuen by Soulie, and *N. pardanthina*, found by Delavay on Mount Koulapo in Yunnan. *Nomocharis* differs botanically from both *Lilium* and *Fritillaria* in the following characters:—The inner segments of the corolla are much wider than the outer, the lower part of the filaments is inflated and hollow, and the foveole are multiplied and partly free.—*Field.*

Verbascum leianthum.—This is, perhaps, the noblest herbaceous plant that I have ever seen. I came across it some four or five years ago at Christchurch, in the nurseries of Mr. Maurice Prichard, from whom I subsequently obtained a plant. He assured me that it had never seeded successfully with him, but contrary to this is the experience of myself and of the Rev. C. O. S. Hatton, who procured a plant at the same time. We both have a number of seedlings, and mine, which are now in flower, form an imposing group of some twelve specimens. Although at Christchurch I saw some plants 15 feet high, in this dry climate of the eastern counties 12 feet seems to be the maximum attained. The stem, 7 feet in height, is surmounted by fifteen racemes of soft, yellow flowers, inclined at a slight angle to the main central spike, which is vertical. The stigma is pale green, and the five anthers of similar tint but very floccose. The size of the leaves is relative to that of the plant, the largest one I can find being 15 inches long and $7\frac{1}{2}$ inches in its broadest part. Their colour is a greyish-green, and they are smooth on the upper surface but woolly underneath. The sight of the spiral columns against a background of evergreens is one never to be forgotten.—G. H. RAYNOR, *Hazeleigh Rectory, Essex.*

Hardy white Jasmines.—It is not generally recognised that there are two quite distinct hardy Jasmines with white flowers. To my mind the better is the common Jasmine (*Jasminum officinale*), which forms such a charming feature on many a country cottage. The second form has, before now, been assigned specific rank under the name of *Jasminum affine*, but it is by Mr. Bean regarded as but a variety of the common kind, from which it differs in being of stronger growth, while the individual flowers are larger, and with a purplish tinge on the exterior, more pronounced in the bud state than when fully expanded. The young leaves and growing points of the shoots are also tinged with red, a feature which is wanting in the common kind. The perfume of *affine* is also, I think, less pleasing than that of the other. Probably from its more vigorous growth *affine* appears to be grown now to a greater extent than *officinale* itself. At all events, it may be far more generally met with than was the case a few years ago. Anyone in need of a white-flowered, fragrant Jasmine should plant the old and well-proved *Jasminum officinale*.—K. R. W.

TREES AND SHRUBS.

HYBRID TREES AND SHRUBS.

It is remarkable that so few hardy trees and shrubs should be hybrids. Except in a few genera, very little systematic hybridisation appears to have been carried on, some of the most valuable hybrids owing their origin to chance rather than to the efforts of the gardener. Probably the most energetic hybridist among shrubs was the late M. Lemoine, of Nancy. With the two families—*Philadelphus* and *Deutzia* alone—his labours will always be remembered by the numerous showy hybrids which appeared in the course of the last twenty-five years. In other directions he has also done good work, for numerous *Diervillas*, *Syringas*, and autumn-flowering *Ceanothuses* originated in his nursery. The names of Jackman, Cripps, Smith, and Moser are household words where Clematises are concerned, for they have given us many of the fine varieties belonging to the *Jackmani*, *lanuginosa*, *patens*, and *florida* groups. *Rhododendrons* and *Azaleas* have for many years been favourites with the hybridist, but comparatively few species have been used as parents when the large number available is taken into consideration. Names such as Gill, Mangles, Godman, Loder, and Davies are intimately connected with hybrids raised between semi-tender species, whilst amongst hardier sorts some of the more important workers have been Messrs. Waterer, Paul, and Davies. Deciduous *Rhododendrons* or *Azaleas* were originally raised in Ghent, but many of the finest hybrids were raised later by the late Mr. A. Waterer and Mr. Cripps. In the genus *Rhododendron* alone there is still plenty of work to be done, more particularly among the dwarf species, and if suitable mates could be found for such species as *racemosum* and *lepidotum*, new races of garden *Rhododendrons* would doubtless appear. The advisability of keeping strict records of all crosses, with the time of seed collection, sowing, appearance of plants, and time of flowering, is very important, for in the event of a particularly useful or interesting plant being raised, the hybridist is asked to supply all kinds of information about it. With this in view every cross should be recorded in a book kept for the purpose, and other items of information added at the proper time.

Professor Henry, of Dublin University, has interested himself in hybrid forest trees during late years, and in addition to clearing up the origin of certain trees which, in the past, have been regarded as doubtful species, by proving them to be hybrids, has raised several new trees, some of which show surprising vigour.

In the following notes attention is directed to some of the more important hybrids at present obtainable.

DEUTZIA.—The various hybrid *Deutzias* have been raised by crossing the following species:—*D. gracilis*, *D. parviflora*, *D. discolor*, *D. discolor purpurascens*, *D. setchuenensis*, and the hybrid *D. Lemoinei*. One of the earliest hybrids was *D. Lemoinei*, which appeared in 1891 from a cross between *D. gracilis* and *D. parviflora*. It is well known by reason of its large corymbs of white flowers, which appear out-doors towards the end of May, although its great value is for forcing. The advent of *D. discolor* and its variety *purpurascens* gave the opportunity to raise kinds with coloured flowers, and the purple, which is a conspicuous feature in the flowers of those two shrubs, more especially the latter, is found in varying degrees in the hybrids. The widely-open

blooms of these kinds have also exerted an influence upon the hybrids, and a considerable difference in the shape of the flower is noticeable. Some fine hybrids between these kinds and *D. gracilis* are found in *floribunda*, *grandiflora*, *rosea*, *campaulata*, *carminea*, *eximia*, and *multiflora*, all very showy. *D. campaulata* and *D. multiflora* have white flowers, whilst those of the others are more or less deeply stained with pink or purple. *D. kalmiæflora* is an exceptionally fine shrub of erect habit, with flat, rounded flowers, whitish within, and rich rose without. Its parents are *D. discolor purpurascens* and *D. parviflora*. Other fine hybrids may be found in *myriantha*, *Avalanche*, *Apple Blossom*, and *Roseball*. The most familiar

MOCK ORANGES (*Philadelphuses*) are *P. Lemoinei* and its variety *erectus*, the latter an improvement on the type, and may be considered one of the best twelve flowering shrubs. Its parents are *P. coronarius* and the dwarf *P. microphyllus*. Other fine hybrid Mock Oranges are *Boule de Neige*, *Gerbe de Neige*, *Boule d'Argent*, *Bouquet Blanc*, *Candelabra*, *Manteau d'Hermine*, *Mont Blanc*, *Mer de Glace*, and *Rosace*. Hybrid

DIERVILLAS include such kinds as *Eva Rathke*, *Lavallei*, *Pascal*, *P. Duchatre*, *Saturne*, *Conquerant*, *Seduction*, and *Abel Carrière*. Garden forms of

LILAC are legion, but perhaps the most distinct hybrid is *Syringa chinensis*, often called the Rouen Lilac. It originated by crossing the common *S. vulgaris* with the dwarf Persian Lilac, *S. persica*. The result is a plant, growing at least 12 feet high, and the same in diameter, of free-flowering character with the elegant inflorescences of the Persian Lilac, though intermediate in size between those of both parents. One would now like to see the Chinese *S. villosa* crossed with the fine garden kinds. Little has been accomplished with the ornamental flowering species of

RIBES. The only hybrid of importance is *R. Gordonianum*, a cross between *R. sanguineum* and *R. aureum*. In habit it most closely resembles *R. sanguineum*, but the flowers are of an intermediate character. A hybrid

FORSYTHIA is found in *F. intermedia*, its parents being *F. suspensa* and *F. viridissima*. It is free flowering and intermediate in character between the parents. There are several hybrid

BROOMS, the best known being *Cytisus præcox*, an early-flowering shrub with cream-coloured flowers. Its parents are *C. albus* and *C. purgans*. Two attractive dwarf hybrids are *C. Beani* and *C. kewensis*. Both were raised at Kew from naturally fertilised flowers of *C. Ardoini*. *C. Beani* bears golden blossoms and *C. kewensis* cream-coloured flowers. Another Kew hybrid is *C. Dallimorei*, a hybrid between *C. scoparius Andreanus* and *C. albus*, the former the female parent, which was isolated whilst in flower. Growing as tall as the common Broom, it differs from any other kind in having rosy-purple flowers.

BERBERIS STENOPHYLLA is the most conspicuous hybrid *Barberry*. An excellent evergreen, it is also a first-rate flowering shrub. Its parents are *B. Darwini* and *B. empetrifolia*.

HYPERICUM MOSERIANUM, a very useful summer and autumn-flowering shrub, is a hybrid between *H. calycinum* and *H. patulum*. The genus does not, however, appear to be an easy one to raise hybrids from.

MAGNOLIAS have been enriched by numerous hybrids raised between the white-flowered *M. conspicua* and the reddish-purple *M. obovata*. Notable kinds

are *Soulangeana*, *Lennei*, *rustica*, and *Norberti*.

PYRUS SCHEIDECKERI is a very free-flowering semi-double-flowered Crab, a hybrid between *P. prunifolia* and *P. floribunda*. Another free-flowering hybrid is *P. Kaido*, which is considered to be the result of a cross between *P. spectabilis* and *P. Ringo*. *P. auricularis* is a curious hybrid between *P. Aria* and *P. communis*, its red and yellow, Pear-shaped fruits being borne in large, flattened heads. Among

LABURNUMS are several hybrids between *L. alpinum* and *L. vulgare*, of which *L. Watereri* and *L. Parksi* are good examples. The graft-hybrid, *L. Adami*, is interesting on account of its producing three distinct kinds of flowers on the same tree—ordinary racemes of yellow *Laburnum* flowers, racemes of purple flowers, and flowers and growths such as are natural to *Cytisus purpureus*. The union of *C. purpureus* and *L. vulgare*, by grafting,

cærulea). From its exceptional vigour and rapid growth the wood is superior to any other kind for the manufacture of bats. The tree is recognised by its stiff, erect habit, female flowers, and bluish leaves. Another useful hybrid tree is the London Plane (*Platanus acerifolia*), whilst there are several useful Elms and Oaks. One of the most interesting of the Oaks is *Quercus Lucombeana*, a hybrid between the evergreen Cork Oak (*Quercus suber*) and the deciduous Turkey Oak (*Q. Cerris*). D.

BERBERIS ARISTATA.

THIS is a valuable late-flowering kind welcome after so many of the family have passed out of bloom, and, with others, shows the variety of beauty among the Barberries, both evergreen and summer-leaving. All who care for hardy shrubs should plant a small group in the coming autumn. It is a Himalayan species of vigorous habit, and forms one of the

this year, so I cannot tell if they are the male or female tree. I enclose a piece.—ETHEL CASE.

[We should certainly put the trees out of harm's way. Fatal accidents have occurred where trees, as in your case, seemed to do no harm.—Eb.]

New plants from China.—The third expedition into China to discover new plants suitable for introduction into the United States has been completed by Mr. Meyer, plant collector, who recently returned to Washington after a three-year trip in the Far East. As a result of this expedition through China, of the specimens secured were the jubebe, a fruit new to this country and which may be suitable for use in the south-west, a wild Peach resistant to alkali, cold, and drought, certain Chinese Persimmons larger than any hitherto known in this country, a number of aquatic food roots and vegetables for the utilisation of swamp land, some thirty varieties of vegetable and timber Bamboos, and a number of Chinese vegetables, bush and climbing



Flowering sprays of *Berberis aristata*. Hillbrook Place, July.

produced this remarkable hybrid. Another instance of hybrids raised by graft influence is seen in the two or three kinds of *Cratægo-Mespilus*. In this case the trees bear three different kinds of leaves, flowers, and fruits from the result of grafting a Medlar upon a Thorn. The red-flowered

HORSE CHESTNUT (*Æsculus carnea*) is another good example of a showy-flowered tree, whilst other hybrid Chestnuts are found in *Æ. Lyoni*, *Æ. neglecta*, and *Æ. plantierensis*. Amongst the several hybrid

SPIRÆAS, *S. arguta* is one of the best, and few shrubs command more attention during early April, for its white flowers are borne in such profusion as to almost hide the branches. Among

CISTUS and **HELIANTHEMUM** are several attractive hybrids. Among large-growing trees are several hybrids which are superior for commercial purposes to the parents. The most notable one is

THE CRICKET-BAT WILLOW (*Salix*

largest specimens in the family. Well-grown examples may be anything up to 16 feet or 18 feet high, with a diameter of quite as much. Although a deciduous plant, it retains its leaves until well on into late autumn, and it is unusual for all the leaves to fall before the second or third week in December. The leaves are of good size, dark green, and sparsely armed along the margins with sharp spines. The pale yellow flowers, produced in racemes each 2 inches to 3 inches long, in June, are succeeded by oval, purplish fruits, which ripen in September, and are covered by a thick glaucous bloom, which gives them a curious appearance, for the purple is here and there visible through the glaucous coating. It is easily propagated from seeds, grows rapidly, and quickly forms large specimens.

The Yew.—The Yew-trees which are growing by the side of the road opposite this house are constantly nibbled at by the horses, goats, and cows with no bad effect. They did not bloom

Roses, shrubs and trees, and a Hickory-tree, the first found in China. Elsewhere English Walnuts were discovered in a wild state, and the discovery of the wild Peach is regarded as significant because it seems to prove that the Peach may have been a native of China rather than of Persia. The discoveries of native and hardy Oranges and other Citrus fruits, a number of which have been brought to this country for breeding, give added evidence that China was the home of the Orange, which was introduced into other countries probably by early Portuguese travellers. Of interest also are the collections of aquatic food plants secured in the recent expeditions. These include Water Chestnuts, Water Nuts, and a number of aquatic bulbs, as well as the Water Bamboo. The Chinese, the explorer found, have mastered through centuries of experiments the process of using swamp lands for the raising of food crops.—*Gardeners' Chronicle of America*.

FRUIT.

FRUIT-BOTTLING FOR SMALL-HOLDERS.

AMONG the industries to which the small-holder should direct his attention fruit-bottling is worthy of wider consideration than it at present receives. This method of preserving fruit is quite distinct from jam-making, and is more simply carried out. It enables the grower to make the utmost use of all fruit which reaches maturity, for in a year of abundant crops all surplus fruit, and in any year fruit which cannot be sold at a fair price or consumed, can be preserved for future home requirements or for sale during the months when fresh fruit is unobtainable. Bottled fruit, properly preserved, is a wholesome and valuable food, which finds a ready and profitable sale. There are probably two reasons why fruit-bottling is not yet so common as it deserves to be:—

(1) The process is considered to be difficult, and (2) there is a general impression that a special and costly sterilising apparatus is absolutely necessary. With regard to the first point it is only necessary to say that few tasks could be more simple or easy to perform than fruit-bottling, which requires only the care and attention of an ordinarily intelligent person. As to the second point, a patent steriliser is not necessary where only small lots of fruit are to be bottled, a large saucepan, boiler, fish-kettle, or similar vessel for heating water alone being requisite. When, however, the small-holder finds that he can profitably dispose of a fairly considerable quantity of bottled fruit, a larger type of boiler holding one or two dozen bottles, or a small sterilising outfit, may usefully be employed. A few shillings will purchase a suitable flat-bottomed iron pot to hold several bottles, while a small steriliser holding about a dozen bottles for use with an oil or gas stove or a kitchen fire may cost £1 5s. to £3 3s. If it be desired to preserve several hundred bottles of fruit in one season it may be worth while to invest in a steam steriliser holding three or four dozen bottles, or even more.

THE OBJECT OF STERILISING OR "PRESERVING."—When it is desired to keep fruit until the fresh article is not available, some means is necessary which will arrest the ordinary processes of decay or "rotting" induced by a variety of low forms of life—bacteria, yeasts, fungi, and possibly even minute larvæ of insects. The most convenient plan is to employ heat to destroy such agents of decay as are present, and prevent the subsequent access of others to the fruit by enclosing it in hermetically-sealed or perfectly air-tight vessels. This accomplished, practically in one operation, fruit will remain sound and good for a considerable period, even several years. The desired result is usually attained by placing the fruit in glass bottles having air-tight caps, subjecting the whole for a certain time to a given temperature by means of water or steam, and closing the bottles while still surrounded by steam.

BOTTLES.—Wide-mouthed bottles specially made for the purpose may be obtained through almost any ironmonger at from 3s. to 6s. 6d. per dozen complete, the price varying with the size and quality of the bottles. Many persons have a decided preference for bottles with glass tops instead of metal tops, and some like the "screw" tops; whilst others prefer the bottles whose tops, covers, or discs are held in position by "spring" clips. When counting the cost of the process of bottling it is well to remember that the same

bottles, when once obtained, may be used repeatedly until broken; the chief renewals required are rubber rings, which are used with bottles for rendering them air-tight. It is absolutely essential that the bottles should be air-tight. An imperfectly-fitting rubber ring or cover may be sufficient to cause failure after perfect sterilisation; the rings and covers must, therefore, fit perfectly. As this cannot always be guaranteed, there will be an occasional bottle which will not be successful. This should be used at once, or the contents may be emptied into a new bottle and re-sterilised.

THE BOILER OR STERILISER.—As stated above, in the case of small lots an ordinary saucepan, boiler, or fish-kettle may be employed to hold the bottles. While such a vessel is over the fire the bottles should be raised somewhat above the bottom of the vessel, or some of them may crack; this may be arranged by placing in the vessel a false wire bottom or a board $\frac{3}{4}$ inch thick and standing the bottles on this. The bottles should then be "shoulder-deep" in the water. The temperature should be slowly raised to the desired point, and the caps should be fastened tightly before the vessel is removed from the fire. For fruit-bottling on a somewhat larger scale a boiler or steriliser may be constructed to hold a dozen or fourteen bottles. Different types of these have been placed on the market. Where large quantities of fruit are to be bottled, a steam boiler may usefully be employed in conjunction with a steriliser. This steriliser is a galvanised iron vessel about 4 feet long, 2 feet wide, and 2 feet high, raised somewhat from the ground on four legs. The lid consists of a galvanised iron plate fitting over a number of bolts on the rim of the steriliser and screwed down by means of winged screws; two handles serve to remove it or place it in position; a perforation allows the insertion of a thermometer; and a perforated brass or copper vent in the centre allows the escape of steam. The steam is admitted at the bottom by means of a pipe from the boiler, and is equally distributed round the steriliser by a perforated pipe running round near the bottom. Cold water can also be admitted at the bottom by a tap and pipe connected with the usual water supply. An overflow is provided at one end for the water, and a tap for the purpose of emptying the steriliser at the bottom. Bottles when filled are placed in rows in the steriliser on a perforated galvanised iron sheet or false bottom raised about 4 inches above the bottom of the steriliser on a ledge; they should not be fastened down, but caps should be as nearly as possible in position. The lid is screwed on and the thermometer inserted (the bulb standing in a jar of water inside the steriliser), and steam is then gradually admitted in increasing amount to raise the temperature slowly to the desired point. After maintaining such temperature for the requisite time steam is partly shut off, the lid is removed, and the bottles quickly closed down by means of the gloved hands while the live steam is still playing round the bottles. Steam and cold water are now admitted together, the water being gradually increased and the steam decreased in order to reduce the temperature quite slowly and avoid breakage of bottles. Finally, when the cold water reaches the shoulder of the bottles, these may be removed to finish cooling while another batch is treated. Such a steriliser will hold from six to eight or nine dozen bottles according to their size, and may cost about £20 to £24.

FRUIT SUITABLE FOR PRESERVING.—Any fruit may be preserved by the bottling pro-

cess, either whole or sliced. Apples, Pears, Apricots, Peaches, Limes, Shad-docks, and Lemons may all be used, though the bulk of bottled fruits consists of Plums, Gooseberries, Cherries, Raspberries, Loganberries, and Currants. Plums and Gooseberries are probably most largely used. When once properly sterilised and the bottles quite air-tight the fruit will keep almost indefinitely, Plums, Gooseberries, Raspberries, Blackberries, and Currants bottled in 1903 being quite good in the winter of 1910-11.

THE USE OF SYRUP.—The use of syrup is not essential, pure water being equally as suitable and a little more transparent, and thus improving the appearance of the fruit after sterilisation. Moreover, a thin syrup spoils the natural flavour of the fruit without making it sufficiently sweet to render further sweetening unnecessary when used. Sugar, therefore, should either not be used, or it should be used at the rate of from $\frac{1}{2}$ lb. to 1 lb. (according to the acidity of the fruit) of pure cane sugar to 1 quart of water. Raw beet sugar should not be used, as it renders the syrup "cloudy," but pure cane sugar leaves the syrup tolerably clear.

SELECTING AND PREPARING THE FRUIT.—The degree of ripeness of the fruit has a considerable effect on the appearance of the fruit after the bottling process is completed. Fruit should be slightly under-ripe for bottling, as the skin does not then break so readily during the process of preservation; with ripe fruit, breaking of the skin can hardly fail to occur, and the appearance is apt to be spoiled. In this respect under-ripe fruit will bear a higher temperature without injury than ripe fruit, but in no case need the temperature rise higher than 200 degs. F., and in practically all cases 190 degs. F. is sufficient. All fruit used should be sound and without speck or injury of any kind. It is best gathered dry, but if it be damp or wet it should be heated a little longer. All fruit should be carefully graded, only that of equal size being placed in the same bottle. Good results are not attained by mixing large and small fruits, while such mixtures have not a satisfactory appearance. "Windfall" Apples and Pears may be bottled if damaged portions are rejected. Preparation before bottling varies somewhat according to the fruit concerned—for instance, Gooseberries should be topped and tailed; Currants shredded from their stalks with light fingers; Rhubarb skinned and cut into pieces of a uniform size; Cherries must be stalked, and, if possible, stoned; the hull should be removed from Raspberries; Plums, Greengages, and Damsons must have their stalks removed; large juicy Plums must be cut into halves before being placed in the bottle; Peaches and Nectarines should be skinned, stoned, and halved; Apples and Pears must be peeled and "quartered." A silver or plated knife only should be used for preparing fruit. Great care should be taken in placing the fruit in the bottles, for if these are imperfectly filled some fruits (e.g. Strawberries) after sterilisation will rise, and leave a large space at the bottom without fruit. Many have experienced this in their first attempts at fruit-bottling. A stout stick or piece of wood, about 12 inches in length—blunt at one end and rather pointed at the other—is very useful in arranging and gently pressing fruit into position in regular layers. The fruit should be selected of nearly equal size and then arranged in the bottles systematically, pressing it into place by means of the stick when necessary. The bottles should be filled to the top of the neck, still using a little force in packing if requisite. Soft fruits like Gooseberries

and Currants require shaking together in order to ensure close packing; Rhubarb should be placed as far as possible in upright rows; Plums should be arranged in rows, as by this means more fruit can be placed in the bottles. As the bottles are filled with fruit, water may be added to within $\frac{1}{2}$ inch of the rim, or syrup as described above may be used. In the case of bottles with screw caps, the latter may be placed on loosely and partly screwed down in order that they may be readily screwed down tightly directly the sterilising process is completed. In the case of bottles with caps (either glass or metal) and springs the rubber rings should be softened in hot water, the cap should be

the bottles then securely fastened down; in the case of screw caps the tops should be screwed further if possible as the bottled fruit cools. Each lot of bottled fruit should be examined two or three times during the first day or two, and if any doubt is entertained as to the condition of any of it the doubtful bottles should be re-sterilised at once. This may sometimes be necessary owing to faulty caps.

TEMPERATURES FOR STERILISING.—The temperatures at which fruits are bottled will in part depend on the period for which such temperatures are to be maintained. One authority states that the temperature should be maintained for fifteen or twenty minutes at about 165 degs. F. in the case

such organisms are rendered incapable of further development, except in occasional instances, which do not necessarily arise from any defect in the process. For Peas, Beans, and other vegetables sterilisation should be complete; to effect this higher temperatures are necessary, for not only do these vegetables contain abundant nitrogenous matter, but they are deficient of organic acids.—*Leaflet No. 250 Board of Agriculture and Fisheries.*

PLANTS AND FLOWERS.

ORCHIDS.

ORCHIS MACULATA.

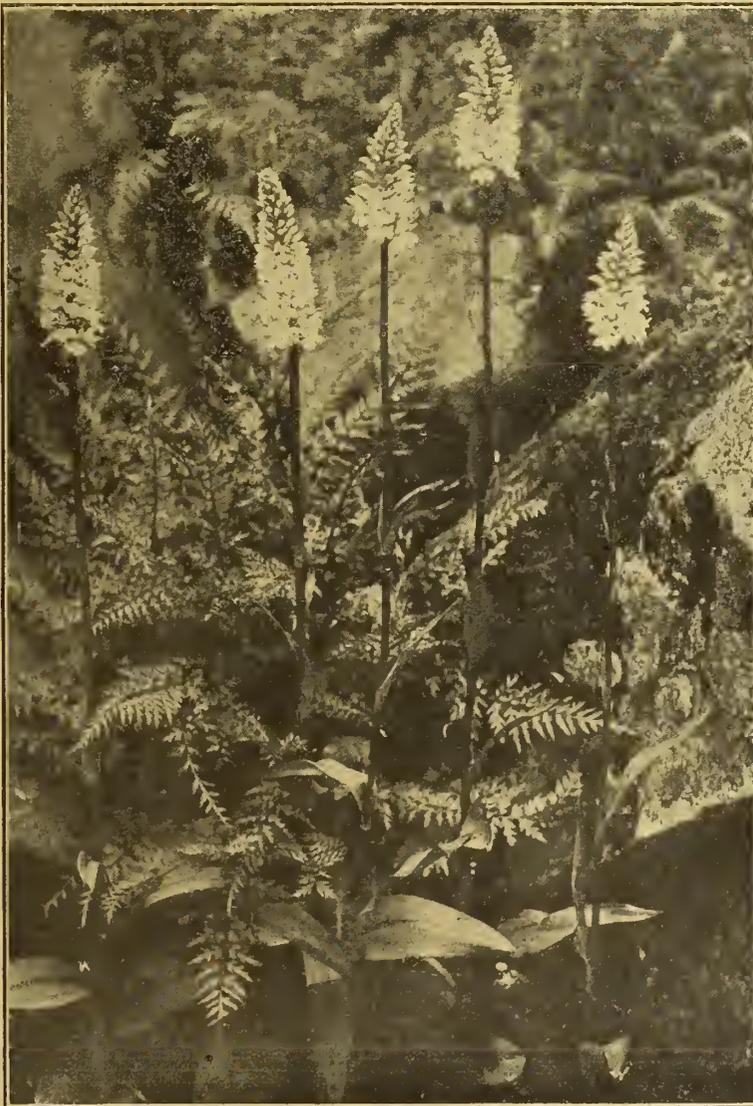
This has much to recommend it, the tall, handsome spikes of variously coloured flowers lasting for a long time when brought into the house. The foliage, too, is pretty, so beautifully spotted and blotched that it always arrests attention, even when the plants are not in flower. Few native plants are more easily grown, for if lifted carefully in the autumn and planted at once in good, rich loam, it will very soon become established. There are pure white forms of the spotted Orchid, but, as a rule, they are not so vigorous as the type. The group of the white form we figure to-day is growing in Sir Frank Crisp's rock garden at Friar Park.

ODONTOGLOSSUMS.

WHEREVER cool Orchids are grown, the Odonoglossums, especially those of the crispum type, form the bulk. For the most part, hybrids are less difficult to grow than species, but all prove amenable to ordinary cultivation.

The flowering period extends nearly the year round, so a few plants will require repotting at intervals, and the majority will need attention in February and August or September. Ordinary flower-pots are chosen, and filled to one-third of their depth with drainage. The compost consists of Osmunda-fibre, peat, and Sphagnum Moss in equal parts, and if the plants are not thriving as they should do, a moderate sprinkling of partly-decayed Oak or Beech leaves may be added. The whole is cut up fairly fine, and thoroughly mixed a week before it is needed. Small plants that have filled their pots with roots may be moved on without much disturbance, but from examples that have lost their roots all the old soil must be picked out, the dead roots cut away, and a few of the back pseudo-bulbs removed, two or three behind each growing point being ample. Such plants generally need a smaller pot, and a little more drainage may be added with advantage. All those that have been repotted may be arranged together where they are not so likely to get overdone with water. Keep the surroundings moist, and shade from all strong sunshine. An average temperature of 50 degs. to 55 degs. should be maintained during the winter, but in summer 10 degs. higher will do no harm.

To be successful with cool-growing Orchids due attention must be paid to ventilation. It is a common mistake with amateurs to open all the ventilators to their fullest extent, which allows a large quantity of dry air to enter and dry up the moisture. If the outside atmosphere is fairly moist, only one set of ventilators should be opened at a time, and they must be on the leeward side of the house. When the weather is hot both may be left open an inch or two throughout the night. A moist atmosphere is necessary, and this is brought about by sprinkling water on the stages and floors twice or thrice daily, allowing it to become fairly dry for a



Orchis maculata alba. Friar Park.

placed on, and the spring placed in position ready for fastening down directly sterilisation is completed.

STERILISING.—When the bottles of fruit are ready they should be placed in the boiler or steriliser and the temperature raised quite slowly, perhaps at a rate of 2 degs. F. per minute, otherwise bottles may crack and the skin of the fruit may break and the appearance of the produce be spoiled. The temperature necessary will vary with the kind and ripeness of the fruit, but a lower temperature than 165 degs. F. is quite unreliable, and a higher temperature than 190 degs. F. or 200 degs. F. is unnecessary. The necessary temperature should be maintained for a time suitable for the fruit being sterilised, and

of small fruits such as Gooseberries, Currants, Cherries, and Raspberries, and at any temperature between 165 degs. F. and 190 degs. F. in the case of Plums, Apricots, Peaches, and Pears. For sterilising the latter fruits forty minutes at a temperature of about 165 degs. F. to 170 degs. F. will answer.

Though the word "sterilise" is employed in this leaflet it is not to be understood that the process of fruit-bottling involves complete sterilisation, for some organisms may not be destroyed by heating to the temperatures suggested. Owing, however, to the absence of oxygen, the relatively high percentage of organic acids present, and the small amount of soluble nitrogenous matter in the fruit juices,

couple of hours at mid-day. Shade will be needed whenever the sun is bright. The best blinds are undoubtedly the wood lath roller kind, which can also be employed during the winter as a protection from frosts. *Odontoglossums* that are well rooted enjoy a copious supply of water during their growing period, but when the pseudo-bulbs are fully developed a less quantity will suffice, although the plants must not be dried off like many other Orchids. If the pseudo-bulbs are kept plump no harm will accrue. SABOX.

Vanda cœrulea.—On account of the colour of the flowers this *Vanda* always commands attention. The colour varies from light blue to a darker tint, the size of the individual flowers also varying. In some collections a house or division is set apart for its accommodation, but this is not essential, as the plants will succeed equally as well if placed in the *Cattleya* division. During their period of growth the warmest end should be chosen, their immediate surroundings kept moist, and the roots liberally supplied with water. Any repotting should be done when root-action begins, but, as a general rule, they will go several seasons if top-dressed annually with clean, fresh *Sphagnum* Moss. The plants may be grown either in pots or Teak-wood baskets, which must be filled to one-half of their depth with drainage, the compost consisting of *Sphagnum* Moss, with a moderate quantity of *Osmunda* fibre. A good time to repot is when new roots are formed. Plants that have lost their lower leaves may have a portion of the old stem removed, so that the leaves are near the surface of the soil. Newly-potted plants must be carefully watered until root-action is evident. When the plants are at rest remove them to the cool end of the house, discontinue damping down, and only give sufficient water to maintain the leaves in a plump and rigid condition.—B.

Cypripedium insigne.—This, decidedly an amateur's Orchid, is occasionally recommended as a window plant, but one could hardly expect good results from such treatment, while it is frequently referred to as a cool-house Orchid. Tolerably good specimens can be grown in such a structure, but the finest plants are produced when a few degrees more warmth are given. Frequent disturbance of the roots must be avoided, but there comes a time when the plants begin to deteriorate unless they are given fresh rooting material. This consists for the most part of good fibrous loam, but if this is heavy a little peat and partly-decayed Oak-leaves may be added, together with a sprinkling of sand and crushed crocks. A few weeks after the flowers are cut any repotting may be carried out, filling the pots to one-third of their depth with drainage. The soil is made fairly firm and brought up to within $\frac{1}{2}$ inch of the rim. After repotting, very careful watering is needed, but when root action is evident the supply must be increased. Plants not repotted must be given water liberally. Shade from strong sunlight and spray the plants overhead during hot, dry weather.—B.

Weed killer (W. B. Smith).—Get 1 lb. of white arsenic, 1 lb. sulphate of copper, and 1 pint common muriatic acid or spirits of salt. Water to 5 gallons. Boil until dissolved, and decant the clear liquor. Mix 1 gallon with 25 gallons of water and apply with an ordinary rose pot in sufficient quantity to go to the roots of the weeds. It is best applied when the ground is damp but not wet. We think, however, you would find it safer and better in every way to purchase the weed killer ready for use, using it according to the directions sent therewith.

GARDEN FOOD.

MEATLESS DISHES.

The *Sheffield Telegraph* has been offering prizes for meatless dishes, and with good results, in the district where such things have not been much thought of before. People went to see, in doubt, and came away, we hear, much impressed.

The following are a few of the recipes to which prizes have been awarded:—

SAGO AND RHUBARB.—3 oz. of sago or tapioca, $\frac{3}{4}$ lb. of rhubarb, 1 pint of water, and 3 oz. of sugar; a little Lemon-juice. Soak the sago all night. Slice Rhubarb, lay it with the sago in the dish, and cook until clear. Add sugar and Lemon-juice, and cook again for a few minutes. Serve with cream or custard.

SAVOURY EGGS AND SALAD.—Two hard-boiled eggs, 2 oz. breadcrumbs, pepper and salt, 2 oz. ground Nuts, one-quarter teaspoonful marmite, one tablespoonful water or stock; a little cheese grated or other flavouring. Method: Mix Nuts, breadcrumbs, and seasonings. Dissolve marmite in a little stock or water. Make all into firm mixture. Divide into two, flatten each piece on a floured board, roll the mixture round, working out all cracks. Coat with egg or a thin batter of flour, salt, and milk. Roll in crumbs and fry in smoking hot fat for four or five minutes. Drain carefully. When cold cut in two and arrange on salad.

FRUIT JELLY.—1 lb. Rhubarb, one Orange, sugar to taste, water, $1\frac{1}{2}$ oz. cornflour. Method: Stew Rhubarb with sugar and a little water carefully without breaking. Lift out of syrup and put aside to cool. Make syrup up to one pint with water, add thin rind and juice of Orange, and simmer for a few minutes. Strain on to blended cornflour, return to pan, and cook for five or six minutes. Pour into wet mould and when set turn out on to glass dish, and arrange Rhubarb round. Any other fruit may be used. Syrup left from tinned fruit is excellent.

EGG AND CHEESE FRITERS.—Two hard-boiled eggs, 2 ozs. of dried cheese, cayenne, salt, 2 ozs. of short pastry, pieces left over from any dish will do. Boil the eggs twenty minutes, cut into rings. Roll out the pastry, then cut rounds with pastry cutter, put one ring of egg, a little grated cheese, seasoned with salt and cayenne, wet the edges, make into small turnovers. Dip in egg and breadcrumbs. Fry in boiling fat a golden brown. These make a nice dish for lunch, or a savoury for dinner. Garnish with Parsley; serve hot.

LENTIL ROAST.—1 lb. Lentils, 2 lb. chopped Onions, $\frac{3}{4}$ lb. breadcrumbs, $\frac{1}{2}$ lb. cold mashed Potatoes, pepper, salt, Parsley, or seasoning to taste. Method: Wash Lentils, cook gently in an earthenware jar in oven with Onion, or in a porridge pan for about an hour, when soft add other ingredients. Shake, place in a greased dripping tin, and bake till brown. Serve hot with brown gravy and Apple sauce.

POTATO BOATS.—Take four Potatoes and four poached eggs and a little sauce. Roast the Potatoes; when done, cut one side off each, and take out the inside. Mix with a little cream and butter. Return same to the Potatoes with a little of the sauce. Fry the eggs; cut with oval cutter, put in the Potatoes, and serve. Sauce.—Half-gill of white sauce, 1 teaspoonful of Lemon juice, one yolk of egg, $\frac{1}{2}$ oz. of butter, pepper and salt. Boil all together for a few minutes.

MACARONI AND EGGS.—4 oz. of macaroni, 2 eggs, 1 oz. of butter, 1 oz. of flour, sugar, salt, and pepper. Break the macaroni in short lengths, put it in rapidly boiling water, salted, and cook until tender. Melt the butter in a stewpan, add the flour, and cook for a few minutes. Then break the eggs into the pan, letting them set a bit before stirring. Then season with a little Tomato ketchup, a pinch of sugar, and salt to taste; let it boil for a few minutes, then add the macaroni, and when thoroughly hot turn on to a dish and serve.

MACARONI SAVOURY.—Ingredients: 1 lb. Tomatoes, 2 oz. breadcrumbs, $\frac{3}{4}$ lb. macaroni, $\frac{1}{2}$ lb. cheese, 1 pint white sauce, two tablespoonfuls vinegar, seasoning. Cook the macaroni in fast boiling water for about twenty minutes till tender, adding a teaspoonful of salt to the water, then drain and allow to cool, cut into

inch lengths, skin Tomatoes, and grate cheese. Then grease the pie-dish with a little butter, put a layer of crumbs at the bottom of the dish, then a layer each of Tomatoes, macaroni, and cheese alternately till the dish is full. Make an ordinary white sauce, adding the vinegar, stir the vinegar into the sauce very quickly to prevent curdling, pour the sauce over the dish, and put into a moderate oven for half an hour till it is a nice brown. This dish looks more appetising if eaten cold turned out into a silver dish, sprinkle the top with a little Parmesan cheese and decorate with Parsley and short sticks of macaroni in the centre of the dish.

NUT CUTLETS.—6 oz. shelled Walnuts, two breakfastsups breadcrumbs, one tablespoonful flour, $\frac{1}{4}$ pint milk, $\frac{1}{2}$ oz. butter one teaspoonful Onion juice, mustard spoonful of made mustard, salt and pepper to taste; an egg can be added if desired. Crumble the breadcrumbs, put Nuts through the mincing machine. Make a stiff white sauce with flour, butter, and milk, add seasoning, then the Nuts and crumbs. Mix well together and put aside to cool. When cold form into cutlets, egg and crumb them, and fry in deep fat. Serve with either Mushroom, Tomato, or bread sauce.

MARGUERITE PUDDING.—4 oz. flour, 2 oz. butter, 2 oz. sugar, one egg, two tablespoonfuls milk, half teaspoonful baking powder, two tablespoonfuls Strawberry jam. Mix the flour and baking powder thoroughly. Cream the sugar and butter together. Beat the egg and add to milk, then beat gradually into butter and sugar, lastly adding flour. Beat well; put the jam at the bottom of a small pudding-bowl which has been well greased. Fill up with the pudding mixture, cover with greased paper, steam one and a half hours.

TOMATOES AU GRATIN.—Butter a flat baking dish and put in Tomatoes cut in halves. Sprinkle over them some breadcrumbs, grated cheese, chopped Onion, and Parsley. Place them in an oven, and when ready to serve squeeze a Lemon over the whole, add salt and pepper.

VEGETABLE SAUSAGES.—Ingredients: Three Carrots, three Onions, one Turnip, one Parsnip, $\frac{1}{2}$ pint split Peas, one tablespoonful chopped Parsley, two eggs, 2 oz. butter, pinch Sage, $\frac{1}{2}$ lb. breadcrumbs, salt and pepper. Method: Soak Peas overnight and boil until perfectly soft, boil all vegetables together, and when tender pulp with the Peas to a smooth paste. Add the eggs beaten and breadcrumbs, Sage and Parsley; when thoroughly mixed roll into sausages; dip each into flour, beaten egg, and breadcrumbs. Fry in butter a golden brown. Serve hot garnished with Parsley.

VEGETARIAN CUTLETS.—One teacupful of Almonds, one teacupful of Brazil Nuts, one teacupful of breadcrumbs, one teaspoonful mixed herbs, one teaspoonful Onion juice, one tablespoonful of white sauce to bind the ingredients together, pepper and salt to taste. Method: Blanch the Almonds, and put them through a mincer with Nuts and breadcrumbs; add the other things, then form into cutlets; dip in egg and breadcrumbs; fry ten minutes in boiling fat. Stick a piece of macaroni in the end to form a bone, and to hold the frill; serve round a mashed Potato shape.

LENTIL AND NUT CUTLETS.—Two small Tomatoes, 2 oz. Lentils, 2 oz. breadcrumbs, 2 oz. ground Walnuts, one small Onion, two small Apples, pepper and salt to taste. Method: Cook Lentils, Tomatoes, Onions, and Apples together; when cold add breadcrumbs and Nuts with pepper and salt, and make into a firm mass, then form into cutlets, dip in egg and breadcrumbs, and fry a nice brown.

BARLEY SOUP.— $\frac{3}{4}$ oz. butter (or margarine), one dessertspoonful of prepared Barley blended together. Add 1 pint white vegetable stock, or milk, flavour with pepper and salt, boil together for fifteen minutes.

RHUBARB JELLY.—1 lb. fresh Rhubarb, about $\frac{1}{2}$ lb. sugar. Wipe Rhubarb, cut in pieces, put into a saucepan with sugar and enough water to cover the stalks. Stew till soft (five to ten minutes), strain through a cloth, and make up to $1\frac{1}{2}$ pints, with water if required. Take 2 $\frac{1}{2}$ oz. cornflour (prepared), mix to a smooth cream with a little juice, bring the rest of the juice to a boil. Take saucepan from fire, pour mixed cornflour slowly in, stirring vigorously. Bring to boil again and boil for three minutes. Pour into mould and cool.

OUTDOOR PLANTS.

TREE AND SHRUB GROWTH ON THE WELSH COAST.

LIKE Cornwall, the South of Ireland, and the West of Scotland, the coast of Wales—particularly Anglesey and Carnarvonshire—enjoys a mild and moist climate, and so it is that numerous half-hardy trees, shrubs, and plants that could not be wintered out-of-doors under ordinary climatic conditions, find there a congenial home. One has only to visit such places as Penrhyn Castle, in Carnarvonshire, or Bodorgan and Penrhos, in Anglesey, to find out what a wealth of trees and plants can be successfully cultivated in the mild, ozone-laden atmosphere of these pleasantest of Welsh places.

At Penrhyn Castle, *Fuchsia Riccartoni*

Castle to the model village of Llandegai. At Glynegarth and Rhianfa, on the Menai Straits, there are also collections of rare and beautiful plants, including the too-little-seen *Eucryphia*, *Fabiana imbricata*, the best forms of *Cornus*, and hosts of alpine and herbaceous plants that will not succeed far away from the coast. *Pinus insignis*, a by no means hardy tree, appears in all its beauty, and produces excellent timber along the coast near Holyhead, while at Penrhos, where *Libonia penrhosiensis* was raised many years ago, the selection of rare and desirable flowering plants and shrubs is always an attraction to visitors to that part of Wales. Penrhos was one of the first places where the *Leptospermum* was successfully grown in the open air. The *Lapageria* is often quite vigorous in gardens near the coast.

A. D. WEBSTER.

to the sides of the pot suggested that a hard surface was preferred by them, and by subsequent experiment I decided this was so. The chief thing, however, is to get a perennial continuity of growth, and, this ensured, a good flowering is almost sure to follow. To this end occasional division and replanting are necessary. A fair amount of moisture is essential; too much shade favours leaf-growth at the expense of flowering. In dry, hot soils or in heavier soils that contract with heat and drought the plant does not extend sufficiently, and flowers are few and far between. In the autumn of 1915 I set out a considerable number of young established plants with a view, ultimately, to forming a big colony, wedging in near the surface occasional bits of stone over which the rhizomes could travel. The plants have flowered surprisingly well, the fine



Penrhos.

and *Hydrangea hortensis* flourish amazingly, the former in particular attaining a great height and vigour. Less hardy trees and shrubs have stood unharmed for fully half a century, including the beautiful *Cunninghamia sinensis*, *Chamarops Fortunei*, *Eugenia Ugni*, several of the *Escallonias*, the *Myrtles*, *American Allspice*, and some Australian shrubs. The flower garden and grounds at Penrhyn contain one of the choicest collections of rare shrubs and other flowering plants that is to be found anywhere in the country. Amongst conifers that succeed well at Penrhyn Castle, special mention may be made of the *Corsican Pine*, which towers yards in height above any other trees in the woods where it has been planted. The *Douglas Fir* also does well, there being some giant specimens by the drives leading from the

OURISIA COCCINEA.

This Chilean plant has been referred to recently in *GARDENING ILLUSTRATED* as "the despair of many gardeners," and there is no doubt that some experience trouble, not so much in growing as in flowering it. It is, perhaps, insufficiently recognised that it is the extending sections of the rhizomes only that flower, though these may be either the main or the lateral portions, the back or old portions of the rhizomes rarely blooming at all. I got my first lesson of its peculiarities in this respect many years ago from a large pot-grown, frame-cultivated specimen in which the extending rhizomes had got over the pot's rim and were descending the sides. All such bloomed profusely, while the back, *i.e.*, the older rhizomes, were void of flowers. The way the rhizomes adhered

growth they are making full of promise for another year. They are in a bed of rich soil—loam, leaf-mould, and well-decayed manure—and while sheltered from mid-day sun by a near-by *Acer* of some size, get a little afternoon shade as well. The position is a little slope. At Wisley the plant has flowered exceedingly well this year, the growth being also of exceptional vigour. Some years ago, when visiting the late Mr. Kingsmill at Harrow, he stopped in front of a fairly big clump of the *Ourisia*, with the remark, "Tell me what to do with that. I have never yet been able to flower it." "And you never will," I rejoined, "till you lift and divide it, and get the rhizomes nearer the surface." In that particular instance the rhizomes were buried several inches deep. What I suggested should be done is detailed above. In after years that good

gardener was not only never tired of telling me of his success with one of the most brilliant subjects any garden could contain, but he had done what all good gardeners do, passed the hint on to his many friends.
E. H. JENKINS.

THE INFORMAL ARRANGEMENT OF ANNUALS.

It often happens that the effects produced by the association of different kinds of annuals have happier results when practically unconsidered than when formal arrangements have been made either in the planting or sowing, and this is more than usually apparent in a season like the present, when one has to make as bright a display as possible at a minimum of labour and expense. An instance of this is in evidence in a groundwork of *Linaria reticulata*, a rather light maroon flower which, given good soil and a deep tith, lasts a long time, interspersed with small clumps of *Gypsophila elegans* and *Mignonette*. This *Gypsophila*, also the form known as *White Pearl*, are very pleasing companions for *Nemesia Blue Gem*, whilst *G. Rosy Gem* shows to advantage on a white ground; indeed, all the annual forms of what are known familiarly as chalk plants are of light, graceful habit, and either on a large or small scale are most appreciated when rising above a dwarf floral carpet. The many annual yellow flowers also show to great advantage in such informal arrangements, alike as to varying heights and the many different shades in *Calendulas*, *Nasturtiums*, and *Marigolds*, and all rank well in the matter of endurance if decaying flowers and seed-pods are occasionally removed. Among the showy annuals with very brilliant colours *Clarkias* and *Godetias* are prominent, and as many new varieties of each have been raised within the last few years, comprising a great number of different shades, a certain portion of ground can be reserved for them, as neither family associates particularly well with other things.
E. B. S.

Hardwick.

RAISING RANUNCULI FROM SEED.

In your interesting article on growing *Ranunculi* the writer makes no mention of the seed, which I am saving, and should like to know how and when to sow it?—CHARLES PHELIPS.

[In the old days when the *Ranunculus* was a foremost florist's flower, growers saved seed from the very best varieties, and in this way new forms were produced, as we see in the case of *Begonias*, *Cinerarias*, etc., in the present day. The old plan was to gather the seed and keep the seed-vessels intact until the time for sowing came round. Sowing the seed was done in October and February. When it was intended to sow, the seed was separated from the pericarp by scraping it with a penknife, for, like that of the *Anemone*, it is of a woolly and fluffy character. The best compost in which to sow is a light sandy loam, with the addition of some fine leaf-soil. So careful were the old raisers that the compost should be free from insects, that they either exposed it to the action of severe frost or they baked it in an oven in order that no trace of insect life should remain. The seed was sown in boxes or pots, coarse siftings being placed at the bottom for drainage, and then fine soil was filled in. The surface was made quite level and pressed down gently, then the seeds were carefully sown and placed an eighth of an inch or so apart, and then sprinkled with a fine rose watering-pot to cause them to lie flat; then some fine dry mould was employed as a covering, but a very thin one,

it being a part of the practice to cover them as thinly as possible.

The late Dr. Horner, who was a great authority on the *Ranunculus* in his day, recommended that the seeds be sown at the end of March, his reason for doing so being that they germinated more quickly then than at an earlier period of the year. The seed-boxes were placed under a wall when sown late, or in a frame for a time when sown early, and then in the open under a wall, open to all the influences of weather. When the seed is good, the seedlings will appear above the surface in a month or so, and they should during the summer have such supplies of water as they may require. When the foliage dies down the bulbs can be taken up, put away in shallow boxes or drawers for the winter, then if planted out in beds in spring they will flower the following June.]

NOTES AND REPLIES.

Fungus on Christmas Rose leaves.—I enclose a leaf from one of my Christmas Roses, and will feel greatly obliged if you will kindly tell me what has gone wrong with it. The plant flowers well and the leaves come all right at first, but gradually they go, one by one, like the enclosed, until by October there are very few remaining on the plant. They are planted on a border facing north, but others on west and south borders are going in exactly the same way. The soil is light and sandy, the manee garden being about two miles from the sea.—M. MUIR.

[The leaves are badly attacked by the Hellebore leaf-mould fungus (*Ramularia Hellebori*). All that can be done now is to collect and burn all the affected parts of the plants, removing and burning if possible 1 inch or so deep of the soil about the plants, which is probably full of the spores of the fungus. In spring periodical syringing with sulphide of potassium should be started, and if kept up at intervals of two or three weeks for some time this would doubtless keep the fungus at bay. One ounce of the sulphide to two gallons of rain-water will be strong enough, and care should be exercised to wet all parts of the plant, the under as well as the upper surfaces of the leaves. Prior to adding fresh soil to replace that removed, a dusting of air-slaked lime should be given. In all probability the plants will be weakened by the disease and replanting will be necessary.]

Geranium Traversi.—I see "W." refers to this plant as "very dwarf, with rosy flowers," which scarcely answers to its habit as grown here. I got a plant from Bees' in 1913, and there is no reason to doubt its genuineness. It has pretty silky stems and rather less silky palmate leaves, and abundant pink flowers which are rather disappointing. It is hardy enough, but capricious. In 1913 the plant grew luxuriantly; not so big as *G. sanguineum*, but much bigger than *G. cinereum*, and spread almost as much as *G. Wallichianum*. Every flower sets seed, which germinates rapidly, but the seedlings are impatient of removal. In 1914 the plant refused to grow at all the summer, so I rooted it up to make room for a self-sown seedling, which is now coming into bloom on a neat little plant, having survived seven weeks' snow and rain in February and March. Another seedling protected in a frame during the winter has grown rank and rather coarse. I am trying another in very sandy soil. Just now all these plants seem to exude moisture symmetrically in the leaves and on the bud-tips every night, which looks as if they had more moisture than pleases them. This moisture is not dew, as the soil and other plants close by, such as *Geranium*

argenteum (Lissadell's Mallow-coloured), *Erodium corsicum*, and *Pelargonium Endlicherianum* (which survived this winter unprotected), remain quite dry.—L. J. ROGERS, 6, Hollin Lane, Leeds.

Foxgloves.—In a rather shady part of a shrubbery within the garden walls a number of self-sown Foxgloves of the usual colour have been permitted to develop. The other day a visitor commented rather sarcastically upon their presence, remarking that as Foxgloves grow in every ditch, hedgerow, and lane in the neighbourhood, they were surely out of place in the garden. Had the critic been, as I have, in districts where Foxgloves are unknown in their wild state, I venture to think that his opinion as to their value would be revised. Even although, as is the case here, these plants are common, yet they have quite a value in places such as that indicated.—W. McG., *Balmoe*.

The Masterwort (*Astrantia major*).—This is quite a pretty alpine, although not by any means a showy species. It has quaint flowers of a pinkish colour surrounded by whitish-green bracts, which are beautifully netted and veined. It is of the easiest culture, best in sun, but doing quite well in shade, and not at all particular as to soil. It grows from 1 foot to 2 feet high, and is easily increased by division.—W. O.

Violets.—These must now be encouraged to make all the growth possible by frequently hoeing between the plants, watering whenever necessary, adding a stimulant in the shape of liquid-manure or soot-water if progress in the matter of growth is not so satisfactory as could be desired, and in keeping runners suppressed. Syringing in dry weather should have daily attention.—A. W.

LADY GARDENERS.

I THINK your correspondents have missed a point in the discussion in your paper on the employment of women in horticulture, namely, the number of people whose incomes have been seriously curtailed and will be permanently curtailed by the war. Hitherto these people have employed the jobbing gardener. Now, unless the family turn to, the garden must go. Surely it is better for the girl gardener to know how to prune fruit and Rose trees, use the proper washes to keep pests under, and raise vegetables and herbs, than lay the garden down to Grass.

The price of fish and meat is still rising, and more important than ever becomes the proper management of vegetables, poultry, and pigs. Not all the women who enter colleges will become head gardeners—not many of the men who make gardening a profession rise to the top. The foundress of Glynde Nursery says that two years are all too short a period to acquire "the whole art of gardening," and a woman who has a head gardener's post in view would go as an improver and work her way up. But two years in a college should save an intelligent woman from costly blunders and serious mistakes when she comes to take her own garden in hand, particularly where she has never had the opportunity of learning at home in a big garden worked by an experienced staff.

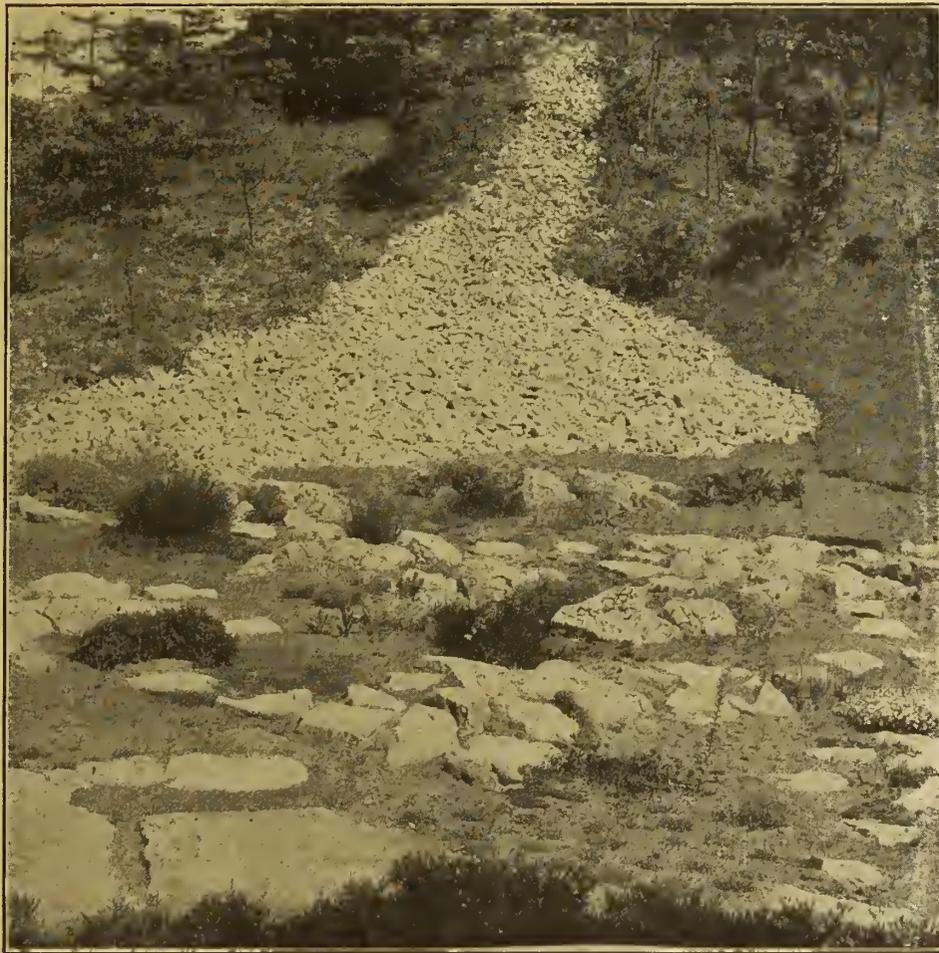
THE SQUIRE'S WIFE.

[Quite right. The young lady should know something about gardening, and now there are various opportunities of learning it. Some things that are mentioned here are very easily learned, such as pruning Roses, though often made a needless fuss about. It is unnecessary for a young lady to go to college to learn some of the essentials of simple gardening. The best way is for her to start doing things in the home garden. Gardening may be as good an exercise as hockey, golf, shooting, and other pastimes which now are practised by young ladies.—Ed.]

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

A MORAINE.

THE moraine is a very good idea. For generations the poor alpine plants have been the victims of over-feeding, but no one took any notice, until recent years, that in their native moraines these plants are very much starved and never benefited by any manure or leaf-mould even. People now begin to see that the true way is to grow them in rough conditions, on chipped stones and gravel. The best example of this we have seen is at Friar Park, of which we give an illustration. The plants there seem quite happy. The stones are not overdone, as they so often are, and the effect is quite good.



The moraine at Friar Park.

NOTES AND REPLIES.

Potentilla rupestris.—This, with its white, Strawberry-like blossoms, looks very pretty growing out of a chink in an open position not too sunny. It is a native of this country, but rare, and is well worth growing in the rock garden. It is of neat habit and gives no trouble provided it is planted in well-drained soil. With me it grows equally well in sandy leaf-mould or in a stony, calcareous mixture with plenty of broken brick—a compost which seems to suit a great many alpins. It flowers in May and June and is easily propagated from seed, which it produces freely.—N. L.

Campanula Hosti.—The Campanulas are most valuable for furnishing the rock garden when the glory of the spring-flowering plants is past, and, to my mind, this species is one of the most valuable for this purpose. It is of strong, bushy growth, like our native Harebell, C.

rotundifolia, but of sturdier habit, and the flowers are larger, of a deep blue colour, and borne in the utmost profusion. I have a large clump of it on a somewhat raised part of the rock garden, and it is a glorious mass of deep colour. It is of the easiest culture in any open position in light soil, and, like most Campanulas, appreciates lime. It spreads quickly and is easily increased by division.—N. L.

Sedum spathulifolium.—This is one of the choicer representatives of its large family, and, like most of its allies, only asks for a dry, sunny spot in sandy or gritty soil to do well. It is of quite prostrate habit and has comparatively large rosettes of flat glaucous leaves which look very pretty, especially in dry weather, when they become tinged with red. It is

one of the first to blossom, and has large, flat heads of yellow flowers of the usual Stonecrop type. Although growing fairly rapidly it is quite free from the fault which many Sedums have of spreading over and strangling its less vigorous neighbours.

Campanula pulloides.—This species seems to be much easier to manage than *C. pulla*, at least I have found it so, though I do not think it is nearly so beautiful. The flowers are of a dark purple, but not quite so pure in colour as those of *C. pulla*, and, moreover, they are large, and to my mind coarser looking. I have tried *C. pulla* under various conditions, but it never survives the winter with me, even when grown in the moraine. *C. pulloides*, however, does quite well in a limy moraine in my London garden, and is now giving a profuse display of its large, drooping, cup-shaped flowers.—W. O.

VEGETABLES.

NOTES AND REPLIES.

New Zealand Spinach.—I would be much obliged if you would advise me as to the best way of growing New Zealand Spinach. Does it require a rich soil, and can I raise it in nursery beds and plant it out later on? At present I have very little room, but would like to have as much as possible for winter use, as we use it a good deal.—R. NOLA FERRALL.

[It is somewhat late to sow, though even now, with good culture, excellent results may be secured, as this variety makes rapid growth in dry weather. This Spinach is quite distinct, having a thick, succulent, very tender leaf. The soil for this crop must be well enriched, as, owing to its quick growth, the roots require much food. For an early supply it is best to sow in boxes or pots in frames and gradually harden off. If this plan is adopted, seed should be sown late in March or early April, planting out a month or six weeks later, according to the weather. Sow very thinly, or thin early, to get a strong plant, and, when planting, care should be taken that the ball of soil is not broken. Plant in rows 3 feet apart, and if the weather is dry, water freely. In the open, seed may be sown in May or June in rich soil, well thinning so as to allow each plant plenty of room. Give plenty of water, with occasional doses of liquid manure, when the plants are bearing freely. This Spinach is useless for late autumn or winter supply, as the first frost destroys it. For the autumn and winter you should sow the Round-leaved or Victoria and the Prickly-leaved or Long Standing, doing this early in August in rows 15 inches to 18 inches apart, and thinning freely in the autumn.]

Sowing Cabbage seed.—About the 28th of the present month is a good time to sow seed of suitable varieties for spring cutting. Varieties specially adapted for this purpose are Harbinger, April, Flower of Spring, Matchless, and Ellam's Early. The first-named turns in earlier than either of the others, and if raised from seed sown about the date mentioned heads will be ready for use, in a normal season, in February. In the meantime, the site where the sowing is to be done should be prepared. That growth may be quick and fly kept from attacking the young plants, a dressing of short, well-rotted manure and some wood-ashes should be applied to the surface and dug in. Thin sowing will result in dwarf, sturdy plants. The drills should be 1 foot apart.

Cucumbers in frames are now in full bearing, and, if not overcropped, will continue to give good results for many weeks to come. Cucumbers require unremitting attention to keep them in good order. They are syringed regularly twice a day, the growths stopped and regulated, removing the oldest leaves and any excess of foliage as often as necessary. Top-dressings of suitable materials are afforded as often as the roots find their way to the surface. A batch of seeds will now be sown to furnish plants for cropping in early winter. The seeds are sown singly in small pots and placed in a temperature of 70 degs. to germinate. These should be ready for planting by the middle of August, by which time a house now occupied by Melons will be available.

Parsley.—A quantity of this herb should be raised at this date wherever an abundant supply is needed during winter and spring. It is altogether unnecessary to sow the seed where the plants are to be grown, as when large enough the seedlings can be pricked out in lines either on narrow borders in front of espalier fruit-trees or any suitable position. So treated, the plants make a sturdier growth and are better able to withstand the rigours of winter.

Scarlet Runners.—These require a small amount of attention in the way of seeing that the young growths do not become entwined and in fastening them to the poles after disentangling any found in this condition. So

much wet weather encourages slugs to attack almost everything of a green or succulent nature, the young stems of Runner Beans included, and lime mixed with a certain amount of cinder ashes must still be strewn round about them and continued until they become firm and tough.

Asparagus beds need hand weeding periodically to keep them free from coarse weeds. The Asparagus growths will be supported with stakes, with string stretched between them. In dry weather thorough soakings of water and stimulants are invaluable, as a great deal of the success obtained next season depends on the assistance the plants receive now.

Early Celery.—The moist weather has suited this crop to a nicety, and good growth has resulted. A little soil may now with advantage be placed round the stems, and to a height of 3 inches to 4 inches, after removing a few of the outer or oldest leaves and any suckers which may have formed at the base.

GARDEN PESTS AND FRIENDS.

WASPS.

WHILE it is doubtless true that wasps do much good by the destruction of other harmful insects, it is equally true that when they are present in large numbers they may be responsible for considerable damage. They often ruin large quantities of fruit, while the chance disturbance of their nests in the harvest field and elsewhere may at any time be answerable for runaway horses and the accidents which follow. It is necessary, therefore, that steps should always be taken to keep their numbers within reasonable bounds. Reports which are reaching the Board from various sources all point to the fact that an unusually large number of queens has been observed this spring, and it is therefore to be expected that wasps will be proportionately abundant and troublesome later in the season.

METHODS OF DESTRUCTION.—Methods for the destruction of wasps and their nests are too well known to need more than brief reference. The capture of queen wasps in the spring is always desirable, and is encouraged in many districts by the offer of a small reward. It may also be of interest to note that the "traps" containing beer and sugar, etc., which are found so effective later against the worker wasps, have also this season accounted for large numbers of queens.

The destruction of queen wasps, however, is not likely to have been carried out sufficiently widely to prevent the production of an abundance of workers in the near future, and it would therefore be well if nests could be marked down as early as possible so that they may be dealt with before they have become "strong." Various means are employed in taking the nests. Some prefer the old-fashioned remedies, such as tar, paraffin, or burning sulphur. In many districts, however, the use of potassium or sodium cyanide has become general, and is, undoubtedly, most effective. These poisons are employed in different ways, according to individual preference and the position of the nest. As a rule, a little is placed inside the entrance to the nest after the wasps have returned in the evening. The hole is then blocked up, and further trouble is seldom experienced, though, to make sure, the nest is sometimes dug out after the adult wasps have been killed. When using cyanide, however, it should never be forgotten for an instant that this substance is one of the most deadly poisons known, a minute dose being fatal. If common sense is exercised there should be no danger, but the carelessness with which it is often treated makes this warning very necessary.—*Journal of the Board of Agriculture.*

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM JULY 26TH.—*Buddleia variabilis*, *Ceanothus* (in variety), *Philadelphus* (late-flowering varieties), *Rhus* (in variety), *Weigelas* (late varieties), *Escallonia*, *Spiraeas* (shrubby and herbaceous) (in variety), *Carpenteria californica*, *Clethra arborea*, *C. alnifolia*, *Berberis Wilsoni*, *Daphniphyllum macropodum*, *Calycanthus floridus*, *Ozothamnus rosmarinifolius*, *Colutea arborecens*, *Andromedas*, *Spanish Broom*, *Robinias*, *Abelia rupestris*, *Cistus* (in variety), *Olearia nummulariaefolia*, *Teucrium fruticans*, *Ononis fruticosa*, *Hydrangeas*, *Nandina domestica*, *Hypericums* (in variety), *Solanum crispum*, *Ericas*, *Menziesias*, *Honeysuckles* (in variety), *Clematis* (in variety), *Polygonum boldschuanicum*, *Roses* (in great variety), *Indigofera Gerardiana*, *Hardy Fuchsias* (in variety), *Veronicas* (shrubby and herbaceous) (in great variety), *Campanulas* (dwarf and tall) (in great variety), *Geums*, *Lavateras*, *Acantholimon glumaceum*, *Androsace lanuginosa*, *Aubrietias*, *Dianthus*, *Gentiana septemfida*, *Linarias* (in variety), *Erinus*, *Sedums* (in variety), *Sempervivums* (in variety), *Onosma tauricum*, *Convolvulus mauritanicus*, *C. Cneorum*, *C. althæoides*, *Tradescantia virginiana*, *Dryas octopetala*, *Antennaria*, *Thalictrums*, *Anthericum ramosum*, *Achilleas*, *Delphiniums* (in variety), *Eremuri*, *Hyacinthus candicans*, *Gladiolus* (many varieties), *Œnotheras*, *Meconopsis* (in variety), *Phloxes* (herbaceous), *Alstræmerias*, *Anchusas*, *Galegas*, *Verbascums*, *Eupatoriums*, *Eryngiums*, *Eryngiums*, *Acanthus*, *Galegas*, *Chrysanthemum maximum vars.*, *Tritomas*, *Lupins*, *Aquilegias* (in variety), *Scabiosa caucasica*, *S. atro-purpurea*, *Bergamot*, *Linums*, *Sweet Williams*, *Nepeta Mussini*, *Liliums* (in variety), *Foxgloves*, *Centaureas*, *Helianthus*, *Salvias*, *Coreopsis* (in variety), *Lobelia cardinalis*, *L. ramosa*, *Pentstemons* (in great variety), *Antirrhinums* (in many colours), *Gazania splendens*, *Carnations*, *Sweet Sultan*, *Candytuft*, *Petunias*, *Verbenas*, *Gypsophilas*, *Leptosiphons*, *Stocks* (in variety), *Mignonette*, *Tufted Pansies* (in variety), *Godetias*, *Clarkias*, *Calceolaria amplexicaulis*, *C. mexicana*, *C. Burbidgei*, *Aperatum*, *Heliotrope*, *Pelargoniums* (in variety), *Anagalis*, *Phlox Drummondii*, *Nemesios* (in variety), *Dianthus Heddeiwigi* (in many colours), *Sweet Peas*, *Senecio japonica*, *S. Clivorum*, *Iris* (in variety), *Primulas*, *Hemerocollis* (in variety), *Lythrum roseum*, *Epilobium pedunculare*, *Lysimachias*, *Solidagos*, *Sagittaria sagittalis*, *Aponogeton spathaceum*, *Water Lilies* (in variety).

THE WEEK'S WORK.—*Antirrhinums* planted in groups of separate colours are now making a fine show. To ensure a succession of bloom the old flower-stems are cut off as soon as the blooms have fallen. If this is attended to lateral growths develop and a succession of flowers is maintained. If the seed capsules are retained the plants will at once cease blooming. *Pentstemons* are also making a grand show. In order to extend the flowering season as long as possible the plants are watered frequently during dry weather, using diluted liquid-manure occasionally. Herbaceous plants that have passed out of bloom have had their flower-stems removed down to the fresh leaves. If possible to keep these well watered during dry weather many will flower a second time. *Anemone coronaria*, having died down, the tubers have been lifted and stored in boxes of dry sand to be planted in fresh positions at the end of September. English and Spanish *Iris* that are nearing the ripening stage have also been lifted. Frequent hoeing and weeding are necessary. *Myosotis* and *Alyssum saxatile* raised in boxes have been pricked out in nursery beds on a border. *Meconopsis integrifolia* and *M. Wallichii*, raised from seed sown last March and pricked out into boxes as soon as large enough to handle, have made good progress, and have now been potted singly into 5-inch pots and placed in a shady position out-of-doors. These will be kept in a cold frame through the winter, and planted where intended to flower next spring. Many plants in the rock garden are now ripening their seed pods, and the gathering of these requires attention almost

daily. Select the seeds from plants with the best coloured flowers and the best habit of growth.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Kales.—These should be planted now. There are now so many superior varieties in commerce that no one would think of growing the sorts which were formerly favoured. The ground for Kales should be in good heart; if not firm it should be made so by trampling the surface before planting takes place. The plants may stand 18 inches apart in the rows, but they succeed better and withstand severe weather with less risk if accorded another 6 inches. The rows would be quite close enough together if they stand 2 feet apart.

Savoys.—These are always useful when cold weather sets in, and the supply of other green vegetables begins to run short. A good quantity of maincrop and late varieties should, therefore, be planted now on firm and, if possible, heavy soil, as the finest beads are developed under these conditions. The larger-growing varieties, such as *Best of All* and *Drumhead*, require the same space as Kales. To succeed the two last-named sorts plant *Late Drumhead*.

Shallots.—These should be lifted and laid out on mats or shutters placed somewhere in full sun to get the bulbs thoroughly dry and mature before storing them.

Early Potatoes.—The remainder of the crop will now be the better for being lifted, when requirements in the way of seed tubers for another season should have attention by selecting the requisite quantity and laying them out thinly in the store or on the floor of a shed to become properly matured.

Second earlies and late sorts.—The first-named have done well this season, and crops promise to be, judging by examination of a few stems, very heavy. Maincrop and late varieties also look well, growth being more satisfactory than it has been for several years past. Moulding has been completed, and the chief thing now is to keep down weeds until the tops have developed sufficiently to smother them. All big weeds are best pulled by hand and burnt.

Mushrooms.—Manure should now be obtained and prepared for the making of a bed about the middle or end of next month. In many places the supply has to be procured from livery and other stables in the nearest town. This usually contains a large percentage of straw, but this can be shaken out. Then if the residue or droppings are partly dried, if necessary, by spreading them out thinly on the floor of an open shed, and afterwards thrown together to ferment in the usual way, excellent returns result in due course from the use of such material. Manure from stables where carriage horses are still kept or from farm stables is, of course, equally as serviceable, provided in the latter instance the horses are not given quantities of green food. In that event the manure is useless for the purpose. In the meantime the Mushroom-house, if it is situated in a cool, shady position or on the north side of a wall, should be cleansed, disinfected by burning sulphur in an old bucket or similar receptacle in sufficient quantity to fill the structure with fumes, and then lime-washed. This gets rid of insects and any germs there may be present on wood-work, etc., and renders all sweet and clean for a start. When the temperature of the house is yet too high for a bed to be made up, a suitable place can usually be found in a shed or disused stable. Spawn in sufficient quantity should be purchased, and be ready to hand a few days before it is required. Any remaining over from last spring may be used or mixed with the new, but should not be relied on altogether.

Perennial Lobelias.—Where these are appreciated the present is a good time to raise young stock from seed. This should be sown and germinated in the same way as herbaceous *Calceolarias*. When large enough to handle, prick off the seedlings into pans or boxes and afterwards transfer them to 60-sized pots. If given frame or cold-pit culture they make nice

plants by the end of autumn, and may be planted out in the borders where required in the spring. A position such as a shelf in a cool greenhouse suits them best during the winter.

Coreopsis grandiflora.—No flower borders are complete unless this showy subject is represented in good-sized clumps. Seed, if sown now in a box and raised in a frame, quickly furnishes an abundance of plants, which if pricked out as soon as ready in good soil become fit for setting out in the borders in November, or they may be left till February and then planted in their permanent positions.

Canterbury Bells.—These should be pricked out at once to the required quantities in lines 1 foot apart, allowing a distance of 9 inches between the plants. Kept clear of weeds with an occasional stirring of the soil with a hoe between the rows, and watered when necessary, strong plants will result by the end of October. The double or cup-and-saucer varieties are charming subjects for flower borders, and have made a grand display this season. The single kinds are more suited for employment in the wild garden or for planting in Grass.

Malmesbury Carnations.—Directly the last of the blooms has faded the best of the young plants are picked out and set on one side for shifting into large pots to be grown on into specimen plants for another season. The remainder will then be layered to afford plants for growing on in 5-inch and 6-inch pots, from which specimen blooms (one each) will be taken next year. The layering is carried out in a low pit containing a bed of soil in which the balls are laid on their sides. The surface is then covered with a sufficient depth of suitable sandy compost for the layers to be pegged into. As the layering progresses the sashes are put on and shade afforded during the day. A sprinkling is given overhead daily in fine weather, and when rooting commences the pit is aired and shading dispensed with.

Callas.—Although the weather has been so sunless for some time past these have ripened up well and have enjoyed a fairly long period of rest. The tubers will now be shaken out and repotted, all the strongest and best being put into 10-inch pots and the weaker into pots of a less size. The compost consists for the most part of good fibrous loam of a holding nature. The additions are leaf-mould, a little rotten manure, lime rubble, and coarse sand. When finished the pots will be stood in a corner of the Chrysanthemum ground.

Poinsettia pulcherrima.—The early-struck cuttings should be shifted on into 6-inch and 7-inch pots, and another or third batch of cuttings got in for late flowering. These should be inserted singly in thumbs and placed in a propagating case to root. A. W.

MIDLAND COUNTIES.

Late Grapes.—So far, the present season has not been favourable to Grapes in late houses, and these will need plenty of encouragement in order that they may ripen perfectly. Late Muscats and Lady Downe's especially are difficult to ripen unless the season is favourable. Where the roots are confined to the inside of the house the trouble is greatly lessened. The bunches must be exposed fully to the light; therefore, if there is a thick covering of foliage, this should be drawn aside to allow the sun's rays to penetrate amongst the branches. Laterals must be removed before they become large, as the removal of a great quantity of growth at one time tends to paralyse root-action. Keep a brisk heat in the pipes except when the weather is hot, and do not allow the temperature to drop below 68 degs. until the Grapes are ripe. Give close attention to the watering of the borders, and when necessary choose a time when the ventilators can be opened fully.

Strawberries.—Young plants that were layered early will now be ready for severance. After cutting them off the parent plants they should be placed in a shady position for a few days to recover from the check, and afterwards planted in their permanent quarters without delay. A plot of land which was trenched and manured last winter and from which a crop of early Potatoes has been taken,

is being prepared for the main crop of Strawberries. After levelling the soil, a good dressing of soot and wood ashes is worked in, afterwards making the ground firm. In the main plantation it is necessary to leave a space of 2 feet between the rows, and 1 foot from plant to plant in the rows. In the following season, after the fruits have been gathered, every alternate plant is removed. When planting make the soil very firm, being careful to keep the crown of the plant just above the surface. After planting is finished give a thorough watering. The subsequent treatment consists in cutting off all runners as they appear and keeping the ground clean by constant hoeing.

Black Currants.—When the crop has been gathered the branches will be well thinned out to encourage the young growths from the base. If the bushes are thinned now these young shoots will ripen much better and earlier. All prunings should be burnt in order to destroy any insect pests that may be on them.

Sweet Cherries.—As the trees are cleared of their crops the shoots are stopped and the trees given a thorough washing with Quassia extract to destroy black aphid, which has been very troublesome.

Fig-trees on a south wall are in full growth and bearing good crops of fruit, but unless there is soon a change in the weather the fruits will fail to ripen. The shoots have been thinned down to a moderate number.

Lilium speciosum.—This is now blooming freely. As soon as the flowering season is over the bulbs will be placed in the open for the purpose of ripening them. A quantity of retarded *Lilium longiflorum* has just come to hand. The bulbs have been removed from the packages and placed in single layers in shallow boxes filled with sand. At the first opportunity the bulbs will be potted up singly into 6-inch pots, using a compost of three parts good fibrous loam, one part leaf-soil, and manure from a spent Mushroom bed, with sufficient coarse sand to render it porous. When potted they will be placed in a cool frame and covered with leaf-soil until they commence to grow. When well rooted, batches are introduced to heat as required. Cuttings of *Hydrangea hortensis* have been inserted in a frame to furnish single-stem plants for next year. Fairly hard shoots are selected and made very firm in the soil. After one good watering slight dampings overhead daily provide sufficient moisture until they are rooted. So far, the present season has been one of the most sunless experienced for some time past. In consequence of this, many of the crops are not nearly so satisfactory as they once promised to be.

Runner Beans promise to be good, although, like many other crops, they are very late. The leading growths should be kept trained to the supports, cutting away any surplus laterals. During dry weather the roots must be kept well supplied with water. A sowing of

French Beans will now be made in a frame to provide supplies late in the autumn. Protection from frost is necessary for this, but no artificial heat. The bed of the pit is dug deeply, and a quantity of manure from a spent Mushroom bed mixed with it. Make the soil moderately firm, and draw the drills at 18 inches apart, placing the seeds at 6 inches apart in the drills, and covering them with fine soil. Dwarf-growing varieties are chosen for this crop. The lights are removed from the pit until the weather becomes cold, when they are placed in position.

Seakale.—The crowns on plants grown specially for early forcing have been reduced to one, and every possible care taken to encourage the building up of stout, well-ripened crowns by the autumn. The surface of the soil is frequently stirred with the hoe, and during showery weather occasional applications of guano afforded.

Turnips.—The final sowing of Turnips will be made during the first week in August. The ground intended for this crop should be well manured to promote a quick growth, thus assisting the plants the better to withstand the attacks of the fly, which in some seasons prove so destructive. The early crops of Peas being now over, the plants have been

cleared, and the ground prepared for sowing winter Spinach.

Herbs are in demand during the winter. A quantity of most of the varieties, such as Sage, Marjoram, and Thyme, should be cut and carefully laid out to dry in a sunny position, afterwards tying them in small bunches and suspending in an open shed.

F. W. GALLOP.

SCOTLAND.

Vegetable garden.—In the early part of the week work was again interrupted by heavy rains, which, in conjunction with cold and sunless weather, make the outlook a little discouraging. Conditions improved about the middle of the week, and although the soil was rather wet, an endeavour was made to get rid of the weeds, which, suited by the weather, had become rather numerous. Hand-weeding was, of course, necessary, a method which, if slow, is sure, and when the surface was thoroughly clean the hoe was run through the soil to aerate it as much as possible. A young hare having found its way into the garden caused some destruction before its presence was noticed, and it became necessary to beat up a considerable number of different kinds of Brassicas out of which it had nipped the hearts. The intruder was promptly dealt with, and a look round for further damage revealed that a line of Spinach Beet just germinating had been neatly eaten over by the ground line. Resowing was done without delay, and at the same time a breadth of Prickly Spinach was sown. A good substitute for this at times disappointing vegetable may be found in Curly Kale, and to ensure a plentiful supply a line of some length was sown with seed saved from a plant or two for this purpose. Further sowings of Cabbage seed for providing material for autumn planting were made, a finish was made with the planting of Leeks, more Turnips were thinned, and a final sowing made. Suited by the rainy weather, Celery is making rapid progress, and the plants were relieved of side-shoots during the week. French Beans are noticeably later than usual from out-of-door sowings, as are Globe Artichokes. The last, however, are now of a usable size, and a very good crop. As it was too wet to sow Parsley out-of-doors in the beginning of the week, a sowing was made under glass in a box, the seedlings of which will be pricked off into their permanent quarters as soon as they attain to sufficient size. Lettuces are now sown where they are to grow, as the season is rather advanced for transplanting. A further allowance of artificial manure was given to Asparagus, which is making excellent growth.

Pentas rosea.—The batch of this useful hard-wooded stove plant, which is intended for early-winter blooming, has gone into flowering pots. These are chiefly 6 inches in diameter—a size sufficiently large for the requirements of this subject. The rosy *Bouvardia*-like blooms are freely produced, and while the plants cannot be said to be symmetrical, even when frequent pinching is practised, yet the stiff, long stems of the trusses of bloom render them valuable for cutting. When the roots fully occupy the pots a little weak stimulant will be given, and, meantime, as aphid is inclined to be troublesome on the tips of the shoots, the plants will be regularly syringed until the trusses are on the point of expanding. *P. rosea* is grown in the stove, and it blooms uninterruptedly throughout the winter and spring months.

Early-flowering Chrysanthemums.—The heavy rains having somewhat knocked about these, some time was devoted to staking them and tying them. Rain is at times more to be dreaded than gales, the weight of the water which accumulates on the foliage being apt to snap off the succulent and brittle stems. For staking, Bamboo canes are used. These are not unduly obtrusive after growth is some way advanced, and are very durable, lasting without rotting for a number of seasons.

Pot Chrysanthemums.—Not for some seasons has the growth of Chrysanthemums for winter decoration been so satisfactory. There has, so far, been an entire absence of pests of any kind, although there is always

some danger from earwigs at a later date. Although the rainfall has been excessive, yet daily inspection is given to these plants. It is never safe, I think, at this time to trust to the rainfall being sufficient for the wants of these plants on any wet day, for it will be noticed that the robust foliage sheds the water off. No plant suffers more quickly or is more easily damaged by a lack of moisture than the Chrysanthemum. Staking is being done at intervals when time can be spared.

Summer pruning.—A certain amount of summer pruning was done during the week, the trees attended to being Pears. The crop is more satisfactory than was at one time anticipated, some trees needing rather severe thinning. In the case of trees which have filled their allotted space the pruning is simple, merely consisting in shortening back the breast-wood and regulating the ties of the shoots. The latter point is, I fear, sometimes overlooked at the time of summer pruning, and an overtight ligature if not attended to at this time may result in damage to a shoot or a branch before the regulation pruning-time comes with the closing year. In the case of foliage which obscures promising fruits, no objection can be made to its removal, although wholesale defoliation is deprecated. In the case of Pear-trees which are grafted on Quince or other stocks, any suckers which may have made their appearance ought to be promptly removed. It is better, when possible, to twist these off at their junction with the stock, otherwise they are apt, if cut, to come away more strongly from dormant eyes. Such trees as have not been already mulched were attended to as seemed to be necessary, and trees which are not this year bearing a full crop were by no means neglected. It always appears to me to be bad policy to pass over a tree with scanty attention merely because it has missed a season. If such a tree is neglected how can it be expected to give a good return in the following year?

Peaches and Nectarines.—Thinning has now been completed in the case of Peaches and of Nectarines on the walls, and a beginning was made with the tying in of the young wood, the fruits being exposed as much as possible to the sun's rays. The crops are, in respect of number, quite satisfactory, and if the weather improves at an early date, progress will be rapid. In a general way, the fruits of Hale's Early Peach usually ripen in the early days of August, but they will most probably be a little later during the present season.

Stove.—This house may with advantage be now freely ventilated on all suitable occasions in order to ripen up the growth. This ventilating is especially valuable in warm weather, the soft air circulating among the plants being of much benefit. It also tends to check insect pests, thrips being at times troublesome among fine-foliaged plants. Gloxinias are very effective just at this time, and brightly-hued foliage is at all times attractive. Some small plants of different subjects which appeared to need a shift were moved into larger pots. Owing to the low temperature out-of-doors, it became necessary at times to light the fire, but as soon as possible it was again dispensed with. Syringing is being regularly done, soft water from the rain tanks always being used.

Schizanthus Wisetonensis for winter flowering was pricked off during the week. A departure was made from the usual way of sowing this seed. It was noticed in spring that numerous seedlings made their appearance on a stage covered with crushed granite upon which a batch of plants had been grown. These seedlings were stronger and more robust than others from a more orthodox sowing, so some time ago a pinch of seed was scattered over the granite on the stage. Germination has been free, and a sufficient quantity of stout young plants has been secured.

Alonsoa incisifolia.—A sowing of this bright and useful annual has been made for winter flowering. The scarlet sprays of this are very telling, and they are freely produced. No doubt, the habit of *A. incisifolia* is rather straggling, but this can be corrected by occasional pinching while the plants are in their younger stages.

Rose blooms are suffering from the wet. On the other hand, growth is good, and there is no trouble with insects. A watch is being kept for a possible outbreak of mildew, which is not unlikely to occur should a period of close and hot weather follow the late rains. A dusting or two of flowers of sulphur soon disposes of mildew if applied in its earliest stages.

Hardy-flower borders, too, have suffered from the excessive wet. Nevertheless, they are very attractive at the present time. The latest additions include the different varieties of *Anthemis*—a family which is not only bright in itself, but of long duration. A good *Woodruff* is to be found in *Asperula hexaphylla*, the neat *Gypsophila*-like blooms being useful in conjunction with Sweet Peas. *Stenactis speciosa* is showy, the Aster-like blooms being so useful for cutting. Rather prematurely, some colonies of the *Kaffir Lily* (*Schizostylis coccinea*) are in bloom, probably due to the dripping weather. W. McGurrog.

Balmac Gardens, Kirkcudbright.

NATIONAL CARNATION AND PICOTEE SOCIETY (SOUTHERN SECTION).

JULY 20TH, 1916.

COMPARATIVELY few exhibits were staged on the occasion of the annual show on the above date, held at the Royal Horticultural Hall, the entries being far below those of former years. To some extent, doubtless, the weather immediately preceding the show was responsible, cold nights and sunless days being alike unfavourable to the development of the flower. At the same time, it has to be stated in fairness that rarely have finer flowers been staged in the more important classes, those "open to all." In not a few of these, flowers of the highest cultural excellence were seen, for which no praise would be too great, and, arranged with much natural effect, practically made the show. Cut with full-length stems, judiciously garnished with "Grass" and unopened buds, these vase classes were worthy the best aims of any Society, while doing full justice to the flower itself. We say this much advisedly, in view of the flowers shown in those other classes on cards and boards, whose mutilated remains, attracting nobody, still appear to receive some measure of encouragement from the Society. For such as these, relics in part of a bygone age and as useless in the home as they are valueless in the garden, we have not the smallest sympathy. The part, too, they so poorly play in the exhibition hall could be far better filled with other and more useful sorts. The attention of the Society should also be directed to the neglect of certain exhibitors—one in particular—to name their flowers, despite the requirement of Regulation II. that "all exhibits must be legibly named." The educational aspect of an exhibition is held to be a matter of some importance, and neglect to name exhibits considerably nullifies it. The Martin Smith Memorial Cup was won by Mr. H. W. Frostick, Norbury, S.W., the Cartwright Challenge Cup being won by Mr. Douglas, who, as usual, was one of the chief prize winners. Sub-joined are some brief details of the leading exhibits.

FLOWERS IN VASES (FIRST DIVISION).

For four varieties selfs, three of each, Mr. J. Douglas, who was first, showed *Daffodil* (yellow), Mrs. G. Jones (rich apricot), Mrs. G. Marshall (maroon), and Fujiyama (scarlet). Four fancies other than white ground, first, Mr. Douglas, his set being *Mona*, *Pasquin*, *Linkman*, and *Edenside*. In the white ground class, similar conditions, Mr. Douglas had *Fair Ellen* (whose ground colour of exceptional

purity is touched with lavender), *Othello*, Mrs. P. W. Owen, and *Lord Kitchener*. Mr. Lakeman was second in each of these, none of his flowers being named. Mr. Douglas also led in the important class for nine distinct varieties selfs, fancies, and yellow ground *Picotees*, three in each vase, his set including *Lt. Shackleton*, *Lord Steyne*, *Fujiyama*, *My Clove* (pink, delightfully fragrant), *Her Majesty*, and Mrs. G. Marshall (maroon).

FLOWERS IN VASES (SECOND DIVISION).

In this Mr. H. W. Frostick, Norbury, who carried off the Martin Smith Challenge Cup, was the chief prize winner, securing firsts respectively for white ground *Picotees*, yellow selfs, and other colour (selfs), showing *Miss Rose Josephs*, a remarkable variety of antique rose, and for six varieties, selfs, fancies, and yellow grounds, three of each. In this last his set comprised *Gordon Douglas* (maroon), *Onward* (yellow *Picotee*), *Linkman*, and *Lord Steyne* (very fine), fancies, and *Bookham White*. Miss Shiffner won firsts for white selfs, showing *Bookham White*, scarlet selfs, with *Fujiyama*, terra-cotta selfs, showing *Elizabeth Shiffner*, and for yellow or buff ground fancies in which *Lt. Shackleton* (freckled with rosy-scarlet) was shown. Mr. J. Fairlie, Acton, showed *Persephone* (scarlet) and *Heliotrope* (fancy) in Class 25, and took first against seven competitors. The variety is very distinct and of outstanding merit.

DIVISION IV. (OPEN TO ALL).

This includes Classes 40 to 49, the Cartwright Challenge Cup being awarded to the best exhibits of any one exhibitor. The exhibits in these, as already hinted, practically made the show, though we could have desired a less free use of wire supports in some of them. Nine blooms, one variety, in a vase were asked for in each. In pink or rose selfs Mr. Lakeman led with *Rosy Morn*. White selfs: Messrs. A. R. Brown, Limited, King's Norton, were first with a superb lot of *Prairie Belle*, its petal quality very fine. A bloom in Mr. Lakeman's stand was selected for Premier. The last-named exhibitor took first for maroon selfs, having Mrs. G. Marshall (very fine), Mr. Douglas showing *The King* and gaining second prize. Mr. Douglas and Mr. Lakeman achieved success in the order named for yellow selfs, both showing *Daffodil*; also for scarlet selfs, both showing *Fujiyama*, which is of a glowing red colour. For buff or terra-cotta Mr. Douglas gained first prize with a handsome vase of *Elizabeth Shiffner*. For "any other colour" Mr. Lakeman was first, having *Miss Rose Josephs* (antique rose), the most distinct variety probably in the whole show, a telling colour wedded to fine quality. Mr. Lakeman again led for nine yellow ground *Picotees* with *Onward*, a light-edged variety. A bloom of this was selected as Premier. In yellow ground or buff fancies Mr. Douglas and Mr. Lakeman both showed *Pasquin*, a grand flower of the first-named lot, which was awarded first prize, being selected Premier. This is one of the finest fancies. Three others in this class showed *Linkman*. Nine fancies other than yellow or buff ground, Mr. J. Douglas took first with *Fair Ellen*, a novelty in white fancies head and shoulders above all else. Lightly-pencilled lavender on a clear ground of dazzling whiteness, the contrast is particularly good. It was also awarded Premier. Classing *Miss Rose Josephs* as the most distinct variety shown, we should characterize *Fair Ellen* as without a peer among varieties of the highest class to-day.

BOOKS.

"A WOMAN'S HARDY GARDEN."*

THERE are signs that the American country people are becoming much more interested in their hardy and native flowers. They have what is, perhaps, one of the noblest of known flora, and many years before they thought of the wild flowers some of them were much grown and loved in the British Islands, where they did very well. One of the busiest of writers about the American flower garden is Mrs. H. R. Eley, whose garden is on the hills of New Jersey. It is a great advantage that people should know what they write about. There is so much difference between our climate and that of eastern America that, as regards planting, there is not much to be said that would be profitable either way. Gardening must always be a matter of local observation, and the conditions in America are so different from ours that we must have quite different plans. The American summer is too hot for the full enjoyment of hardy plants, and their great advantage over us is in their shrubs, which ripen their wood so well that the flowering is profuse and beautiful.

The illustrations in this book are numerous and very often good, but spoilt by over-emphasis of the blacks. The printing of the letterpress is good. Mrs. Eley has written some excellent and stimulating books on the subject of hardy plants in America, and they are not without touches of humour.

With work in the garden care and worry vanish. The cook (as some cooks of mine have done) may announce that "'tis a woild waste of a place. I be lavin' the mornin'." The hamper of meat does not arrive on the one train from town, or somebody smashes something very dear to your heart—just go to the garden, tie up some Roses or Vines, or poke about with a trowel, and though murder may have been in your thoughts, in half an hour serenity will return. And what does it all matter, anyway? Another maid can cook for a few days, and there are always bacon and eggs. Philosophy is inevitably learned in a garden. Speaking of eggs, I think of hens. Living on a farm, of course, there have always been hens and chickens. These creatures were provided with houses and yards and fences, and given every inducement to remain where they belonged; yet with diabolical ingenuity they would escape from their quarters, dig under the fence, fly over it, or someone would leave a door or a gate open, and then, with one accord, all the flock would make for the gardeus and scratch and roll in the borders. But the limit of endurance was reached when, one afternoon, coming out to look at a bed of several dozen Chrysanthemums set out in the morning, I found the poor plants all scratched out of the ground, broken and wilted. Then in wrath the fiat went forth, "No more hens on this farm, those on hand to be eaten at once." For days a patient family had hen soup, hen croquettes, hen salad and hen fricassee, until the last culprit came to her end.

"THE BOOK OF OLD SUNDIALS AND THEIR MOTTOES."†

This is printed on toned paper, and has eight illustrations in colour by Mr. Alfred Rawlings, and some thirty-six drawings of famous sundials, in black and white, by Mr. Warrington Hogg. The sundials are found at churches in various parts of the country, in museums, at country houses, and over shops (such as one at Rye). Mr. Launcelot Cross writes a sympathetic description, extending to some twenty pages of letterpress, of old sundials. The greater portion of the work is given up to the mottoes of sundials,

* "A Woman's Hardy Garden," by Helena Rutherford Eley. London: Macmillan and Co.

† "The Book of Old Sundials and Their Mottoes," T. N. Foulis. Price 3s. 6d.

which are set out in old-fashioned type. The motto chosen by Queen Alexandra for the sundial at Sandringham occupies the first position. It reads: "Let others tell of storms and showers, I'll only count your sunny hours." The binding of the book is hideous.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Black-spot on Rose-leaves (*F. S. Iredale*).—The leaves you send have been attacked by "black-spot," a very troublesome fungoid disease, which is very prevalent on some sorts this season. We should advise you to spray the plants with Woburn Bordeaux paste, both now and throughout the season at intervals. It will be most effectual, however, if you commence to spray another year as soon as pruning has been completed. Be careful to burn all prunings and all decayed foliage. We do not reply to queries by post.

Oleander not flowering (*S. M.*).—It is very probable that the trouble with your Oleander results from insufficient moisture and feeding, as if properly drained it is hardly possible to give too much water. A dose of liquid manure about every fortnight during the summer will also greatly assist the development of the flower-buds and prevent them dropping. A genial atmosphere during the growing season is important, while during the summer the plant may be stood in the open air to thoroughly ripen the wood, on which successful blooming in a great measure depends.

Begonias unhealthy (*S. Lamb*).—The injury to your Begonia leaves is due to yellow thrips, insects so tiny that it is very difficult to see them. True, we could not find any insects on the leaves sent, but the damage is done when the leaves are young, and as the leaves grow the disease develops. An unduly dry atmosphere is the principal cause of the trouble, and the best remedy is frequent vaporising and maintaining a fairly moist atmosphere. It is of no use attempting to restore any plants so badly affected as the pieces you send us, and the best plan will be to clear them out into a frame and dry them off, gathering up and burning all the shoots and leaves.

Eccremocarpus scaber (*H.*).—In this we have a delightful creeper that is not often seen, notwithstanding it flowers long and freely during the summer months. The plant may not prove perfectly hardy in all parts of England, though in the southern and western districts it grows freely and flowers every year. The best position for it is against a wall, facing south or south-west, its orange-red flowers being very beautiful. It may be raised from seed early in the year, and planted out in May. In such a soil as yours we should prepare a place for it by substituting some loamy sandy soil and plenty of drainage for the clay. Give the plant the warmest nook you can find for it, and cover the roots with ashes or cocoa-fibre before the advent of hard frosts. Treated thus, even if it gets cut down to the ground, it will send up shoots from the root stock in the spring. If you plant it against a wall you will have to nail it up, but a better way would be to fix some Pea-sticks in the ground and lean them against the wall, allowing the plant to ramble at will among the sticks.

FRUIT.

Apples cracking (*A Reader*).—The only reason we can suggest for the cracking of your Apples is that the roots have gone into the poor sandy soil of which you speak. When that happens a fungus which preys on the ill-formed fruits and spoils them is set up. We should advise you to try, in the autumn, hard root-pruning, treating one side of the tree only. Cut off all downward roots so as to encourage the formation of new and fibrous roots on the surface. It is then that a mulch of rotten manure will be beneficial. Cox's Orange Pippin is very subject to canker, and it is just possible that such may be the case with the trees you refer to.

VEGETABLES.

Caterpillars on Cabbages (*Mrs. Cornish*).—We fear there is nothing you can do to prevent the white butterfly laying its eggs on the Cabbages. On the first signs of the caterpillar then hand-picking is the only remedy, but if the caterpillars are very numerous, syringe the plants with mildly-salt water, and soon after give a heavy washing with clear water. Dustings of fine salt applied over night and washed off with clear water in the morning often do much to destroy the caterpillars.

SHORT REPLIES.

Wm. Paul.—The truss of bloom had fallen to pieces, and it was quite impossible to form any idea as to its value.—*Miss Lushington*.—We do not now undertake *post-mortem* examinations. These were discontinued some few years ago.—*Mrs. R. M. Riccard*.—Seeing you give us no particulars as to the soil and the cultivation of the plants, it is quite impossible to suggest any cause. We should advise you to ask a practical man to visit the garden, and who by doing so could find out the cause and suggest a probable remedy.—*D.*—If, as in London, the weather with you has been dull, with little sunshine, the flowers open but slowly and bursting of the calyx follows. Some varieties are far more liable to burst than others.—*E. J. H.*—See reply to your query in our issue of July 29th, page 379.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*E. L. B.*—1, *Phacelia campanularia*; 2, *Gilia tricolor*; 3, *Dictamnus Fraxinella albus*; 4, *Papaver nudicaule*.—*F. F.*—1, *Pteris serrulata*; 2, *Pteris serrulata cristata*; 3, *Asplenium bulbiferum*; 4, *Pteris tremula*.—*A. Walker*.—1, *Escallonia macrantha*; 2, *Begonia Dregei*.—*R. W.*—1, *Thalictrum adiantifolium*; 2, *Hemerocallis flava*; 3, *Begonia fuchsoides*.—*E. D.*—1, *Arum Dracunculus*; 2, *Fuchsia procumbens*; 3, *Crucianella stylosa*; 4, *Centaurea montana alba*.—*A. W. A.*—1, *Sedum album*; 2, *Cistus ladaniferus*.—*Fernside*.—1, *Sempervivum* sp., probably *S. Haworthi*; 2 and 3, White-flowered forms of *Helianthemum vulgare*; 4, *Rhodiola rosea*.—*A. M. L.*—A, *Sidalcea malviflora*; B, *Epilobium hirsutum*; C, *Borago (Borago officinalis)*; D, A fine form of the Purple Loosestrife (*Lythrum Salicaria*).—*Mrs. Stewart*.—Fine, fully-blown Roses travel very badly, and yours were all fallen. We see the remains of Caroline Testout (pink), Hugh Dickson (red), and a beautiful Rose that looks like a big Malmaison.—*Tweedside*.—1 and 2, To name Ferns properly we must have spore-bearing fronds; 3, Specimen insufficient.

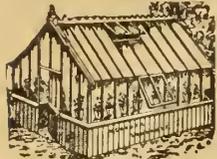
Name of fruit.—*F. Parker*.—Sorry we are unable to name the Gooseberries you send, as it is all important that the habit of the plant should be known.

OBITUARY.

N. N. SHERWOOD.

WE regret to announce the death, at the age of seventy-one, of Mr. N. N. Sherwood, at his country residence, Prested Hall, Kelvedon, Essex, on July 20th. Mr. Sherwood was the head of the well-known firm of Messrs. Hurst and Son, of Houndsditch, and his name will long be cherished for the great interest he took in all the gardening charities. For many years he was treasurer of the Royal Gardeners' Orphan Fund, a trustee of the Gardeners' Benevolent Institution, and to him we owe the inception of the Convalescent Fund of the United Horticultural and Benefit Provident Society, to which he annually sent a donation. He was one of the original recipients of the Victoria Medal of Honour. In 1902 Mr. Sherwood suffered from a very severe illness, owing to which he was compelled to hand over the management of the business to his two sons, William and Edward Sherwood, who since then have been entirely responsible for its direction.

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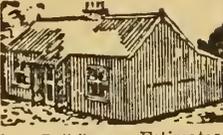
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AUGUST 12, 1916.

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MACHINE WORK IN GARDENS.

UNDER this heading in a recent issue of *The Times* some advice is given about introducing a motor-driven machine into our gardens—a very unwise suggestion. To keep the smell and noise of the motor out of the garden is the best way for most of us, who get enough of motors in other ways. The right plan is to refrain from mowing Grass as much as possible in these days of labour shortage. In the past hundreds of acres of pleasure ground, which would have been much better left alone, have been mown. It is much better to let the early flowers grow in the Grass. Mowing should be confined to essential needs of the garden or playground. All needed in most places could be done well by one man with the lightest of hand mowing machines, and so get rid of the horse or the motor in the garden. I have left my lawn unmown this year and cannot even mow it in the hay time. I lose the hay and can only turn the crop into mulching stuff when I have the labour to do it, but that is better than the alternative of mowing it with a motor.

Then the writer of the article introduces the blow lamp for destroying weeds, but that is snrely not nearly so effective or quick in action as a good weed-killer.

As to sweeping up leaves as they fall, a better way is to let them all fall before sweeping them up, and then gather them up in the old way and turn them into leaf-mould. Hitherto there has been much needless fuss over the sweeping up of the fallen leaves.

In most places all but bereft of skilled men, owners will be well advised to call to their aid every labour-saving device they can afford that may help them to tide over the very tight place in which they find themselves.

Just now when lawns that in many cases have been carefully tended for generations are in danger of going to seed, the usefulness of the mower would be increased tenfold by the evolution of a simple motor-driven machine, smaller and handier than those at present available, and marketed at a price within the powers of the man of moderate means. Meanwhile, where there is much Grass to be cut in straight-forward fashion those who possess a small light car geared to crawl at five miles an hour or less, will find that by taking the mowing machine in tow, work that usu-

ally occupies some hours can be done in a fraction of the time. Half-an-hour's practice should be enough to establish a working understanding between the man or woman at the wheel and the individual guiding the mower. The inevitable wheel marks will soon disappear.

Those who understand the handling of such things will find that a paraffin blow lamp of the kind employed by house painters for removing old paint makes a wonderfully effective weed destroyer, burning up tops and roots beyond recovery, and at far less cost than where poison is used. In the kitchen garden revolving cultivators deal with weeds as effectively as the Dutch hoe and in less than half the time.

Later on, when growth goes to rest and leaves cumber the ground gardeners will find leaf-sweeping machines of great use.

These changes are quite in the wrong direction and may do infinite harm. There is no need for machine work in the garden, and all the difficulties of the day in the garden may be got over by simpler means.

WALKS AND DRIVES.

The greatest improvement ever made in the keeping of gardens was the introduction of the weed-killer, and the "blow" pipe as suggested here would be a poor substitute. One mile of my drive, 15 feet wide, has been kept in order for several years now at a seventh part of the cost of the old way of ripping up and scuffing the drive. One dressing a year of Bentley's weed-killer is usually applied in August if weather permits, and its use saves much labour to turn to a better end. The amount of labour wasted on walks and drives in the past was great. Ripping up the walks was the rule in British and Continental gardens. A horse with a sort of large hoe was used in large parks abroad, and all this waste of energy to make a seed-bed for future generations of weeds. To get rid of the horse and his boots in mowing was a gain, and it is quite easy to get rid of mechanical aids in the garden; above all, those depending on the filth of petrol and its allies. The light and well-made American hoes and "cultivators" are useless on much of our heavy land, though well worth looking after on suitable soils.

The needless excess of walks in many gardens doubled the labour. This often resulted from the adaptation of office-made plans to ground inviting simpler design. A yard of walk not needed for the work and convenience of a place should not be made.

W. R.

NOTES OF THE WEEK.

Delphinium grandiflorum Azure Fairy.—This gives a cloud of pretty colour in a group; a lovely pale blue.

Rose harmonies.—You have, of course, made the acquaintance of the climbing Rose, American Pillar. It is good in constitution and good in effect when seen at a distance on the side of a house or down a bank, and even in combination with Lady Gay, which is lighter in colour, but distinctly free-flowering. They both flower at the same time.—R. H. B.

Antirrhinum.—With reference to the illustration of Antirrhinum in your issue of the 29th ult. (p. 373) I feel sure a mistake has been made in naming this Antirrhinum Asarina. The illustration appears to me to be Antirrhinum sempervirens true, quite a distinct plant from the former, which is a pale yellow in colour, the latter being white.—B. CRISP.

Romneya trichocalyx.—My plants of Romneya Coulteri, over 6 feet high, which have given us a fine bloom for years, are poor and shrivelled up this year, with no bloom in the last days of July, whereas the above-named was full of finely-formed flowers at the same date. The plants are about a yard high, but in effect finer than the old kind. They have been fully exposed for several years.

Abelia floribunda in Scotland.—Abelia floribunda, an article on and illustration of which appeared in your issue of July 22nd, grows and flowers well outside here. It is in a rather sheltered position, against the conservatory on a small rockery facing south and looking down on the Gareloch and Firth of Clyde. Various other supposed tender shrubs do well here.—JAMES MACKENZIE, *The Gardens, Glenoran, Helensburgh.*

Single-flowered Hollyhocks.—In some of the gardens in Bournemouth the soil is almost pure sand. I mention this because it is surprising that such stately specimens of Hollyhocks as I recently saw should grow in such soil. I always thought it was necessary to have really good, rich soil to grow plants similar to those I now refer to. Of course, light, sandy ground can be enriched with manure, but this had not been so treated. The plants were growing in irregular clumps, which added considerably to their beauty. The highest were nearly 12 feet; unstacked, but quite erect. It may be that I am specially foud of these plants, but I

think more of them should be grown in our gardens than is the case at the present time.—G. G. B.

The Willow Herb (*Epilobium angustifolium*).—Seeing this, with much pleasure, in various positions in wood and pleasure garden, I thought how little is made of so fine a plant. Under trees and in half-shady positions its beauty was remarkable, the flower-spikes, each a foot long, lasting longer than in sunny positions. The white form is a good plant, too, not so free as the usual one. Neither should ever be allowed in the flower borders, becoming in free soils weeds not easy to get rid of.—W.

Geranium Traversi.—With me *Geranium Traversi* has always grown a little bigger than *G. argenteum* or *G. cinereum*, but I can hardly agree with L. J. Rogers (page 388) in considering the pink flowers "rather disappointing." The white variety is still prettier in my estimation. Much of the charm of *G. Traversi* lies in the silky stems and leaves. I have not found *G. Traversi* as hardy as either *G. argenteum* or *G. cinereum*, as it appears to suffer more from wet winters than either of these.—S. ARNOTT.

Rose British Queen.—This, sent out in 1912, is bearing some magnificent flowers. It is true that while Mrs. Andrew Carnegie has risen in the Rose audit, *British Queen* has gone down from twenty-four to forty-seven, but the former does not flower so freely with me as *British Queen*. The creamy-white flowers of *British Queen* are very fine. It has not been long enough in general cultivation to have found its way into the bulk of gardens, having been introduced by the raisers, Messrs. McGredy and Son, in 1912.—SOUTH SCOTLAND.

The Valerian.—While reading the interesting note on this plant by "Pte. E. M." in the issue of July 29th (p. 368) I was reminded of the grand display it made in a long border close to the grand old Priory Church at Christchurch, Hants, when I saw it recently. The background is formed by an old grey stone wall whereon many kinds of plants nestle in clumps. The position, facing due south, is, naturally, a warm one and the rooting medium very dry. But the plants attain a height of nearly 3 feet and flower profusely. I can well realise how beautiful they look in the quarry referred to in the note mentioned above.—BOURNE VALE.

A good yellow Carnation.—Last autumn I noticed in *GARDENING ILLUSTRATED* a query asking for the name of a good yellow border Carnation. The answer was that there was not such a thing. I am sending you a box of blooms of one I have grown now for some years, and should like your opinion of it. It has a splendid habit and never splits. I fear the layering season will be very late, as my plants are only now coming into bloom, these being the first I have cut.—B. M. HORNER, *Bures, Suffolk*.

[A very good pure yellow, and if the constitution is good in all soils it might be valuable. Soils have a great influence.—Ed.]

A hybrid Primula.—I am much interested in your note *re* hybrid *Primula* in your issue of July 29th, p. 374. I have raised exactly the same thing; colour, a soft apricot flushed with scarlet. The colour varies. Mine are seeding freely, and I hope to ripen the seed. The plants are much taller than *P. Bulleyana* or *P. japonica*, at least with me. I measured my finest spike and find it 46 inches with seven whorls. Several plants have stems over 36 inches. I thought it might be a cross between *P. Cockburniana* and *P.*

pulverulenta. Do you think it would do in the water garden? *P. pulverulenta* does splendidly; also *P. japonica*. My garden is often under water in the winter, sometimes for three weeks at a time, but the plants seem to thrive.—B. M. II., *Bures, Suffolk*.

Cytisus hirsutus.—This upright-growing Broom flowered well during June and the greater part of July, and is now thickly set with its seed-pods, giving a plentiful promise of seedlings should they be desired. The under-sides of the leaves are thickly covered with villous hairs, the young branches having the same covering in plenty. The yellow flowers are borne in the axils of the upper portion of the branches and are freely produced. It is hardy with me here.—DUMFRIES.

Lilium Martagon Cattaniæ.—The *Martagon* Lilies are generally satisfactory in the garden, and the variety *dalmaticum* is so distinct that Mr. A. Grove approves of Mr. Elwes's recognition of it as a separate species. Its deep wine-coloured flowers are very striking. The variety *Cattaniæ*, variously spelled *Catani* and *Cattaniæ*, is, as Mr. Grove says in his work on "Lilies," "a very satisfactory form of the above." The flowers are lighter, but the colour, as the writer already quoted remarks, is "rather difficult to describe." I have grown this variety for well-nigh twenty years, I think, and it has generally given me much pleasure.—S. ARNOTT.

Varieties of the Field Poppy (*Papaver Rhœas*).—I am not by any means acquainted with all the varieties of flowers in this world, but if there is anything to surpass the *Field Poppy* in its now many colour varieties it must, indeed, be very beautiful. The great charm of this flower is its infinite variety allied to its airy gracefulness, and though the flowers do not last very long they are so plentifully produced that one can ignore this. They are truly fairy flowers. I have this year had some seed of an improved strain, and it certainly has produced very superior flowers. Nature appears to be inexhaustible in its power of excelling all its previous best things, and the gardener need never sit down and cry because there are no fresh worlds to conquer, not only in flowers, but in fruit and vegetables; also I believe that our best of to-day will be utterly eclipsed by the products of the future.—W. J. FARMER.

[All these forms are varieties of the *Field Poppy*, and that name should be kept as the right one.—Ed.]

Plagianthus Lyalli.—The beauty of this New Zealand shrub during July cannot be well known, otherwise it would be more often seen. In the neighbourhood of London it has stood for many years in the open, very severe winters killing it to the ground-line, but leaving the rootstock alive to produce new branches. This has occurred twice in the last twenty-five years, but very severe weather might, of course, result in more frequent disaster. Here it grows about 10 feet high, forming a well-branched, spreading bush, but in New Zealand it is said to form a small tree 25 feet to 30 feet high. From the axils of the leaves the clusters of white, pendent blossoms are produced. *P. Lyalli* should be given well-drained loamy soil containing a little leaf-mould, and it is advisable to provide a fairly sunny position sheltered from cold winds. The flowers are borne on the current season's growth, and there is no reason for regular pruning. Cuttings can be rooted in summer, though they are rather difficult to deal with, and better results may often be obtained by layering the lower branches.—D.

TREES AND SHRUBS.

SOME FRAGRANT SHRUBS.

WE might with advantage pay more attention to the many and varied fragrant shrubs, for nothing is more delightful when strolling round a garden than to be regaled with the odours which pervade the air where sweet-smelling plants are grown in quantity.

Upon the turf or in the "wilderness," by stream or woodland walk, we might have fragrant shrubs in masses, and they would pour out odours as rich and variable as the subjects which emit them. The *Lavender* is one of the sweetest of dwarf hardy shrubs, but hardly anyone thinks of planting it when making a shrubbery. It is beautiful when in bloom, as everyone knows, but so it is when out of flower, as the eye finds repose in, and never tires of looking upon, its soft-cushioned masses of silver-grey foliage. This is one of the things that might be boldly used in the foreground of the shrubbery between the taller shrubs and the turf; and, moreover, planting shrubbery margins with such things as these would render digging unnecessary. Another sweet thing of the same grey colour is the *Lavender Cotton* (*Santolina*). It has yellow Daisy-like flowers in summer. Then there is the *Rosemary*, which no garden should be without. It always looks fresh in its dark green dress of richly-scented leaves. Probably these three things are the most accommodating of all the scented shrubs, for they will flourish upon hot, dry, stony soils where little else would grow. Equally as sweet and hardy are the different forms of the *Southernwood* (*Artemisia*); in fact, this is quite a large genus, of which it is rare to see a single member in gardens. *Comptonia asplenifolia* is a hardy, spreading, bushy shrub with elegant Fern-like foliage, which gives off a delightful odour when touched. It is called the *Fern-leaved Gale*. Then there is the *Bog Myrtle* or *Sweet Gale* (*Myrica*), so suitable for wet situations. Many of the herbs might be used, especially such things as *Marroram*, *Camomile*, etc. The *Sweet Bay* is one of the finest of scented shrubs, and a valuable Evergreen too. Upon warm soils it forms quite a tree as much as 40 feet high. The *Sweet Verbena* (*Aloysia citriodora*) has a perfume which all appreciate. It is one of the most useful scented shrubs for cutting. Although considered and usually treated as a greenhouse plant, it will live out of doors in many southern gardens, especially if planted against a warm wall. Even raised from cuttings in spring and planted out in May it rapidly grows into a bush, with plenty of young shoots for cutting. It strikes very easily.

The *Balm of Gilead* (*Cedronella triphylla*) has a delightful odour. It is a half-hardy shrub in most situations, but would probably prove hardy in favoured spots in the west and south of England. It forms a spreading bush about 4 feet high, and the shoots are terminated by a little spike of pale flowers, but they are dull and ineffective. The merit of the plant is its fragrance, and as it can be readily struck from cuttings and grows freely upon warm soils it should be treated as half-hardy, and young stock be raised and planted out every year. *Junipers* and *Escallonia macrantha* have also a nice fragrance, whilst in the *Rose* family there is a variety of delicate odours in the leaves as well as the flowers, the best known and most appreciated being the *Sweet Brier*, which should be found in every garden.

THE LEPTOSPERMUMS.

THE most interesting shrubs at the recent exhibition at Holland House were the species and varieties of *Leptospermum*, several of which had red flowers. Until recent years the principal *Leptospermums* in cultivation had white or cream flowers, and a good deal of attention was paid to a group of a red-flowered kind which was exhibited for the first time at the International Exhibition at Chelsea in 1912. Since that time, apparently rapid strides have been made in the production of bright-coloured sorts. The family includes a score or more species, all evergreen shrubs from New Zealand and Australia, but of that number a few only are grown in the British Isles, and the outdoor cul-

the dried leaves as a substitute for Tea. In some parts of Australia and New Zealand the commoner kinds sometimes become a nuisance, for, after an area of land has been burned over, or otherwise cleared, one or more *Leptospermums* spring up in thousands and exclude to a great extent other vegetation, a densely-covered area being as difficult of access as a well-grown plantation of the Common Gorse here.

In the warmer parts of the country the *Leptospermums* can be planted as other shrubs in ordinary good loamy soil, the addition of a little peat or leaf-mould at planting time being an advantage. Except for the purpose of shaping the bushes in a young state, pruning is not required, and

more favourable places. The leaves are small and sharp-pointed, and the white flowers are barely $\frac{1}{2}$ inch across. One of the first of the rich-coloured sorts to claim attention was

L. CHAPMANI, said by some people to be a sport from *L. scoparium*. It has rose-coloured flowers, the colour of seedlings varying from bright rose to white, and its leaves from green to purple. The plant, however, to arrest attention here was

L. SCOPARIUM NICHOLLSI, or *Nicholli* as it is more frequently spelled. This, according to the "Botanical Magazine," t. 8419, was brought from New Zealand by Captain A. A. Dorrien-Smith in 1908. It was originally found on the sandhills to the north of Christchurch, and is thought



Part of a flowering shoot of *Leptospermum ericoides*. Nymans.

ture of those is restricted, for they are only really hardy in the milder parts, though there are other places where they succeed against walls, and they are well worth growing as cool or cold greenhouse plants either in pots or in tubs. Although they are only known as bushes here, some species form goodly-sized trees in New Zealand and Australia, reaching a maximum height of 40 feet to 60 feet with a diameter of 2 feet to 3 feet. The timber of such trees is valuable, and according to "Kirk," "Forest Flora of New Zealand," it is strong, durable, tough, and elastic, and is used for house-bloeks, piles, marine jetties, fences, spokes, etc., the smaller wood being used for Hop-poles and other purposes. Many of the species are known under the common name of Tea Tree, from the fact, it is said, of early settlers using

it is possible to add to the stock by inserting cuttings of half-ripe shoots firmly in sandy soil in a close propagating frame during summer. When grown in pots the plants should not be over-potted, but kept in health by feeding, and they should be stood out-of-doors in full sun during the summer months. A point to remember in the cultivation of pot or tub plants is the fact that they must not be allowed to become very dry, for once they suffer from drought it is difficult to get them to regain their vigour. At the same time they must not be allowed to become water-logged or they will suffer to an equal extent.

L. SCOPARIUM, the Manuka or Tea Tree, is one of the best-known species. In New Zealand it varies from a prostrate shrub on the mountains to a tree up to 30 feet high, with a trunk 2 feet in diameter in

to have originated as a seedling from a white-flowered plant. It is said to grow from 10 feet to 18 feet high, and is attractive by reason of its purplish leaves and its freely-produced deep-red flowers, which are each about $\frac{3}{4}$ inch across. Another equally beautiful plant is

L. BOSCAWENI, which has purple leaves and large red flowers. Hybrids between *L. Boscaweni* and *L. Nicholli* were on view at Holland House, the colour of the flowers varying from pink to dark red. One of the most beautiful was called Donard Beauty, whose petals were deep pink with a dark-red blotch at the base of each. This was given an Award of Merit. Another called Radiance, with red flowers, was equally good. The flowers in each case were about $\frac{3}{4}$ inch across. They were exhibited by the Donard

Nursery Co., Newcastle, Co. Down. The accompanying illustration gives an idea of the freedom of flowering of *L. Boscaweni*.

L. ERICOIDES is naturally a larger-growing species than *L. scoparium*, and the larger trees in New Zealand are said to be between 40 feet and 60 feet high. It also is called Tea Tree, and in New Zealand it is given the native name of Manuka-rauriki. The leaves are very small and the flowers white. An idea of its free-flowering qualities can be gathered by the accompanying illustration. It is very common in some parts of New Zealand and Australia, and in addition to other uses the wood is employed largely by settlers for heating.

L. LANIGERUM is widely distributed in some parts of Australia and is sometimes grown here, though it is generally less useful than those already named. Here it does not bloom very freely and is less worthy of general cultivation.

L. FLAVESCENS, also from Australia, grows from 15 feet to 20 feet high and bears small yellowish flowers.

L. GRANDIFLORUM greatly resembles *L. scoparium*, but is very free-flowering and the flowers are of large size.

Although other kinds have been introduced, it is probable that those already mentioned are of more value than the others, and are, at any rate, more easily obtained. D.

NOTES AND REPLIES.

New flowering shrubs.—At the Holland Park Show of the Royal Horticultural Society Awards of Merit were made to two pretty and very promising flowering shrubs, both of them of garden origin. *Escallonia Donard* Seedling was raised from *E. Philippiana* crossed with *E. langleyensis*. As this latter had *E. Philippiana* as one of its parents there is, of course, a considerable amount of *E. Philippiana* influence to be found in the new-comer. The flowers of *E. Donard* Seedling are freely borne and of a pleasing blush tint, the habit of the plant promising to be fairly compact. The second Award of Merit was given to *Leptospermum Donard Beauty*, described as the result of a cross between *Leptospermum Boscaweni* and *L. Nicholli*. Of these two *L. Nicholli* attracted a large share of attention at the International Exhibition in 1912, when it was awarded the silver cup as the best new plant in the show. The flowers of this are of a rich ruby-red. The variety *L. Boscaweni* was also shown at the same time, and received an Award of Merit. This is of looser habit than *L. Nicholli*, with larger flowers, which are nearly white, with a red centre, the buds being red. The variety *Donard Beauty* has the large flowers of *Boscaweni*, their colour being bright rose and of a somewhat paler tint at the edges. Both were shown by the Donard Nursery Company, Newcastle, County Down, Ireland.

The present season.—Among gardeners the present season seems likely to be branded as notorious for weeds and insect pests. No doubt both, especially weeds, have been more difficult than usual to deal with, but a little thought would show that the season is not altogether at fault. Most of us are suffering from the want of labour, and even in cases where men can be got they are unskilled, and have not the same interest in the work which is displayed by young and keen gardeners. With the lack of attention and the shortness of hands it is little wonder if weeds and pests are more in evidence than usual, but I am not prepared to admit that the increase of these worries is altogether due to the season.—W. McG., *Balmae*.

FRUIT.

STRAWBERRY INTERNATIONAL.

OF Messrs. Laxton's introductions of recent years, this stands out in my trials as a great advance. Of its value as a field variety I have no experience, but if one may judge from the vigour of the plant it should be a good market sort. The fruits, large and very bright, make an imposing dish. I do not say that it has come to replace Royal Sovereign, because it has not the same freedom and continuity, but, nevertheless, it is a noble Strawberry. It is strange that so many Strawberries do well for a time and then fail. One can recount numberless sorts, novelties of passing years, that in their youthful days were all or almost all one could desire as regards cropping and vigorous growth. After a brief life some of these sorts seem to, as it were, turn back and refuse to crop. Whether International will follow in the wake of its many predecessors time alone can decide. At the present time, at any rate, it inspires one with hope of maintaining its good name.

I am so favourably impressed with the general merits of International that I intend to extend its culture at the expense of others which, though giving very good crops of attractive fruits, fall behind in the averages. I have always favoured trials of new introductions, and learned much from these. At the present time I have a goodly number established, and with which I am able to make comparison. I discard only when it is found by more than one season's trial that the newcomers are not profitable. The bright colour, size, shape, and stout leathery leaves of International combine to make it a conspicuous as well as a favourite Strawberry. There are, I know, many who pin their faith to Royal Sovereign, but good as this is everywhere, I feel sure the palate would yearn for a change. It is only from young plantations that a really good stock of runners can be had. Planted during August most varieties will give a fair crop of fine berries in the season following, but it cannot be expected unless the runners are taken from young beds that have not been weakened by heavy cropping.

W. STRUGNELL.

MELONS IN FRAMES.

I SHOULD be obliged for hints as to Melons in frame. We have Sutton's Blenheim Orange, No. 1, but never succeed in growing them larger than 1½ lb. to 2 lb. We never have more than three on one plant. My gardener thinks it has something to do with soil.—LITTLE CHANG.

[Many amateurs would like to grow a few Melons, but are deterred by reason of the idea being prevalent that a hot-water apparatus of some kind is absolutely necessary. This is certainly not the case, unless the owner desires fruit early, for excellent crops can be produced in pits or frames by means of a little bottom-heat to give them a start, after which solar heat will be enough to keep them going. The main thing to ensure success is not to start too early in the season, for although we sometimes get very warm weather in April we almost invariably get a spell of cold again in the early part of May, and those who have not got pipes at command should not plant out their Melons until they are certain that they can keep them going without any check. As the pits and frames are usually fully occupied up to the beginning of May it is the best plan to sow the seed about the first week in April in the warmest quarter at command, and grow the plants on in pots until the

pits are ready, and as soon as they can be set at liberty have them emptied and thoroughly cleansed, washing the lights and giving the sides a dressing of fresh lime-wash; then put in a good body of fresh stable-manure, trodden in as hard as possible, for the tighter it is put together the slower and more lasting will be the heat. As soon as the heat has well spread through the whole mass put in some turves, with the Grass side downwards, in the centre of each light, and on them put a barrowful of turfy loam that has been stacked up for about three months; this should be chopped up, but not sifted, and as soon as it gets warm the plants may be put out. Some tepid water should be given to settle the soil, and after hot days a good syringing will greatly accelerate growth, but if dull weather prevails, too much moisture must be avoided, especially close up to the main stem of the plants, or they may rot off altogether; in fact, when the fruit is nearly full grown it is the best plan to keep the soil around the stems rather dry and water where the extremity of the roots can find it. When the shoots begin to run out about half-way across the frame the best time for earthing up has arrived, and this should be done with turfy loam, chopped up and trod in very firm; this will grow Melons to perfection without any addition whatever. The leading shoots should then be stopped, when a number of side branches will push out, and on these the male and female flowers will appear. It is advisable to fertilise these. One thing to guard against is to see that one or two fruits do not get too much in advance of the others, for the nearer a good regular crop can be set together the better, as they swell off more evenly. When the fruit gets near to ripening let the soil get rather dry, admit plenty of air, and elevate the fruit on tiles or flower-pots to keep it free from damp.]

GRAPES SCALDED.

I SEND some Grapes grown in my vinery. Please say what is the cause of the rotting? I have nine Vines (various), and may say that before the war I was a successful exhibitor at Shrewsbury with them for many years, but the war took my gardener, and I had to rely on an old-age pensioner, who has been an excellent gardener in his day. I have not forced the Vines this season at all. I fancy it is damp that has caused it, and that he would not give sufficient air. I have had to cut many berries out, but many bunches are not affected.—WREKIN.

[The berries you send have been what is known as "scalded." This always occurs during the stoning period, and is most troublesome in stormy and changeable weather, when, no matter how careful the inside management, the air temperature rushes to extremes. Under these rapid fluctuations the economist who grudges fuel allows the night temperature of the house to fall to a low figure, when the berries long before daybreak become extremely cold. A bright, sunny morning breaks, the temperature of the house rises faster than that of the berries, condensation of vapour follows, and a portion of the skin is destroyed.

Scalding does not extend over a long period—generally from a fortnight to three weeks, more or less, according to the regularity of the "set" and the active condition of the roots, while the greatest destruction almost invariably is experienced where ventilation is imperfect and the borders are wet and cold. The amateur who never reads his calendar, when he finds his berries scalding, unmindful of the fact that this subject has been discussed over and over again, at once sends berries to the editor of his paper, but be-

fore the oft-repeated reply can reach him the mischief is done, and many of his best bunches are disfigured, if not spoiled. Once more, then, upon the principle that prevention is better than cure, we would suggest the production and maintenance of conditions the reverse of those described. The fires, in the first place, should be started sufficiently early in the afternoon not only to expel sluggish vapour, but also to maintain a brisk circulation of warm air through the night. The apex ventilators should never be closed, and, the better to prevent a sudden rise, fire-heat should be shut off before the sun strikes the roof, when, by abundant, if not profuse, ventilation, a warm greenhouse temperature may be maintained through the day. Cold

crowding. Some varieties need but little pruning, owing to their habit of growth. For example, established trees of Kirke's, Reine Claude de Bavay, and Coe's Golden Drop very rarely produce such a superfluity of shoots as is the case with Washington, Victoria, Brahy's Gage, and others of more robust growth. A good watering is afforded to each tree as the pruning is done, as this has been found to give the young fruits a fillip. Blister, which for some time had been troublesome on Nectarines out of doors, has now disappeared under the influence of the warmer nights. Both these trees and Peaches are fairly well cropped, and at present the fruits are stoning. To assist them over this stage waterings are being

VEGETABLES.

SPINACH FOR WINTER AND SPRING.

WHERE Spinach is in demand throughout the winter and spring the value of a good breadth of it is great. In very many instances Winter Spinach is often very unsatisfactory. The grub of the Spinach moth is for the most part answerable for these failures, which are more prevalent in some seasons than others. The best preventive is to have the ground fallow at least a month before sowing, during this time well forking it over, thus exposing it to birds and the pulverising influence of the atmosphere. With soil nicely fined down the seeds germinate much more kindly. With Winter Spinach there is generally a difference of opinion as to the date of sowing for the main winter crop. The danger is, that if sown too early and the autumn should turn out warm and dry, it may run to seed, and if sown too late there is not sufficient time for it to become large enough to be of use for gathering during the winter. A week or two often makes all the difference one way or the other. For late districts the first week in August is none too early, but for earlier and warmer parts the end of the second week or throughout the third week is the more suitable. It is a good plan to make two sowings, one during the early part of the month and the other at the time stated. In this case the earlier sowing may be gathered from in the autumn, the other not being gathered from upon any account until the winter. The chances are if the winter crop should be gathered from in the autumn the growth will be checked. This may appear a simple matter, but it is best to be prepared if Spinach is expected to be forthcoming at all seasons, or, at any rate, when the weather will allow of its being gathered. Another sowing should be made at the latter part of September. This commences to turn in just as the winter crop is going over. It is well known how quickly the winter crop runs to flower upon the return to sunny and more genial weather. With the sowing under notice, the seedlings grow but very little before hard weather sets in, but at the turn of the day they commence to start nicely into growth and bear long before any sown in the new year.

For the main breadth of Winter Spinach there is nothing like having the plot in an open position, as here the plants are not likely to be attacked by grubs. Spinach follows well after Potatoes or even Peas. The soil having been well forked over, should, previous to having the surface broken down, receive a fair dressing of soot and also burnt refuse. This, besides stimulating growth, also has a deterrent effect upon grubs. For providing the supply for the winter season the Prickly-seeded is the variety generally grown, but Victoria is now having many advocates, it being considered much superior on account of the larger leaves and not bolting so quickly in the spring. Whatever merits Victoria may have, the older Prickly-seeded will continue to be largely grown, as on suitable soils the leaves of this even will grow surprisingly large. The drills should be drawn quite 18 inches apart, as crowded rows are not very desirable, the seeds also being sown thinly, as if at all crowded the young plants become unduly disturbed in the thinning, which should be gradual, or an attack of grub may lessen the number of plants. Although Winter Spinach likes a moderately firm soil, yet surface hoeing is very essential, this promoting a healthy and free growth, and,



Part of a flowering shoot of *Leptospermum Boscaweni*. Nymans. (See page 397.)

draughts must be guarded against, otherwise another enemy in the form of rust may put in an appearance, when the intended remedy may prove worse than the imaginary disease.]

NOTES AND REPLIES.

Summer pruning is being attended to now, Plums being dealt with. In a general way Plums are much too severely handled. Neat trees are all very well, but when neatness can only be achieved by the extravagant use of the knife it may be assumed that a tree so treated will either have a short life, be troubled with gumming, or shy in fruiting. It is better to prune as sparingly as possible, and to lay in as much young wood as can be found room for, avoiding, of course, over-

given from time to time as occasion requires.—KIRK.

Nectarine Cardinal.—This Nectarine, sent out by Messrs. Rivers in the autumn of 1896, has well maintained the position which it immediately claimed. In Cardinal all the good qualities which one looks for in a Nectarine are combined—size, colour, appearance, flavour, and freedom of setting. An additional recommendation is its earliness, the variety being quite a fortnight in advance of Early Rivers. Cardinal, unfortunately, does not succeed out of doors, but does well in quite a cool house. Cardinal is a clingstone, a fact which detracts from its value with some, but intending planters during the coming autumn might, with advantage, give it a place.

besides, if grubs should be present this will disturb them; in fact, hoeing should be practised as long as possible. In gathering, a leaf or so should be taken off each plant, as then the plants are more likely to keep on giving a supply, weather permitting.

NOTES AND REPLIES.

Grubs at roots of Cauliflowers, etc.—I send some grubs which are attacking my winter Greens, in particular Cauliflower and Broccoli. I have pulled up thirty to forty. Can you tell me what to do with remaining plants, as I am afraid they will be attacked as well?—A. W. ARNOLD.

[The grubs attacking your plants are the larvae of the Cabbage-root fly. They are very troublesome, but, as a rule, their attacks do not continue much later than this. The best preventive measure is to sprinkle sand moistened, with paraffin along the rows in order to check the flies from laying their eggs. It is too late to hope for much from this measure. Watering the rows with a weak solution of carbolic acid is said sometimes to give relief, but this must be done with caution, so that none of the fluid touches the foliage.]

Cabbage.—Where a large and continuous demand for vegetables has to be met, a good breadth of these should be planted at once for autumn cutting. A good variety for household or general purposes is Enfield Market, which grows to a good size and is of excellent table quality. The plants should be set out not less than 18 inches apart each way. For dining-room and similar purposes Rosette Colewort should still be planted in quantity on any piece of ground that may be available. These, as has before been mentioned, may be set out 1 foot apart each way. The hardy winter varieties should be allowed a distance of 18 inches both between and in the rows.

Broccoli.—Advantage should be taken of the moist condition of the soil to get the various breadths of Broccoli planted. The varieties will, or should, consist of such as will form a regular succession from late autumn until June in next year. For the first-named purpose Autumn Protecting is very reliable, and can always be depended on to produce medium-sized heads of the highest quality. To succeed the foregoing there are Winter Mammoth and Christmas White. After this Spring White and Vanguard will yield good, useful-sized curds. Then come the main crop varieties, of which there are many valuable kinds, and finally the late sorts, such as Model, Late Queen, and others. Planting should be done on firm ground, otherwise soft growth and stems will result, which quickly succumb when subjected to severe and prolonged frost. If space is available for so doing, the plants should be set out 2 feet apart both in and between the rows.

Late Peas sown the second week in June have been earthed up and the sticks placed in position. New sticks were chosen for this crop in order to withstand the rough autumn winds. If dry weather sets in a good mulching of dung will be applied before the ground becomes very dry, in order to avoid having to give cold water to the roots, which is a fertile source of mildew.

Leeks.—The plants for maincrop supply are now of a sufficient size to transplant. These are grown in trenches taken out in the same way as for Celery. The plants will stand 9 inches apart in the rows, and the latter 1 foot asunder in the trenches.

Herbs.—The various kinds of herbs are now coming into flower. A sufficient quantity of each should, therefore, be cut when dry, tied into bunches, and suspended under the roof of an open shed to become dried for winter use.

GARDEN FOOD.

THE ARTICHOKE.

This vegetable is now in season, and very welcome it is. There are various ways of cooking it in France, but it is not easy to beat plain boiling. It should not be served hot, but cooked beforehand and served cold with a little oil and Lemon-juice by way of sauce, and that is not wanted by those who like the Artichoke plain. Old, neglected plants give poor heads. Plantations should be renewed now and then and the shoots of old plants thinned out in spring to one or two. It is needless to use any second term for this plant, the only true Artichoke. The Sunflower we dig up the roots of in winter is a very different thing, and a good thing, too, in its season. There is endless confusion in the cookery books, owing to the names being misapplied. The French never make this mistake. We give a few French recipes from *L'Art du bien manger*:—

ARTICHAUX A LA PROVENCAL.—Prenez des artichauts que vous nettoyez dessus et dessous; faites-les cuire un quart d'heure dans l'eau; ôtez-en le foin: mettez-les sur une tourtière avec huile, gousses d'ail, sel, poivre; faites cuire feu dessus et dessous: quand ils sont cuits, ôtez les gousses d'ail, et servez avec un jus de citron.

ARTICHAUX SAUTES.—Coupez en quatre des artichauts moyens et tendres, ôtez le foin et parez-les en leur laissant à chacun trois feuilles; lavez et essuyez. Mettez du beurre dans une casserole où vous arrangerez vos artichauts, et les mettez sur un feu doux seulement vingt minutes avant de servir. Dressez-les, sur le plat, en turban. Mettez une cuillerée de chapelure dans le beurre, autant de persil haché et un jus de citron, un peu de sel: servez cette sauce dans le milieu des artichauts. Il ne faut pas les blanchir.

ARTICHAUX AU GRAS.—Coupez en deux de moyens artichauts, ôtez-en le foin et les parez: faites-les blanchir à l'eau et sel; lorsqu'ils sont cuits, mettez des tranches de lard gras dans une casserole, avec une ou deux tranches de veau, deux oignons, une carotte, un clou de girofle et très peu de thym; arrangez les artichauts sur les hardes et le veau, et mettez sur un feu doux. Quand le veau a pris couleur, mouillez avec un peu de jus ou du bon bouillon: faites mijoter. Servez les artichauts en turban, et la sauce que vous avez liée de fécula, au milieu.—(*Ancienne mode.*)

ARTICHAUX FRITS.—Prenez-les, petits et très tendres, les couper par quartiers, et les faire blanchir à l'eau bouillante salée. Faites une sauce à la poulette, composée d'un morceau de beurre fondu à la casserole; ajoutez une cuillerée de farine, mouillez de crème, liez de jaunes d'œufs; trempez-y les artichauts, laissez-les refroidir. Au moment de servir, trempez-les dans une pâte à frire.

ARTICHAUX A LA DISLAIRE.—Après avoir ôté le vert de dessous, coupez les feuilles de dessus à moitié, ou les partagez en deux. Le foin ôté, blanchissez à l'eau bouillante; faites-les cuire avec du bouillon, du sel, poivre, un houquet de persil, ciboules, deux clous de girofle, un oignon, une carotte et la moitié d'un panais. Presque cuits, égouttez-les, et les farinez pour les faire frire; servez-les garnis de persil frit.—(*Mode ancienne.*)

A good part of the Artichoke is the base or bottom, called by the French *Fond d'Artichaut*, which is used largely in winter cookery, preserved. It is very good indeed for winter use. Best of all, though, is the bottom of the Artichoke in summer when freshly cooked. The "fond" is easily taken away from the head, and the scale of good heads is used at the same time. As the plant is a very free bearer when well grown there are often more heads than one can use, and it is then a very good thing to save them all for winter use. Treated well in the garden and kitchen the Artichoke affords one of the most wholesome and delicate of the mid-

summer foods. There are several varieties in cultivation in France, and any one with experience of these would confer a favour by telling which of them is found the best for our country.

HOT SALADS!

Vegetables should always be hot when made into a salad, for they absorb the dressing as they cool. Such ingredients as Potatoes, Haricot Beans, Lentils, Rice, in fact all starchy foods should be finished by adding stock, milk, cream, or mayonnaise sauce when they are made into salads, as this treatment gives them a creamy consistency. They are too often served dry and unappetising.

The above, from the *Telegraph*, is among the amusing items of news one may gather since the great dailies took to writing on gardening and cookery. We should say the sort of salad so made is a salad to be avoided. Coolness, freshness, well-grown Lettuce, and no mixture of meaty stuffs of any sort are what should be sought in a British garden salad.

NOTES AND REPLIES.

Mountain Ash Berry jelly.—I should be greatly obliged if you would say if fruit of Mountain Ash enclosed is edible. I am told it can be made into preserve.—E. E. L. CAIGER.

[Yes, the berries can be made into jelly. The berries must be gathered when dry and quite ripe. Pick off the stalks and put into a preserving pan with a little water, and simmer until they can be broken up. Pour into a jelly-bag and run the juice through, but do not use any pressure or it will not be clear. Allow a pound of loaf-sugar to every pint of juice. Boil rather rapidly for an hour, skimming well, then put into perfectly dry pots and tie down at once. The berries you send are those of the yellow-fruited form, the ones generally used for the making of jelly being those of the red-fruited variety.]

Apple jelly.—In this district, and in others, too, the Apples are falling in large numbers as a consequence of the cold, inclement season, and it is specially important this year that they should not be wasted. Many people do not know that immature Apples make delicious Apple jelly—much nicer, in fact, than ripe Apples do—and the process is quite simple. Here is a good recipe:—Wash the Apples thoroughly and put them into a preserving-pan with just enough cold water to cover them. Let them boil for about an hour until they are reduced to a pulp, and then strain the juice through a stout muslin bag. Add to the juice preserving sugar, allowing 1 lb. of sugar to every pint of juice, and then boil gently for 2 or 2½ hours. A little Lemon-juice added is thought an improvement by many. It will be found that a pint of juice with 1 lb. of sugar will make 1½ lbs. of jelly, and with sugar at 6d. a lb. the cost will work out at 4d. per lb. of jelly, exclusive of firing, so it is quite a cheap preserve, and goes further than jam, and being, of course, free from pips or stones, is especially good for children.—N. L.

Cucumber fritters.—If Cucumbers are plentiful they will make an acceptable change when cooked in fritters. Peel the Cucumber, cut into slices ¼ inch thick. Make a batter with one well-beaten egg, half a cup of milk, and enough flour to make it of the right consistency to drop from spoon. Season batter with salt and pepper. Dip each slice of Cucumber in the batter, coating it well, then fry a nice brown, and serve very hot.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

CRANESBILL IN THE ROCK GARDEN.

It is doubtful if we make as good use of these plants as we well might. They have the great merit of hardiness with good colour. Some of them have much beauty, as the one figured here, and which is very useful in the rock garden. The Spanish and English Geraniums take to the Grass, and look very pretty among it. The Spanish *G. ibericum* kind is most vigorous, and fights its way in a hedgerow, and the white form of our native kind is also

against the grey stone of the retaining wall on which it grows. There is now a number of plants at Monreith, and although it does not give spikes up to 4 feet in length, as is said to be the case in some places, they are very handsome.—S. ARNOTT.

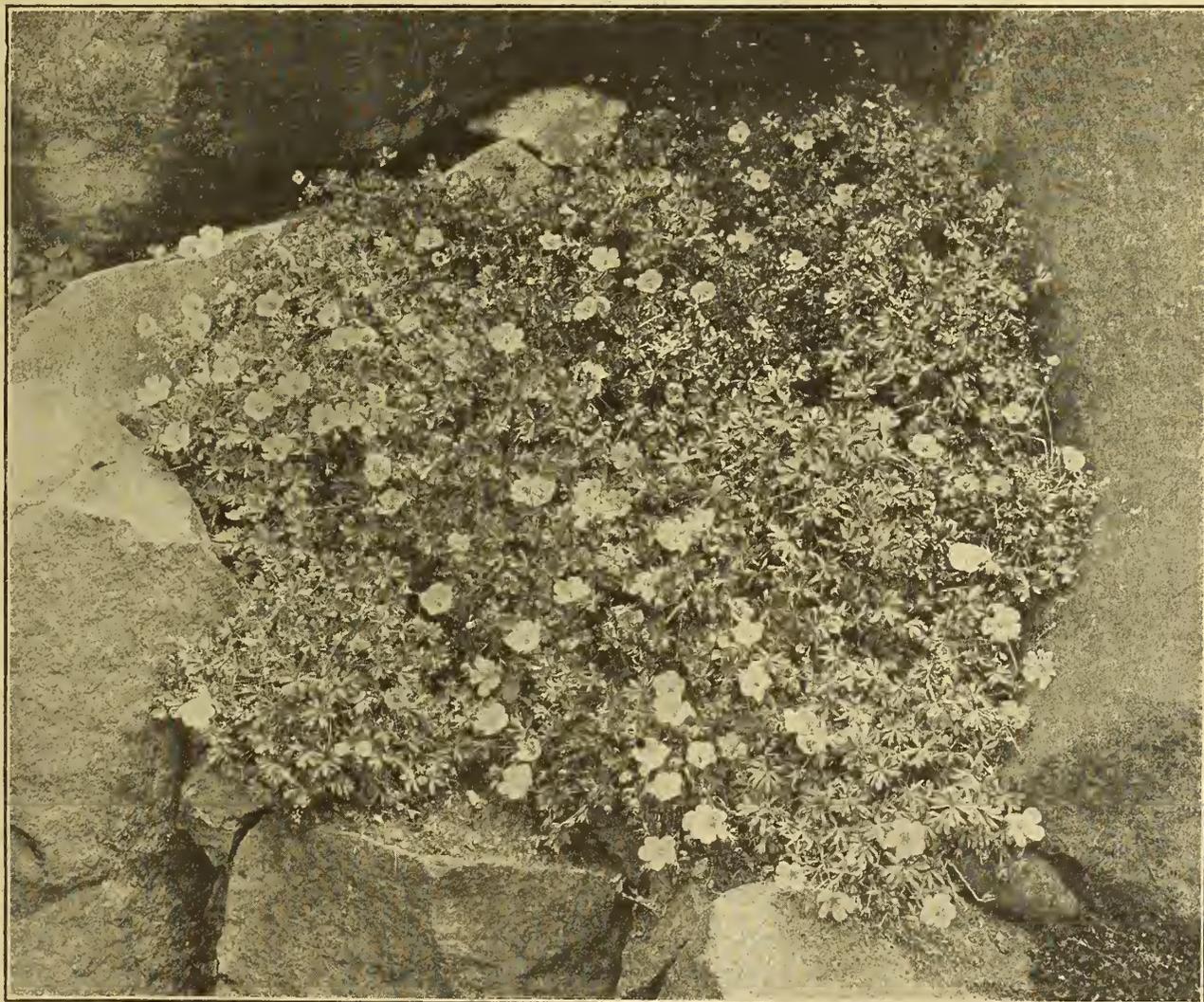
Campanula rotundifolia alba.—Several forms of the white variety of *Campanula rotundifolia* are in existence, some of which are not only purer but have larger flowers than others. I have a good white one, which I received a good many years ago from Mr. T. O. Walker, of Carnforth. This produces sheaves of good, open, pure-white flowers every year.—S. ARNOTT.

Æthionema Warley Hybrid.—I am very fond of all the *Æthionemas*, the flowers are so delicate and pretty, and the foliage is usu-

OUTDOOR PLANTS.

PROPAGATING BEDDING PLANTS.

The propagation of Zonal Pelargoniums should commence by the middle of August, and wherever possible every cutting should be inserted by the end of that month. Many, especially trade growers, strike them in "stores," that is, something less than a dozen in a 6-inch pot, and pot them off in early spring. It is perhaps the most economical way of wintering them, as so many can be stored away in a small space, but it necessitates a lot of labour at a time when there is much work coming on, and at the present time, as all interested in gardening work know, labour is scarce and expen-



The Silvery Cranesbill (Geranium argenteum) at Friar Park.

very effective. The one we show is an extremely good example of an arrangement which cuts it off from various enemies, and looks very effective. The Armenian Geranium is a very showy plant. Some people object to the colour. I do not. There are some not yet in cultivation that are well worth attention. W.

NOTES AND REPLIES.

Saxifraga Cotyledon icelandica.—In this we have the finest of the forms of *Saxifraga Cotyledon*. It appears, however, that *icelandica* is a misnomer. It is said to grow well at St. John's, Oxford. At Monreith, Sir Herbert Maxwell's garden in Wigtonshire, it is magnificent in the wall garden, the massive, yet elegant, spires of bloom showing well

ally of an attractive glaucous hue and the habit neat. This hybrid has flowers of a much richer shade than most, the colour a bright rose-pink. The flowers are small and the whole plant is compact. Like most of its family, it likes a dry, sunny position in a light soil with a fair proportion of lime. All the *Æthionemas* should be cut back after flowering to keep the growth from becoming straggly.—W. O.

Campanula rotundifolia Hosti.—This, with the form called *C. r. alpina*, not to be confounded with the species *alpina*, should be grown in every garden where rock plants are cherished. It has much larger flowers than those of the typical *C. rotundifolia* (a very variable plant, by the way). The flowers are large, produced in great numbers, and are of a deep purple blue. There are some forms of *C. r. Hosti* which are much better than others.—S. A.

sive. For years past I have struck my Zonals singly in 2-inch and 2½-inch pots, according to the season and condition of the cuttings. They are stood in the open and in fine weather watered once a day, but never in the evening, which minimises the danger of damping. In a time of extreme heat they may need more than this. In this way labour is lessened in spring. The pots are then full of roots, and as soon as growth commences they can be fed so that when they are planted out they have trusses on them as large as those produced by much older plants later in the season. The advantage of this is obvious. The beds are effective early in June, whereas when the cuttings have to be potted off in spring there is a check from which it takes them some time to re-

cover. In blooming power plants grown as above indicated are equal to two plants wintered in stores, and are quite as good as three spring-struck plants, which cannot be relied on to come to their best before the middle of July. I would advise readers to try this way of propagating bedding Zonals. I feel sure that one trial would convince them of its superiority over the method usually followed. It may be objected by some that the pots being full of roots quite early in the year, the plants become to some extent starved, and therefore in a measure deprived of their blooming power, but they can be fed, and all practical men know what can be done in this way when the plant is healthy and the pots filled with active fibres.

VERBENAS are not so much grown as they were. When I was a young man they were considered indispensable, and beds of Brilliant de Vaise, Purple King, and Mrs. Holford (a fine white) were prominent features in well-ordered gardens. From some cause or other, I think possibly to the express method of increase adopted to meet the great demand, the constitution of the popular varieties declined. They fell a victim to some kind of disease, and it was found impossible to make them a part of the flower-garden arrangements. In my early days I had much to do with the propagation of this class of plant, and quite 90 per cent. of the cuttings was struck in warmth in spring. In the course of time this undoubtedly exercised an enfeebling effect. It is, moreover, sometimes difficult to obtain good succulent cuttings from flowering plants. There should be reserve plants which should be in good ground and not allowed to bloom, from which stout growths in plenty can be obtained in August, and which, inserted in 42-pots at the rate of about a dozen to the pot, and wintered in a cool-house, will form sturdy little plants ready for potting off early in April, and which can go into cold frames where, in favourable weather later on, they can be exposed to outside influences. Such plants become very hard by the end of May, and as the Verbena will bear a certain amount of frost without injury they can be planted out at a comparatively early date, and therefore get good root-hold before the hot weather arrives.

CALCEOLARIAS are perhaps the most economical bedding plants in use, as they need no artificial warmth to keep them through the winter. They never do so well as when wintered in old-fashioned turf pits with a light on them. The turves keep out frost much better than bricks, and with some litter on the frame the plants will come through a hard winter without injury. The cuttings are simply inserted in free soil and can then be lifted with good balls. Calceolarias are very impatient of artificial warmth, and never seem to have the vigorous health when struck in pots and wintered in a greenhouse. Many of the failures with this plant are due to late planting. The latter end of May is too late. They should be in place by the beginning of the month, which can be done with safety if wintered as above indicated. I have known plants stand over the winter when not very severe.

PARIS DAISIES can be wintered in the same way. They are not very tender and do not damp off. They could well be wintered in a cold frame with, of course, protection against hard frosts. It is as well to know this, for the amateur and trade grower have never too much room in heated greenhouses during the winter.

HELIOtropES are altogether different. The newer varieties seem to be more tender than those grown some thirty years ago, and if the temperature is frequently

below 45 degs. they are apt to cast their leaves. They should be propagated early in August, putting half-a-dozen cuttings into a 2½-inch pot, as they winter better when the pots are full of roots. Stand them in the warmest end of the greenhouse and be very careful in watering from December till March.

LOBELIAS are often raised in warmth in March, but this is a mistake. Seed should be sown in boxes or pans early in September, allowing the seedlings to remain in a cold frame until December, with full exposure in fine weather. Sturdy, hardy little stuff will be the result, and they can be pricked off early in April, taking them out in little bunches. By the time they are to go into the open air they should be nice compact little plants and well in bloom. It is not everyone who has a warm house for raising seeds early in the year, but all who possess a cool greenhouse can command in the manner above described a good stock of this useful little bedding plant, almost indispensable for window-boxes.

AGERATUMS are nowadays frequently raised from seeds in spring, but they are very easily struck from cuttings, putting a dozen into a 4½-inch pot, and they are not liable to damp off. I do not see, however, why they should not be raised from seeds in July or early in August and wintered in the seed-pans.

PETUNIAS can be propagated from cuttings, but only in early spring, when succulent shoots can be had. Seedlings are preferable, and must be raised in heat. Coleus and Iresine strike easily in August, but must be wintered in a minimum temperature of 50 degs. BYFLEET.

NOTES AND REPLIES.

Anemone fulgens.—You would greatly oblige if you could give any hints in GARDENING ILLUSTRATED which would throw light on the cultivation of *Anemone fulgens*. With me, in a mixture of loam and leaf-mould, well drained, it flowers for the first season pretty well, after that it does no more good. And yet I hear of people declaring how it increases. I am inclined to give it up altogether.—R. L. ROUTH, *Banbury*.

[The cultivation of this fine scarlet Windflower in your county should not be fraught with the least difficulty, unless there is some peculiar local cause of which you afford us no information. The plant is usually a success in sunny gardens, and fails in those much shaded or where shade and a heavy, more or less retentive soil obtain. Generally speaking, the freshly imported roots do well the first year, and we know instances in rather warm counties and with a certain amount of chalk in the rather heavy soil of the plant succeeding permanently when planted in Grass. For garden decoration, however, we suggest the warmest and sunniest spot you can find, and planting not later than October. If your soil is heavy or clayey, add quite a third of sharp grit where the tubers are planted—that is, mixing the sand freely with the other soil and finally surrounding the tubers also with sand. After the first flowering it may be well to lift the roots after the leaves are quite ripened off, and give them a thorough resting in some open shed through which a free circulation of air is passing. After this treatment replant them as before, preferably in a fresh spot.]

Meconopsis chelidoniifolia.—This is exceedingly graceful. It comes from Szechuan in Western China, and has been distributed generously from Glasnevin, where it first flowered in Europe. As it is quite hardy, a good perennial, and, moreover, very easily propagated, it ought to be found before long in every good gar-

den where a cool, half-shaded position can be spared for it. I brought home a tuft of young plants from Glasnevin a year ago last April, divided it, and planted the resulting pieces in two clumps. Those among some Ferns in rather rich, cool soil did best and threw up slender, leafy stems, but did not flower last year. The tallest of these stems fell over, and I was delighted to find in the autumn that where they touched the ground every axil had rooted and produced a little plant. This spring each plant has shot up a stem, which arches over with the weight of the many heart-shaped flower-buds on the terminal shoot, and the lesser zigzag sprays that branch out from the leaf-axils of the central stem.—E. A. BOWLES in *Garden*.

Sweet Peas.—Judging by the scarcity of notes on Sweet Peas in GARDENING ILLUSTRATED, it may be inferred that there is something of a slump in them. Not, perhaps, from a garden point of view, for, no doubt, they are being as largely grown in that way as ever, but there does not now seem to be the same booming of new varieties, nor the same amount of writing concerning their merits from "experts." With all its good qualities the Sweet Pea was never really worth the position which it assumed, for some years, in garden literature. It was, as has been previously the case with other flowers, forced to the front by the efforts of enthusiasts, and, again as is generally the case, these very enthusiasts are responsible for its partial eclipse. The huge flowers, stems, and foliage with which we were familiar on show benches created a positive feeling of repulsion among many admirers of Sweet Peas, and the meaningless introduction of variety upon variety—the majority of them differing but little from others in cultivation—also tended to become a weariness to those who wished to keep abreast of the times. That the Sweet Pea is a most valuable stand-by for cutting cannot be denied, and if the present slump results in a return to its cultivation in a saner form so much the better. Grown naturally the blooms of Sweet Peas are among our fairest flowers, but when, like Chrysanthemums, they are taken under the wing of the exhibitor, their usefulness and their beauty alike vanish.—KIRK.

Scabiosa ochroleuca and S. caucasica.—The flowers of these, used in combination, make a lovely table decoration, the soft primrose-yellow of *S. ochroleuca* harmonising perfectly with and setting off the delicate lilac-blue shade of *S. caucasica*. Both of them flower on long, stiff stalks, so that they are ideal for cutting, and they last a fair time in water when cut. *S. ochroleuca* is the easier of the two to grow, and in any good garden loam, either in full sun or in partial shade, it grows like a weed. It flowers profusely during June and July. *S. caucasica* is rather more particular, and prefers a light and very stony soil in sun. Like *S. ochroleuca* it is very easily raised from seed, and when it finds itself in congenial quarters it improves year by year. The seedlings vary considerably both in colour and in habit, some having leafy bracts round the flowers, which do not improve their appearance. There is a white variety, but I do not care for it.—N. L.

Spiræa Aruncus.—The Spiræas are a moisture-loving family, but this handsome species seems almost indifferent in its tastes. I have a large plant growing in an ordinary raised border of rather dry loam, and it is a magnificent sight just now with twenty to thirty great snowy plumes of blossoms, making a striking object in the garden. It is a somewhat

slow-growing plant and is not seen at its best until it has been established for some years, but where there is plenty of room it is well worth growing.—N. L.

OSTROWSKIA MAGNIFICA.

This is without doubt one of the noblest of hardy herbaceous plants. A group of vigorous plants in full flower has a magnificent appearance. The blossoms, as seen in the illustration, are each fully 6 inches in diameter, whitish with a lilac suffusion throughout, and satin-like in texture, borne on stout stems, each from 5 feet to 7 feet in height. Unfortunately it must be considered a somewhat capricious plant as it is not a success in every garden. Even when apparently permanently established it occasionally dies unaccountably. A heavy soil to which has been added plenty of old mortar-rubble is evidently to its liking. With me it succeeds splendidly in such a soil planted under a wall having a south-east aspect. The only protection afforded the plants is a few Spruce branches placed

they all came up, looking very healthy, none of them bloomed. I see the plants depicted in your paper were planted at the same time as mine were, and I should be greatly obliged if you could tell me why mine have not flowered and what I ought to do to make them grow as well as in your illustration?—T., Loughton, Cloughjordan, Co. Tipperary.

[There may have been too much shade. Soil should be deep sandy peat and leaf-mould. The best plants we have seen of this were grown on the cool side of a wall in the Glasnevin Botanic Gardens.—Ed.]

ROYAL HORTICULTURAL SOCIETY

AUGUST 1ST, 1916.

INTEREST of a special character attaches to the meeting held on this date by the first exhibition of hardy British-grown flower-bulbs being held in conjunction therewith. From many points of view this latter must be regarded as a success, though it was a matter for surprise, seeing the far-reaching, almost national importance of encouraging to the full home industries at this time, that a much larger

Nottingham were also on view. Tulips from Wisbech and Spalding merited the highest praise, as did also the Hyacinths from the first-named district. Rarely, indeed, has such produce been seen. For the rest the wonderful collection of Gooseberries from Langley attracted the attention of everybody, a remarkable lot of mid-season Peas (100 varieties) from the Wisley trials also coming in for a fair share of attention. Phloxes and other hardy flowers were well shown, an extensive collection of Hart's Tongue Ferns (*Scolopendriums*) from Edmonton presenting a most cool and refreshing appearance. Gladioli also constituted a feature in an exhibition of unusual interest.

HARDY FLOWERS.

A plant of some importance to gardeners, which has yet to find its way into general cultivation, is *Thalictrum dipterocarpum*, a recent introduction from China. Of graceful habit and with violet-blue sepals, it is both elegant and attractive. It was shown by Mr. James Box and stood out well in a handsome grouping of the best hardy flowers. The finest Phlox novelty seen at this meeting was *P. Aubrey Alder*, whose salmon-scarlet flowers and blackish stems make it quite distinct. It gained an Award of Merit in the Phlox trial last year at Wisley. Mr. W. Wells, junr., had a big stand of it, and another of the new *Delphinium*, Mrs. H. Kaye (dark purple and violet), which also gained an Award of Merit at this meeting. Mr. H. J. Jones, Limited, also had some good novelties in herbaceous Phloxes, *Leonie Cobb* (pale salmon) and *Evangeline* (self-salmon) being among the more pronounced of these in a standard collection in which the finest of these good border flowers were remarked. Quite one of the most charming of new alpine Bellflowers is *Admiral Sir John Jellicoe*, a dainty thing in palest sky-blue, 4 inches or so high, that has resulted from crossing *C. Waldsteiniana* and *North Star* of the carpatia set. Lord Kitchener is a Bellflower of the *Fergusonii* and *Hendersonii* type, giving an impression of *pyramidalis* influence. Both were exhibited by Messrs. T. Grove and Sons. The prettiest thing of recent introduction and choice withal in Mr. G. Reuthe's collection was *Astilbe simplicifolia*, whose feathery white plumes of 9 inches high appear profusely above pointed heart-shaped, deeply-notched foliage. It is of quite alpine character. *Solidago rigida* is the most golden-coloured; "Golden Rod" we have seen, minus the weedy commonplaceness of so many of its tribe. It and the lovely *Romneya trichocalyx* were conspicuous items in a group from Messrs. Wallace and Co., which also teemed of the newer *Astilbes* so valuable for moist spots in the open or for gentle forcing. The Donard Nursery Co. sent a lovely lot of flowering examples of *Sparaxis pulcherrima*, obviously from the ordinary pot-grown, nursery-plunged stock than which nothing could afford better proof of the genial Irish climate whence they came. Graceful and beautiful to a degree, the array of pendent blossoms rendered the exhibit a chief attraction. A 3 feet high example of *Desfontainia spinosa* full of its gold and scarlet blossoms, *Styrax japonicum* (white), and the curious *Lomatia pinnatifida*, which is not generally hardy, were also from the same source. Mr. G. W. Miller's best plant was the new rosy-crimson *Astilbe Gloria*, in which the inflorescence is more densely arranged than usual, but the rich colour is its chief attraction. The most striking object in a large collection of plants from Mr. L. R. Russell was *Erythrina crista-*



Part of a group of *Ostrowskia magnifica* at Lilford Hall, Oundle, Northants.

around them in spring to ward off late frosts. In making a bed for the *Ostrowskia* this should be fully 3 feet deep, as the Carrot-like roots descend to a great depth. Perhaps the best method of establishing this plant is to raise seedlings, planting these out when about 6 inches high in the soil recommended. Seedling plants usually take about four years to reach the flowering stage. The roots are exceedingly brittle, and it is almost impossible, even with the greatest care, to lift a plant from the open ground without breaking them, this rendering its transplanting without damage most difficult. F. W. G.

Lilford Gardens, Northants.

Cypripedium spectabile.—I was much interested in the note on and picture of *Cypripedium spectabile* in your issue of July 29th, page 371. Two years ago next autumn I bought three of this Orchid, and planted them in a moist, shady spot, which I thought would suit them, mixing in peat with the soil before putting the plants in. The first spring after planting the three plants came up, but only one of them flowered, and last spring, though

number of growers did not participate in it. It may be that in large measure many of those who grow chiefly for the wholesale trade or others who cultivate extensively—almost exclusively—for market work were prevented from showing their produce, owing to shortness of labour, or difficulties of transit, or both. At the same time in a matter of such exceeding importance occasion should have been taken to demonstrate the vast superiority of British-grown bulbs, a fact which, if well known to cultivators and specialists, is insufficiently recognised by the great flower-growing public, who each year send vast sums of money abroad. Of the show itself—particularly the Daffodil classes—it would appear that, in the main, exhibitors had laid themselves out to showing produce of giant size to the exclusion of the much more useful commercial article. Giant "mother bulbs," indeed, were frequent, some from Ireland surrounded by a numerous family indicating the great possibilities of bulb cultivation in that land. Bulbs of the highest quality, however, from Cambridge, Lincoln, and

galli, which, though among the older-cultivated plants, is in the nature of a novelty to a large number. The brilliant crimson-scarlet flowers are a great attraction. Sweet Peas were very finely shown by Mr. Bolton and Messrs. Piper. A pretty new pink, *Dianthus deltoides flore-pleno*—the flowers are semi-double and in other respects replicas of those of the typical kind—was sent by Messrs. Baker. While gaining no award, it is likely to be of considerable service for rock garden work. *Scabiosa caucasica* was grandly shown by this firm. Gladioli of the finest description and in great variety were from Messrs. J. Kelway and Sons, whose two novelties, *Wraith* and *Phyllis Kelway*, are hybrids showing *primulinus* influence. That last named is an all-yellow variety of much beauty and purity of tone. It is also very handsome. *Empress of India*, of intensely dark crimson, was very fine.

ROSES.

Four novelties of much merit in a collection from Mr. Elisha Hicks stood out from all the rest. These were *Joanna Bridge* (semi-double), cream and pink, with a wonderful spread of roundly-formed petals, being the most conspicuous of all, *Candeur Lyonnaise* (big double white), *Mrs. Dunlop Best* (apricot), and *Red Letter Day*. Rev. J. H. Pemberton showed the new hybrid Musk Rose, *Pax*, which also possesses the Musk perfume. It is white-flowered and showy.

HARDY FERNS.

A collection of upwards of a hundred varieties of Hart's Tongue Ferns (*Scolopendrium*) was among the most refreshing and cool-looking exhibits staged at this meeting. Well grown and well staged, their dark, glossy, green fronds were welcome amid the heat and flower gaiety of the occasion. Such indispensable crispum forms as *Bowdeni*, *Grayi*, *latum*, and *robustum* were very noticeable, while of the tasselled set *grandidens* and *corymbiferum* were among the more distinct.

DRY BULB SHOW.

In the important class for twenty varieties of Daffodils twenty bulbs of each the Donard Nursery Co. were placed first, with a truly wonderful collection of mother bulbs. Messrs. R. H. Pearson were second. There were eight collections. In the Tulip class Mr. G. Monro, junr., was first, and Messrs. R. H. Bath second, both showing magnificent produce. For thirty varieties of bulbs and tubers, Daffodils and Tulips excluded, Messrs. Wallace were first and Messrs. Barr second, Mr. G. Monro, junr., being awarded first for an exhibit of market Daffodils in ten varieties.

FRUIT AND VEGETABLES.

Outstanding novelties in this section were Red Currant Laxton's Perfection, the finest Red Currant yet introduced, its glossy crimson-scarlet fruits in racemes of a score or more being a great attraction. Fruiting bushes of it also demonstrated its prolific bearing qualities. It is essentially a dessert Currant, though alike valuable for cooking. Plum Early Laxton (River's Early Prolific and Fraser's Early Yellow) shows a great advance in earliness. Both were shown by Messrs. Laxton Brothers, of Strawberry fame, and secured Awards of Merit. The new Black Currant "Blacksmith," also raised by this firm, is full of promise. Fruits of giant size, fine flavour, and abundantly produced, the variety appears to require no further recommendation. In short, it appears unique. A collection of upwards of a hundred varieties of

Gooseberries, gathered fruits, and single, double, and triple cordon trees, demonstrating how best to grow these fruits to attain perfection, was among the finer exhibits of a good meeting. No new variety was on view, though such high-class dessert varieties as *Langley Gage*, *Golden Gem*, and *Langley Beauty* will require some beating in this direction. These were well shown by Mr. J. C. Allgrove. From the Society's gardens at Wisley mid-season culinary Peas to the extent of a hundred varieties were placed before the Committee.

A complete list of the certificated plants and fruits, as also the list of medals awarded, will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM AUGUST 2ND. — *Arundo conspicua*, *Ceanothus* (in variety), *Buddleia variabilis*, *B. globosa*, *Spiræas* (in great variety), *Ozothamnus rosmarinifolius*, *Philadelphus* (late-flowering variety), *Rhus* (in variety), *Clethra arborea*, *C. alnifolia*, *Calycanthus floridus*, *Spartium junceum*, *Carpenteria californica*, *Metrosideros floribunda*, *Berberis Wilsoni*, *Colutea arborescens*, *Escallonias* (in variety), *Hydrangeas*, *Nandina domestica*, *Cistus ladaniferus*, *Andromedas*, *Hypericums* (in variety), *Jasminum affine*, *J. humile*, *Hardy Fuchsias* (in variety), *Honeysuckles* (in variety), *Clematis* (in variety), *Indigofera Gerardiana*, *Tricuspidaria lanceolata*, *Viburnum coriaceum*, *Deutzia scabra fl.-pl. purpurea*, *Olearia nummulariæfolia*, *Veronicas* (shrubby), *Bocconia cordata*, *Raphiolepis ovata*, *Forglives* (in variety), *Delphiniums*, *Phloxes* (in variety), *Helianthus*, *Verbascums*, *Helonium pumilum*, *Erigerons*, *Anchusas*, *Lavateras*, *Chrysanthemum maximum* (in variety), *Echinops*, *Eryngiums*, *Acanthus*, *Galegas*, *Centaureas*, *Tritomas*, *Romneya Coulteri*, *Achilleas* (in variety), *Aster Amellus*, *Ænotheras* (in variety), *Geums* (in variety), *Nepeeta Mussini*, *Lobelia cardinalis* (in variety), *Gazania splendens*, *Verbena venosa*, *Santolina viridis*, *S. alpina*, *Glossocoma clematidea*, *Heucheras* (in variety), *Aubrietias* (in shade), *Sedums* (in variety), *Convolvulus mauritanicus*, *Linarias*, *Sagina glabra*, *Oralis floribunda*, *Onosma tauricum*, *Tradescantia virginiana*, *Veronica Lyalli*, *V. candida*, *Androsace lanuginosa*, *Silene Schafta*, *Plumbago Larpentæ*, *Mimulus* (in variety), *Erinus*, *Primula capitata*, *Dianthus* (in variety), *Gentiana septemfida*, *Francoa sonchifolia*, *Banffia petræa*, *Æthionema coridifolium*, *Antirrhinum Asarina*, *Potentillas* (various), *Linums*, *Calceolaria amplexicaulis*, *C. mexicana*, *Salvias*, *Ageratum*, *Heliotropes*, *Petunias*, *Verbenas*, *Phlox Drummondii*, *Stocks* (in variety), *Antirrhinums* (in many colours), *Pentstemons* (in variety), *Tufted Pansies* (in many varieties), *Cosmos*, *Candytuft* (in variety), *Leptosiphons*, *Godetias*, *Clarkias*, *Alstræmerias*, *Canterbury Bells*, *Sweet Sultans*, *Begonias*, *Verbenas*, *Dianthus Heddewigi*, *Gladiolus* (in variety), *Hyacinthus candicans*, *Montbretias*, *Mignonette*, *Annual Larkspurs*, *Pelargoniums* (in variety), *Carnations*, *Campanulas* (dwarf and tall) (in many varieties), *Sweet Peas*, *Roses* (many species and varieties), *Lysimachias*, *Epilobiums*, *Solidagos*, *Lythrum roseum*, *Senecio Clivorum*, *S. japonica*, *Iris Kæmpferi*, *Sagittaria sagittalis*, *Water Lilies* (in variety).

THE WEEK'S WORK.—During the past week a great deal of time has been given up to watering, for, although deep-rooting subjects have not suffered, shallow-rooting plants quickly feel the drought. Many of the earlier varieties of Climbing Roses have ceased blooming. These are being overhauled and some of the old growths cut out to allow the young basal shoots to be retained in their places. There are usually many more shoots than are required, and the weaker ones should be cut clean away, retaining only sufficient of the stronger branches to furnish the allotted space. It is a mistake to tie in too many shoots, for unless they are ripened properly the results will not be satisfactory next

season. Sweet Peas have grown to an unusual height, and it has been necessary to afford extra support. Where the plants are in rows, stout poles were inserted firmly in the ground at intervals of a few yards, and a row or two of string stretched between them. Some of the old plants of Tufted Pansies (*Violas*) have been cut down to encourage young growth suitable for cuttings. From these plants good cuttings will be obtained by the end of the present month or early in September. Tufted Pansies may also be propagated at the present time by dividing the old plants and planting them in a border, but I prefer young plants obtained from cuttings. Cuttings of many plants put in a month ago into a bed of sand (as described on page 338) are now well rooted. We are now potting them up singly in small pots, using a sandy soil. After potting they are placed in a cold frame, which will be kept close and lightly shaded, spraying the plants twice daily until they get over the check of removal, after which they will be gradually hardened off.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Fruit garden.—The layering of Strawberry runners should now be brought to a conclusion. Those layered early in the month and which will soon be ready for severing from the mother plants must be kept well supplied with water. When first removed, it is best to place them close together in partial shade for a few days, after which pick out those required for pots and stand them by themselves. Potting should be done before the plants become pot-bound. The budding of stocks with suitable kinds of fruits may now be proceeded with. Trees grafted last spring should have the young growths made secure against damage from rough winds by tying them to bamboo canes lashed on to the branches below where the scions were inserted. In the case of wall-trained trees and espaliers this is, of course, unnecessary, as the shoots can be fastened either to the wall or wires. Red and White Currants trained on walls facing north should have all side shoots shortened to four buds and be securely netted to preserve the fruit from birds. The young canes of autumn fruiting Raspberries should be thinned out, dispensing with the weakest and retaining sufficient of the stronger so that when tied to the wires they stand about 9 inches apart. Cut out the old canes of the summer fruiters and burn them. Then thin out the canes of the current season's production, rejecting the weakest and those of medium strength, and tie to the wires the best and enough of the strongest to stand when finished about 6 inches apart. Where the old-fashioned method of growing them in clumps and tying the canes to stakes still obtains, from seven to nine new canes should be retained on each, and be loosely fastened to the stakes. Any thinning of fruit required in the case of Apples or Pears—which will certainly be the exception this year—should now have attention, leaving the best-shaped and such as are in a more forward condition as a matter of course.

Orchard-house.—Trees laden with fruit, such as late Peaches, Nectarines, Pears, Plums, and Apples, must be carefully attended to in the way of watering, as any neglect in this direction will lead to premature ripening and dropping of fruit. Judicious feeding, both with diluted liquid and artificial manure, is very necessary, seeing that the pots are so full of hungry roots, and a renewal of the mulch on the surface should take place as soon as that previously applied becomes exhausted. Until the fruit begins to ripen, the foliage needs to be copiously syringed morning and afternoon, and in the case of Plums the water used should be clean and free from lime, otherwise the fruits will be marked and their appearance spoilt. Free ventilation is necessary, especially when the ripening has to be retarded as much as possible, while to promote a cool and healthy internal atmosphere, both paths and the surface of the bed on which the pots are stood or plunged should be frequently damped in fine weather. Trees from which the fruit has already been gathered may be moved outdoors and stood on

a hard base and in full sun that the wood and buds may become the more thoroughly ripened. If boards are stood on edge in front of the pots—some loose litter will do equally as well—watering will need less frequent attention.

Pot Vines.—Canes required for forcing early next season should now be moved outdoors for the ripening of the wood and buds. A good position for them is the base of a hedge facing south, as the canes are then readily afforded the security and support they require to prevent them becoming damaged in any way while the sun has full play on the wood and buds. A wall answers the same purpose. In either case watering must be strictly attended to, but to lessen labour in this direction adopt the same measure for the prevention of undue drying out of moisture as recommended for orchard-house trees.

Pinks.—These should be propagated now either by the rough-and-ready method of planting tufts containing seven to nine growths with a portion of the old stem attached or by inserting cuttings or pipings in prepared soil and covering with handlights. For ordinary purposes the former method answers every requirement. For the working up of stock of a new or scarce variety the latter is the preferable mode.

Pentas carnea.—This is a most useful plant for indoor decoration during autumn and winter. The plants should now be shifted into their flowering-pots, 6-inch and 7-inch, and grown on in heat, frequently stopping the young growths until hushy specimens of the required size have been secured, when they may be allowed to flower.

Tuberous Begonias.—Plants required for autumn decoration and now coming into bloom require assistance at the roots in the form of diluted liquid alternated with a pinch of Clay's fertiliser. A light, airy position, shading them from direct sunlight, will now both suit their cultural requirements and prolong the blooming period. Any of the seedlings raised last spring, whether of single or double varieties, that are of exceptional merit should be labelled and taken care of.

A. W.

MIDLAND COUNTIES.

Peaches and Nectarines on a south wall are very backward and need more sunshine. It is necessary to frequently look over the trees, keeping the lateral shoots persistently pinched in at the first leaf. The fruits are fully exposed to light and air by removing a few of the leaves covering them, or fastening them back. Trees carrying heavy crops are assisted by an occasional application of liquid-manure. All shoots required for fruiting next season are carefully tied in, removing any surplus ones that have been overlooked in order to avoid overcrowding.

Apples.—Although early-summer pruning of the Apple is not advisable owing to it producing a profusion of sappy growths, the summer pruning of the bush, espalier, and similar trees that have their growth restricted should now be completed. In pruning, it is necessary that the operator knows the difference between ordinary wood growths and fruit-bearing spurs—i.e., short, sturdy growths which ultimately terminate with a fruit-bud. Some varieties of Apples, such as Jacob's Seedling, Irish Peach, Worcester Pearmain, and Cornish Gilliflower produce a great portion of their fruit upon this principle. The removal of such growths would consequently cause failure. On young trees sufficient terminal and other shoots to properly furnish them should be retained. Attend to the thinning of fruit where it is necessary, but in our case, except in the case of a few espaliers, it has not been necessary this season. Where aphid has been troublesome, the trees and their fruit will be benefited by being thoroughly washed with the garden engine.

Chrysanthemums will now be afforded a good top-dressing, first removing all weeds and suckers, and stirring the surface-soil with a pointed stick. A suitable top-dressing consists of good loam and horse-manure passed through a sieve, adding a 5-inch potful of bone-meal to every bushel of soil. See that the

ball of soil is moist before applying the top-dressing, and ram it firmly with a potting-stick. The shoots need to be regularly tied and made secure against wind. An occasional spraying with Quassia extract keeps aphid and other insect pests in check.

Pelargoniums of the show and fancy sections will now be pruned. Show Pelargoniums should have nearly the whole of the current year's growth cut away, but the fancy varieties must not be pruned so hard. In each case the grower must be guided by the shape of the plant. After the plants are pruned and cleaned they are placed in a cold frame, taking care not to crowd them. Lightly syringe the plants twice a day, but for the present give no water at the roots. The frame should be well ventilated.

Calanthes are now growing vigorously and require an abundance of water at the roots. They are afforded alternate waterings of liquid cow-manure. Many young roots are appearing on the surface of the compost. A thin layer of good fibrous loam will be laid over them, and into this they will quickly enter.

Malmison Carnations.—The one-year-old plants having passed out of flower are being repotted, giving each a good shift according to the strength of the plant. A suitable compost consists of good loam, a little mortar rubble, wood ashes, crushed oyster-shell, silver sand, and a small quantity of bone-meal. The pots must be clean and well drained, and the soil made very firm. After repotting, the plants are placed in a well-ventilated frame and carefully watered. The earliest layered plants will soon be ready for potting. It is a good plan to sever the layers from the parent plant a few days before potting. Pots 3 inches in diameter are a suitable size. The compost for these young plants should be the same as for the old plants, only omitting the bone-meal. Pot firmly, and keep the collar of the plant above the soil.

Cauliflowers.—The main crop, now turning in for use very fast, is of exceptionally good quality. Tie the leaves together directly a plant shows signs of developing a curd, in order to have the heads white and of the best quality. When it is found that they are coming into use too fast, some of the plants may be taken up and placed in a cool shed, where they will keep good for many days. There is still time to plant Cauliflowers for early winter supplies, selecting rich soil in a sheltered situation. If the variety Early London is put out now, the plants may be expected to yield heads throughout October. Fresh plantations of young Cauliflowers should be watered freely with liquid-manure and the ground between the rows stirred frequently. Late Broccoli, Kales, and winter Cabbage, as well as Savoys, may still be planted on ground cleared of Potatoes and other early crops. Give a slight earthing up to earlier-planted Savoys and winter Cabbage. The seedlings from the first sowing of spring Cabbage are now appearing, so a second sowing will be made. A sowing of Chervil will be made now, this being frequently in demand for flavouring during the winter months. As soon as large enough, the young seedlings are thinned out to about 6 inches apart.

Parsley.—Plants raised from seed sown a month ago are now ready for thinning. Those removed from the rows will be planted in a sheltered position, where they may be covered with box frames during severe weather. If the seedlings are planted at 8 inches apart they will have room to develop into good strong plants before the season is far advanced. Liberal supplies of water are afforded the roots, and when the plants have grown to a good size they will be cut close to the ground to encourage a stocky growth.

Leeks.—A further plantation of Leeks has been made to provide supplies next April and May. The plants are allowed a distance of 1 foot between the rows and 8 inches in the rows. Give plenty of clear water to the roots until they are established, and keep the soil loose by frequent hoeing. Leeks planted early in the season will derive much benefit from good waterings of liquid manure. Place a little soil around the stems as growth advances. The Leek is a cross-feeding subject,

and, unlike most vegetables, the largest specimens have the mildest flavour.

Endive.—To ensure a continuous supply, frequent small sowings will be made during the next four weeks. Plants raised from earlier sowings are put out as they become ready in rich soil on a site facing south-west, allowing a distance of 12 inches between the plants.

F. W. GALLOP.

SCOTLAND.

Plants for spring flowering.—In the course of the week a look round was given to the hardy border plants with a view to selecting such as may be of value for the greenhouse in the spring. The restrictions upon the importation of hulks will by many be felt, but there are many border plants which, if judiciously used, may be relied upon to give a good account of themselves, while, in addition, their use is a breakaway from the stereotyped flowers of spring. The Plantain Lilies (Funkias) of all kinds are amenable to cultivation in pots, and very hardy they are. These will stand a considerable amount of forcing, but need from the beginning to be lavishly supplied with moisture. *Dielytra spectabilis* and Solomon's Seal, as well as *Hoteia japonica*, are too well known in this connection to need more than a passing reference. The value of the Day Lily (*Hemerocallis flava*) for greenhouse work is less known. It is, however, a fact that good-sized clumps of this popular plant may be accelerated by placing them in a moderate heat. *Montheletias*, too, are, generally speaking, a novelty under glass. These will not endure forcing, but if grown quite coolly they are very much appreciated in the late spring. All of these I have used at one time or another for the purpose referred to, and with satisfactory results. Therefore, strong pieces were marked in order that no mistakes may occur when the time for lifting comes round. In addition to these things, there are, of course, great possibilities in the way of using Stocks, Wallflowers, Canterbury Bells, and Forget-me-not, so that, for once in a way, the loss of the usual batches of bulbs may be endured with equanimity.

Hardy fruit.—The weather having become warmer and brighter, progress is now being rapidly made. Raspberries, Strawberries, Red Currants, and White Currants ripening practically simultaneously, picking takes up no inconsiderable portion of the time, but is being persevered with as occasion permits. Naturally, the soft fruits are dealt with first. In the case of Raspberries, a considerable proportion of the crop is bottled. For this purpose the first berries are preferred, as they are larger, firmer, and altogether finer than those which ripen at a later date. The bottles are filled direct from the canes, and conveyed to the kitchen. Gooseberries are later than usual. Wall fruit, encouraged by the finer weather, is now going ahead, but here, too, the crops will be decidedly late. Apples are a thin crop, alike on walls and in the open, with the exception of a collection of young trees on the Paradise, which have fruited freely.

Present sowings of flower seeds may yet include such things as Pansies, Lupins, Canterbury Bells, Aquilegias, Hollyhocks, and supplementary sowings of Primulas, Calceolarias, and Cinerarias. In the case of Pansies, a cool, but not shady, place is to be preferred. Seedling Pansies are always very useful, their blooms being larger than those from plants propagated from cuttings. These blooms from seedling plants may not, of course, be of such high quality or so well marked as flowers from named varieties, nevertheless they are quite as good for general purposes. Tufted Pansies may also be sown. Some varieties, such as Primrose Dame, come quite true from seed.

Cleaning, etc.—With the more favourable weather conditions an effort was made to deal with weeds, which had become more prominent than is usually the case. All the available labour was concentrated on this work, and at the week's end everything was in a more satisfactory condition. It may be mentioned, in this connection, that the present week is the first one of the season in which the mow-

ing-machine had not to be taken off on account of rain.

Woodland.—During the week woodland walks received their usual annual clean up. Being overhung by trees, Grass and weeds are not very troublesome, and a thorough clean up about midsummer keeps the walks in pretty good order until the fallen leaves require to be gathered.

Shrubberies.—Foliage at the present time is more in evidence than bloom, and, owing to the dripping season, is more luxuriant than usual. At the same time there is a considerable amount of bloom. Fuchsias of different kinds are very free and showy. Veronicas, and especially *V. Traversi*, are in fine form, and the shrubby *Spiræas* begin to be telling. Among these, *S. ariaefolia* and *S. Bumalda* are noteworthy. Some large pieces of *Rosa rugosa* have bloomed consistently for some time. The Elders are in flower, the variety *rubra* being well worth attention. It is not such a pest as the common sort, which is grubbed out wherever it is noticed. *Coton-easter frigida* is full of flower, this auguring well for a profuse display of berries. The False Heath (*Fabiana imbricata*) still blooms, *St. John's Wort* and other odds and ends adding to the attractions of the shrubberies at this season of the year.

Vegetable garden.—All vegetable breaks have been thoroughly hoed. Potatoes are lifting well, much better than was anticipated after the backward weather experienced since the time of planting. Indications point to the second-early varieties being better than the early sorts, *Beauty of Hebron*, *Puritan*, and *Sir John Llewellyn* being remarkably promising, if haulm is any criterion. Parsley was sown, as was a bed of Carrots, and some lines of Prickly Spinach, and another line of Spinach *Ecet*, which is always useful in autumn, and especially so in spring. A further sowing of an early variety of Cabbage was got in. Lettuces were sown, and preparations were made for the forthcoming sowing of autumn Onions. More of these will be sown than is generally the case. They will be thinned as soon as possible, and the best of the thinnings transplanted. A few more Early *Ulm Savoy* and a final lot of Cauliflowers were planted. It is to be hoped that Peas and Broad Beans may now come away in response to the finer weather. Up till now, although pods are very numerous, they have not filled well. W. McGuffog.

Balmæ Gardens, Kirkcubright.

Royal Horticultural Society's Lindley Library.—The Lindley Library of the Royal Horticultural Society has been presented with a magnificent collection of books from the library of the late President of the Society, *Sir Trevor Lawrence, Bart., K.C.V.O., V.M.H.*, whereby many gaps which previously existed on the shelves are now filled. The volumes are beautifully bound in half calf, are all valuable, and in many cases rare. They bear a book plate inscribed: "Presented to the Lindley Library of the Royal Horticultural Society in memory of *Sir J. J. Trevor Lawrence, Bart., K.C.V.O., V.M.H.*, President of the Society from 1885 to 1913, by his children, 1916." Among the books may specially be mentioned:—"Coloured Engravings of Heaths," *H. C. Andrews*, 4 vols.; "The Naturalist on the River Amazon," *H. W. Bates*, 2 vols.; "The Flowers of Japan," *J. Conder*; "British Entomology," *J. Curtis*, 8 vols.; "Illustrations of British Mycology," *Mrs. T. J. Hussey*, 2 vols.; "Illustrations of Orchidaceous Plants," *T. Moore*; "Select Orchidaceous Plants," *R. Warner*; "Iconographie des Orchidées," *Lindénia*, 17 vols.; "L'Orchidophile," 10 vols.; "Journal des Orchidées," 7 vols.; "La Belgique Horticole," 35 vols.; "Revue de l'Horticulture Belge," 25 vols.; "Journal of Botany," 45 vols.—*W. Wilks*, Secretary, Royal Horticultural Society.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Madonna Lilies failing (*J. E. Longson*).—Your Lilies have no doubt been attacked by that terrible disease (undoubtedly of fungoid origin) which has destroyed this Lily in so many gardens in which at one time it used to do so well. Various remedies have been tried, but up to the present none of them seem to have given general satisfaction. Spraying the plants with a solution of 2 oz. of sulphide of potassium dissolved in 3 gallons of water has been recommended, at the same time removing any decaying foliage and burning it. Lifting the bulbs and shaking them up in a bag of sulphur have in some cases proved efficacious.

TREES AND SHRUBS.

The Poison Ivy (*Rhus Toxicodendron*) (*John Wyatt*).—This ought to be known to everyone who is interested in a garden, if only to know a plant that is well to avoid. It would really be a good thing if it were banished from gardens, for it is an extremely poisonous shrub and one which people who know nothing of its dangerous qualities would only be too glad to possess, for the ternate leaves assume brilliant hues in the autumn. The danger lies in the sap, which causes a kind of eczema, which has a decidedly unpleasant irritating effect, while bad attacks have been known to prove fatal. Some people appear to be immune from its harmful influence, while merely handling the leaves affects other people. A synonym which has misled many people is *Ampelopsis Hoggi*, under which name it is often found in nurseries and gardens. Needless to say, it has nothing to do with *Ampelopsis*.

FRUIT.

Peaches dropping (*K. F. Green*).—To imperfect fertilisation of the flowers may be traced the origin of the dropping of the fruit, and there is no remedy that can be applied to benefit the present crop. The vigour of the tree affords no solution of the difficulty because it is not the result of bad health, but rather the reverse. When Peaches are flowering it is never safe to trust to chance in the setting, for without artificial fertilisation the fruit may swell away for a time and then drop from premature softening accelerated by the unsound stone. Fresh-slacked lime applied in sufficient quantity to whiten the surface is a good remedy in such cases, applying it two or three times during the growing season. In the case of over-luxuriant growth, root-pruning, lifting, and placing the roots nearer the surface go a long way towards remedying the evil. Unripened wood will also cause the

trouble, while allowing the borders to get dry after the crop is gathered is also very often the cause of the trouble.

VEGETABLES.

Tomatoes not swelling (*A Reader*).—The cause of the fruits failing to swell is that the fertilisation was imperfect. In order to ensure this taking place the pollen should be distributed by passing the hand or a feather lightly, yet briskly, over each expanded truss of bloom about noon each day when the sun is shining and the atmosphere dry. Give as much air as you can, do not shade, and keep the atmosphere of the house dry. You are feeding too freely. Food given when the fruits are setting causes too much leaf-growth, and the flowers drop. Feeding is required only when the fruits are swelling.

MISCELLANEOUS.

Improving clay soil (*Miss Barton*).—In order to improve clay soil, such substances should be added as will render it more porous. Road grit, old mortar-rubble, wood-ashes, burnt vegetable refuse, leaf-mould, and fresh manure from the stable with plenty of straw in it are all good. The ground should be deeply trenched, and the bottom well broken up, mixing with it the materials above mentioned. You cannot expect any good results from such a soil unless you do this.

SHORT REPLIES.

A. M. Allen.—1, You may gather the pods as they ripen, or better wait until the pods and haulm are quite dry, then pull the haulm with the pods attached and thrash out, drying the seeds carefully before storing. 2, Dried Peas for winter use are saved in the same way. 3, The White or Green Flageolet are usually grown for their seeds, and are cultivated in the same way as the kinds the pods of which are used green. Allow the Beans to ripen thoroughly before pulling them, afterwards drying them and storing them.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*I. S.*—1, *Lysimachia vulgaris*; 2, *Astilbe japonica*.—*W. P. R.*—1, *Euphorbia Lathyris*; 2, *Linaria pallida*; 3, *Lonicera aureo-reticulata*; 4, *Alstrœmeria aurantiaca*.—*W. F.*—1, *Galega officinalis*; 2, *Agrostemma coronaria*; 3, *Sidalcea Listeri*; 4, *Scabiosa caucasica*.—*H. G.*—1, *Asclepias tuberosa*; 2, *Galega officinalis*; 3, *Matricaria inodora fl.-pl.*; 4, *Solidago Virgaurea*.—*M. A.*—1, *Lavender Cotton* (*Santolina incana*); 2, *Sidalcea candida*; 3, *Erigeron speciosus*; 4, *Campanula lactiflora*.—*S. D.*—1, *Sedum Sieboldi*; 2, *Fuchsia Riccartoni*; 3, *Salvia Horminum*; 4, *Olearia Haasti*.—*E. E.*—1, *Malope grandiflora alba*; 2, *Godetia Lady Albarle*; 3, *Platycodon grandiflorum*; 4, *Veronica prostrata*.—*E. S.*—1, *Phacelia tanacetifolia*.—*J. E. Kelsall*.—So far as we can judge from the flowers you send, the plant is *Sedum spurium*.—*T.*—1, *Linaria purpurea*; 2, *Campanula sp.*, should like to see fresher specimen; 3, *Lychnis Haageana*.—*Miss Ramsden*.—Cannot name with any certainty without fresh flowers.—*Morgan Williams*.—*Clarkia elegans fl.-pl.* *Salmon Queen*.—*Frank Hubbard*.—*Linaria pallida*.—*R. N.*—1, *Inula glandulosa*; 2, *Centaurea macrocephala*; 3, *Lathyrus rotundifolius*; 4, *Galega officinalis alba*.—*S. T.*—1, *Hypericum calycinum*; 2, *Deutzia crenata fl.-pl.*; 3, *Thalictrum aquilegifolium*; 4, *Chrysanthemum maximum*.—*J. P., B'head*.—So far as we can say without seeing the flowers you refer to, the yellow-flowered plant with dark spots is *Helianthemum formosum*.

Names of fruits.—*H. J. W.*—Apples: 1, *Keswick Codlin*; 2, *Beauty of Bath*.

Trial of winter-fruiting Tomatoes at Wisley.—The Royal Horticultural Society will carry out a trial of winter-fruiting Tomatoes at Wisley during the ensuing season. Seeds for trial (one packet of each variety) should be sent as early as possible to the Director, *R.H.S. Gardens, Wisley, Ripley, Surrey*, from whom the necessary entry forms (one for each variety) may be obtained.

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THE TRUE LAUREL AND THE EVERGREEN CHERRY.

In the passage printed below from a letter sent to the daily papers the Duchess of Rutland helps in the misuse of the terms often wrongly applied in gardens to two trees commonly grown.

Would it not be a becoming symbol of gratitude for what the Empire has achieved, of honour to the dead whom the Empire has given, and of living love and faith in the thousands of the sons of the Empire still fighting and dying with us and for us for the ideals which inspire us all, if wreaths of Laurel and Bay should decorate these statues on the coming August 4, the second anniversary of the declaration of war, when in one single moment of time the scattered Empire knew that it was one, and united for ever?

This is another instance of the blundering about names common with us. The true Laurel (*Laurus nobilis*), often wrongly called the Bay Laurel, is the noblest evergreen tree we have, and both Duchesses and Lady gardeners should be told to use for it its own classical name. By natives of our islands it should be doubly cherished, from its ancient associations and the fact we may enjoy its fine form in the open air, whereas in northern Europe it has to be protected, and hence its extensive use in houses and winter gardens in cold countries. Such are its claims, however, that it is grown to a vast extent for this purpose in the Belgian nurseries. All the greater reason why its one simple name Laurel should be used and the term Sweet Bay discarded.

Next as to its use in gardens. The name being wrongly given to a totally different tree has, to some extent, led gardeners and planters to neglect or make a poor use of it. The coarse Evergreen Cherry is, owing to the confusion of name, often put to do its work. That being a coarse grower, to keep it in bounds leads to acres of mutilated objects in pleasure-grounds, and much harm has come from the practice. A very good use is to form backgrounds of this beautiful tree, for which purpose it is better than the Yew, Spruce, and various other trees often used in this way, with the gain that, in its case, shaving or clipping is unnecessary. In all our southern counties near the sea and in mild situations it should be used. In the same districts groups are very effective in pleasure-grounds. In the colder northern districts, where the tree is not hardy, those who care for it

might well grow it in sheds or cool houses, standing it in the open air in the summer.

It is well to remember that the Laurel is, naturally, when grown under favourable conditions, a tree of 50 feet high or more, and that it will attain the same dimensions in warm valleys round our own coasts, which knowledge should prevent our regarding it as a mere shrub.

THE EVERGREEN CHERRY (PRUNUS LAURO-CERASUS).

This also is a noble evergreen tree, and it deserves a good name. Bringing in the word Laurel in connection with it at all is wrong. It is as easy to say Evergreen Cherry as Evergreen Oak. This is an important matter, and when we use the right name we separate it at once from the Laurel. It is a noble tree if well used, but it has hitherto been often misused, particularly where it had to be clipped. Its true use is seen when we have it in a bold, picturesque group in the pleasure-grounds or home wood. Its form is very fine if allowed to grow in its own way and not mutilated as it often is. It has a number of interesting variations, narrow-leaved and other forms, some of which flower in a very pretty way. As an evergreen in mixed woodland the Evergreen Cherry gives a fine variety of colour and form, and some shelter for birds.

W. R.

NOTES OF THE WEEK.

Spiræa arborea.—Long used to the effect of Lindley's *Spiræa* one could not well expect anything finer, but the above named has broader plume-like masses of flower. It is said to be the most tree-like of the group it belongs to, and is a native of China. Seen at Myddleton House, mid-August.

Blue Lactucas.—These, often known as *Mulgedium*, are very useful in half-shady places in shrubbery or the wild garden, giving masses of tall blue flowers when good blue flowers are scarce. The one to avoid in the garden, *L. alpina*, is a graceful, tall plant, but once get it into the garden it is impossible to get it out. I saw it lately at Myddleton House in various safe positions.—W.

Ceanothus Gloire de Versailles.—This, although a trifle later than usual, is now, July 27th, in flower. In some districts it may succeed in the open, but although the climate here is milder than the average it is necessary to give *C. Gloire de Versailles*

the protection of a wall. The late Mr. Jeffery planted this fine shrub in the open in Captain Hope's garden at St. Mary's Isle, but while it grew to some extent it could never truthfully be described as a success.—KIRKCUDBRIGHT.

Epilobium hirsutum Apple Blossom.—

It is interesting to seek good forms of our native wild plants, and this, so constant in its wild state in every wet ditch, never promised much, but a white form with pink buds has been found on the banks of the river Lea and proves a very pretty water-side plant. Seen at Myddleton House.

Roscea cautioides.—Either due to the character of the soil or because of some variation among the plants, *Roscea cautioides*, as seen in gardens, apparently varies in depth of colouring. It is, happily, proving hardy, and I have met with it doing well in several Scottish gardens both last year and this. On a grey stone moraine it is not nearly so pleasing as it is in the garden of Sir Herbert Maxwell, where, in a border with a background of greenery, it looked exceedingly pretty this summer.—S. ARNOTT.

Chionodoxa in light soils.—Few spring flowers are so beautiful as the *Chionodoxas*, which seem to thrive in almost any soil except heavy clay. This spring I was astonished to see how they were thriving in a small garden at Camberley (West Surrey) under some large Fir-trees. The owner told me a few bulbs were planted some five years ago and they had only been replanted once. They had been allowed to seed every year and had increased more than double. They did not appear to object to the Fir needles.—J. CROOK.

Ourisia coccinea.—I am always unwilling to question the views of Mr. Jenkins, but there are places where it is quite unnecessary to lift and divide *Ourisia coccinea*. I know gardens where it flowers well annually and where it is never lifted, but allowed to grow on year after year. In one of these gardens pieces from the original mass have been tried in other parts of the garden, but have always failed. Mr. Jenkins' advice is certainly worth following in many gardens, but it would not be successful in others.—S. ARNOTT.

Raoulia australis.—This is one of the dwarfiest as it is the most silvery of carpeting alpines, the whole plant, even at flowering time, not more than a $\frac{1}{2}$ inch high. Too close and dense growing, per-

haps, to admit of much succeeding well if planted beneath it, a good use may yet be made of it in the rock garden by planting it near others of distinctive leaf character by way of contrast. In this way colonies of such diminutive subjects may well play a part in any good rock garden. It does not object to a little shade, though given good soil it is more silvery perhaps in sun.—E. H. J.

The Cape Pondweed (*Aponogeton distachyum*).—This ought to have a small tank or pond to itself, as, after it has become established, it has an extraordinary way of monopolising everything and of crowding out its neighbours. I know of a large Water Lily pond which gave an immense amount of trouble owing to the *Aponogeton* in pools in a streamlet which flowed into the pond having seeded, the seeds being washed down to the pond, where they germinated. The pond had to be cleaned out, but not before some of the *Nymphaeas* had been choked up and destroyed.—S. A.

Tropaeolum speciosum in Scotland.—I once saw a cottager digging Potatoes in a roadside garden in Scotland. The hedge next the road was scarlet with the flowers of *Tropaeolum speciosum*, and the thick white roots came up along with the Potatoes. "What will you do with these roots?" I asked. "Throw them away," was the laconic reply. I asked for some, which were willingly given—an awful almost. "Now," said the donor, "be careful' whaur ye pit it—it's the worst weed ye can ever get into a garden." And so it seemed to be there, and in other places northward, but with some it is one of the most capricious and stubborn of plants.—T.

Grinum Powellii and C. P. album.—A border of these bold bulbous-rooted subjects has for a long time past been providing a feast of flowers beside the economic house at Kew. Tall shafts of 5 feet or so high by the score—almost the hundred—could be counted, and remembering the succession of buds that such would carry the display has been one of long duration. The white form is particularly good at the moment, and if of somewhat dwarfer stature its lovely pure white bells are of giant size and of exceptional quality. Hardy and free-flowering, no bulbous-rooted subjects are possessed of a finer presence than these when rightly placed.—E. J.

Campanula grandis.—During the last half of June and early July this has made a fine show in many gardens on our poor Camberley soil. In a garden near me there is a big group many feet across in full sun. This was a mass of colour, the flower-stems 3 feet to 1 foot high. In the autumn of 1914 a few small plants were planted a foot apart. In another garden I saw it doing well amongst the Grass in a portion given up to bulbs in spring. This gave me the idea of its value to give colour in rough Grass after bulbs are over. In a cut state it is most enduring. I cut some when just opened, placing them in my sitting-room, where they looked well and lasted for some time.—WEST SURREY.

Orange Lilies and Larkspurs.—What charming effects can be made in the garden at this season with these plants alone. The contrast of colour as well as form is perfect. The tall purple spires of the Delphinium group beautifully with the spreading flat heads of the rich orange-yellow Lily. Here, then, are two common and inexpensive plants capable of producing striking and pleasing effects for a few weeks at this season. Those who contemplate planting groups of hardy flowers this autumn should not forget to

plant in proximity several plump bulbs of the orange Lily and strong clumps of the best sorts of Delphinium. Plant in good, deep, well-trenched soil, manure well the Larkspurs, and in the second season there should be an array of bloom as attractive as one could wish for.

Delphinium Queen Mary.—This was one of the most beautiful new Larkspurs at the Holland House Show, where Messrs. Bunyard grouped it on a lavish scale. The flowers are sky-blue with white centre, almost identical in colour with those of the old *Belladonna*, the flowers thrice as large and bearing some relation to that variety in the freedom with which its flower-spikes are borne.—E. H. J.

The Plum crop.—In a recent issue enquiries were made as to this crop. In this part of West Surrey the Plum crop may be described as fairly good, especially of such kinds as *Victoria*, *Early Prolific*, and others of this type. In my own garden trees of these have heavy crops. On one or two trees more than half had to be pulled off before stoning, although the trees are in an exposed position and had a big crop on them last season. I have a nice bush tree of *Kirke's* which blooms abundantly every year, but never gives more than a dozen fruits, while *Pond's Seedling*, by its side, bears well. I have seen *Kirke's* on bush trees at *Marriott's Nursery*, in Somerset, carrying enormous crops.—W. SUREY.

A Lily from the leaf.—Some six years ago, when I was living in Hampshire, I grew *Madonna Lilies*. I observed one day that one of the leaves was partially buried in the surrounding soil. On freeing it I noticed a tiny bulb like a pearl had formed at the end of the leaf. I watched it till the pearl grew to the size of a Pea, and the Pea grew to the size of a marble. Then I severed the bulb and potted it, and now it is blooming for the first time after all these years. Propagating by leaves is a known thing, but the growth of a bulb from a leaf seems unique and unusual, which is the reason I am sending you an account of it.—Mrs. E. Towgood, *Okhampton, Devon*.

[The growth of a bulb from a leaf is not at all unusual, the *Gloxinia*, *Sireptocarpus*, *Begonia*, to only mention a few, being easily increased from leaves. We have never heard of the Lily being increased in this way.]

Campanula arvensis.—Only those who have grown and flowered this unique Spanish Bellflower with some measure of success can form an adequate idea of its beauty and worth. Four inches or so high, and at its best in July, when covered with a profusion of its violet-blue or purplish flowers, it is quite one of the gems of a race which owes much to the miniature or alpine section of the genus. In flower character it may not inaptly be referred to a larger, freer-flowering, and more vigorously-inclined *C. Waldsteiniana*, to which must be added its more intense violet-blue colour. The leaf character, too, is quite distinct, green in that under notice, and with basal leaves varying from roundish cordate to almost Ivy-leaf form. Those of the other kind named are longer and of a glaucous tone, the plant smaller in all its parts. Of its perfect hardiness I am not yet quite sure, a goodly plant succumbing last year rather suddenly, probably, however, from some cause other than cold. Rich soils doubtless would be opposed to success, and moraine treatment, or poor, stony and gravelly soils, in which such as *C. cenisia* delights to ramble, would suit it better. It has also been called *C. acutangula*.—E. H. JENKINS.

VEGETABLES.

WINTER CUCUMBERS.

THESE are not in such demand now as was at one time the case, but where necessary to grow them the matter should now receive consideration. A house partly sunk in the ground, provided it is well heated, answers better for the purpose than one standing entirely above ground, as there is a much less loss of heat in cold weather, while structures of this description can be conveniently covered at night either with mats or canvas for the conservation of heat and economising of fuel. Before the plants are taken in, the house should be thoroughly cleaned, and if there is an old fermenting bed of leaves this should be cleaned out beforehand, as the space so occupied will be required for the making up of a new one when leaves become available unless a sufficient quantity left over from last year is in reserve. The leaves are, of course, to supplement and not to supply bottom-heat entirely, as a good quantity of hot-water piping laid in a brick chamber should be in existence beneath the bed. Before the new bed is made up the brickwork should be thoroughly limewashed.

Winter Cucumbers succeed best when grown in large pots. These should have their rims on a level with the surface of the bed, and to prevent them moving out of position it is best to stand them either on loose bricks laid one above the other or on inverted flower-pots before the bed is made up. Grown in this way the roots of the plants are well under control, and in due course, when the pots are full to the rim with compost, they can then be encouraged to root over the sides if suitable compost is placed above the rims and around the pots on the surface of the bed. If the house is not at liberty no time should be lost in getting the requisite number of plants of an approved free-cropping variety raised. Set out in good time, they will then bear in late autumn and throughout the winter, or until the January-raised plants come into bearing.

G. P. K.

NOTES AND REPLIES.

Peas failing.—I shall be glad if you can tell me what has made my Peas go off like this. They came up beautifully green and looked as though they were going to be a good crop. But they soon went yellow and died from the roots upwards during the damp weather we have had, the Peas becoming shrivelled before they were full. The gardener thinks there is some disease near the roots, and I shall be glad to know what may have caused it.—EVERS.

[The plants submitted have succumbed to an attack of the Pea blight (*Brachypisum pisi*). The only thing we can suggest in the way of a preventive is to dress the ground in future where Peas are to be grown with a soil disinfectant, of which several are advertised from time to time in our columns. If the attack could have been caught in its initial stage spraying with Bordeaux mixture would in all probability have killed or prevented its further development. This is a soil fungus of which but little is yet known.]

Thrips on Peas.—A row of Prince of Wales Pea, which is well above the normal height, looks quite healthy and has cropped abundantly. A good many of the pods are affected as enclosed, which appears to prevent them filling properly. My Peas this year have had no manure except a dusting of superphosphate at sowing-time, and never looked better. What is the cause and cure?—BENJILL.

[The Pea-pods are affected with thrips, a destructive pest which extracts the juices from the pods, which, in turn, prevents the Peas from developing. Unless

taken in hand directly the insects put in an appearance, remedies are of little or no avail. If the attack is not very general you may possibly save part of the crop by syringing the plants and pods at once with Quassia extract. This must be repeated daily until there are no further signs of the insects present.]

Planting vegetables in August.—Will you kindly tell me if it is too late to do anything with a kitchen garden the middle of August? I move into a new house then, and would like to know what vegetables I could put in.—**PRIMROSE.**

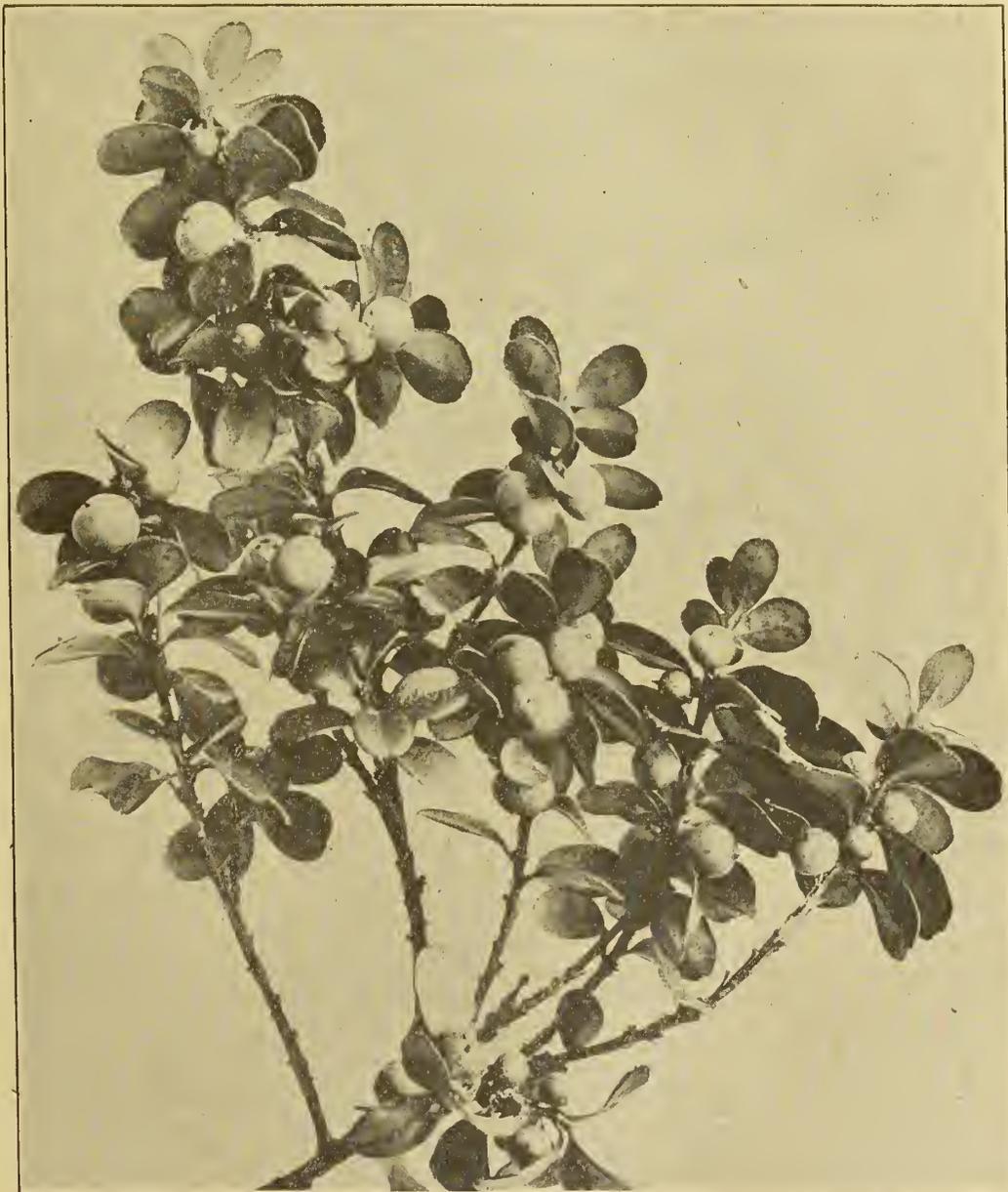
[It is not yet too late to plant your gar-

Mammoth, Penzance, Vanguard, Spring White, Leamington, Reading Giant, Safeguard, Late Queen, Model, and Latest of All. A selection from these will give you a regular supply up till June. The useful and hardy Sprouting Broccoli should be included, and do not omit to plant three or four different kinds of Kale, which are hardy and furnish a very wholesome article of diet from January till April. You would also be well advised in planting a good number of Cabbage plants of a suitable variety for spring cutting, such as Early April or Flower of Spring. These should be set out as soon as procurable on

TREES AND SHRUBS.

MYRSINE AFRICANA.

This interesting evergreen shrub is widely distributed in the higher regions of East Africa, in South Africa, the Himalaya, China, and other countries, but it is not generally hardy in the British Isles, although there are many places where it may be expected to give good results. It is quite at home in Mr. Messel's famous garden of rare plants at Nymans, Sussex, where it both grows and fruits well. Never growing very tall, it may be found



Myrsine africana in fruit. Nymans.

den with vegetables. No doubt you can yet obtain plants of Autumn Giant and Walcheren Cauliflowers, Autumn Protecting and Michaelmas White Broccolis, which will carry through to the end of the year. Then of the Cabbage tribe there are Cabbages of varieties such as Nonpareil, Enfield Market, and London Rosette Colewort. The last can be planted from 12 inches to 15 inches apart each way. Savoys must not be omitted. Of these there are Earliest of All, Drumhead, and the late variety of the latter. Of Broccoli for winter and spring supply varieties are numerous, reliable kinds being Winter

a well-manured and sheltered plot of ground 15 inches to 18 inches apart each way.]

Asparagus.—As Peas are now plentiful, cutting must cease for the season. Attention must, however, still be directed to the keeping of the beds clear of weeds and affording stimulants at intervals to ensure good results in future.

Tomatoes in the open are very late, but the crop has greatly improved since the advent of fine weather, especially in the case of those on south walls and buildings. Remove all surplus growth that the fruit may be exposed as much as possible.

under a foot high or it may exceed 3 feet in height, with a rather dense system of thin, twiggy branches covered with small oval leaves. The green and inconspicuous flowers are borne in the axils of the leaves, male and female blossoms appearing on different plants. The female flowers are followed by small berries, which are purplish in colour when ripe and very attractive, reminding one somewhat of small berries of *Pernettya mucronata*. The neat habit of this shrub makes it a suitable subject for the rock garden, where it should be given a sunny position in light loamy soil containing a

little peat. In places where it cannot be grown in the open it will probably prove a success if planted at the foot of a low wall with a south or west aspect. D.

THE SUMMER AND AUTUMN-FLOWERING HEATHS.

Few more beautiful sights can be imagined than wide, Heath-clad hills and moorlands from July onwards to the end of September. Although wild, Heaths may be brought into the garden, where they will continue in good condition for many years, giving little trouble and producing a lavish display of flowers each year.

Planting in formal-shaped beds should be avoided, and if an area of ground in a semi-wild part of the garden or park can be given up to them so much the better. They need not be isolated from other vegetation, but their associates should be such as will harmonise with them and their surroundings. Patches of French Gorse (*Ulex Gallii*) are very effective when interspersed with Heather and Ling, and the results of such combinations are well seen in the southern counties, more particularly around Bournemouth, where the Gorse forms compact, tussock-like patches, perfect masses of gold, amongst the Heather. The Bilberries are also good associates, as are also trees of such species as common Birch, Holly, and Scots Pine, arranged in irregularly-shaped clumps with occasionally an isolated specimen. Here and there, on the outskirts of the Heaths, patches of Wild Thyme may well be allowed to grow, whilst masses of the dwarf Scotch Rose are also in keeping. Pure garden plants, however, such as ornamental-foliaged trees and variegated-leaved Hollies, must be avoided, for they are quite out of place amongst natural surroundings and native plants.

Heaths are not difficult to cultivate provided they are given soil moderately free from lime. They are popularly thought to require peaty soil, but peat is not essential. Very good results are obtained by removing the coarse herbage from the ground to be planted, then spreading over the surface a layer 3 inches deep of decayed leaves or peat, afterwards digging the ground over one spit deep. Light loam is better than soil of a heavier nature. Plants can be raised from seeds, cuttings, or layers. The layers usually take two years to root, branches of old plants being buried in fine soil and kept in place by means of stones. Cuttings are taken during July and August and inserted in pots of sandy peat placed in a cold frame or in firm soil under a hand-light out-of-doors. Seeds are best sown indoors in February. After Heaths have bloomed it is a good plan to go over them and remove the old flower-heads, this improving their appearance and keeping them compact.

ERICA CINEREA is the commonest Heath in the British Isles. Under normal conditions it grows from 6 inches to more than a foot in height, and bears its reddish-purple flowers freely over a period of quite three months. Under cultivation variations have occurred in habit and colour of flowers. Some distinct forms have been given varietal names, *alba*, *rosea*, *atropurpurea*, *coccinea*, and *rubra* being very beautiful.

E. CILIATA, though less conspicuous than the last named, is abundant in some places. It forms very long, slender branches, lying close to the ground, from which erect flowering shoots spring. The flowers are rosy-red, rather large as hardy Heath flowers go, and borne in racemes for at least three months. The

variety *Maweana* is a great improvement on the type. It is of erect habit, with shoots each 9 inches to 12 inches long, bearing terminal heads of large red flowers from July to November.

E. TETRALIX (the cross-leaved Heath) is found almost throughout the country. It grows from 9 inches to 12 inches high and bears terminal heads of rich rose flowers. In one variety the flowers are white and in another pink. *E. Watsoni* and *E. Mackayi* are considered to be hybrids between this species and *E. ciliaris*. Both bear reddish flowers.

E. STRICTA is the tallest-growing of the summer and autumn-flowering Heaths. Under the most suitable conditions it may grow 8 feet high, though it is more familiar as a bush 3 feet to 4 feet high. The branches are erect and wiry, the flowers rose, and borne in terminal heads in July and August. A native of S.W. Europe, etc., it is hardier than other species from that region, and grows well in Derbyshire at an elevation of 1,000 feet or more.

E. VAGANS is better known as the Cornish Heath. Of vigorous habit, it forms a spreading bush 1½ feet high, bearing long, cylindrical racemes of pale pink or white flowers, according to variety, from August to October. It is common in south-west Cornwall, where it covers many acres. The variety *alba* has white flowers, whilst *rubra* and *grandiflora*, two excellent varieties, bear red and pinkish-purple flowers respectively.

E. MULTIFLORA, a native of S. Europe, is closely related to *E. vagans*. The rose-coloured flowers are borne freely from July to October.

CALLUNA VULGARIS, the common Ling, is usually associated with *Erica cinerea* in a state of Nature, and may occur in a variety of conditions, from a dwarf, Moss-like plant scarcely 1 inch high, to a tall, spreading bush 3 feet in height. It is easily distinguished from *Ericas* by the arrangement of the leaves, which give the stems an angled appearance. The pinkish-purple flowers are produced freely from July to September, August being the best time. As they are very productive of honey, bee-hives are often carried out to areas where the plant is common. There are numerous varieties with colours varying considerably in shade. *Alporti*, *rubra*, and *coccinea* are three of the best reds; good whites are *alba*, *alba Serlei*, and *Hammondii*; *euprea* and *aurea* have copper-coloured and golden leaves respectively; *argentea* has silvery leaves, and *minima*, *Foxi*, and *pygmaea* are of dwarf, compact habit. The branches of the tall-growing forms are often used for thatch for summer-houses, fruit-rooms, etc., and are excellent for the purpose.

DABECIA POLIFOLIA, called St. Dabec's Heath and the Connemara Heath, is another very useful relative of the ordinary Heaths. Found wild in Ireland and Western Europe, it forms a spreading bush 1 foot to 2 feet high, and bears erect racemes of large, urn-shaped flowers, which in the type are reddish-purple. There are also white and bicolor forms. Flowering commences during late May and continues through summer, but the most brilliant display is usually reserved for September. It is an excellent plant to include in the Heath garden, for it is at the same time attractive, and few shrubs have a longer period of beauty. D.

Zelkova serrata.—*Zelkova serrata*, or, as it is more generally known, *Z. keaki*, *Keaki* being the Japanese name for this tree, is one of the important trees of Japan. Although no longer very common or of a large size in the Japanese forests, it is

one of the largest of Japanese trees, for specimens 100 feet high, with trunks from 8 feet to 10 feet in diameter, are not uncommon in temple gardens and by village roadsides. The wood is more valued by the Japanese than that of any other tree; it is tough, elastic, and durable both in the ground and when exposed to the air, and is considered the best building material in the Empire. *Keaki*, however, has now become so scarce that it is not used for building except in temples in which the large, round, light brown, polished columns which support the roof are always made of this wood; it is universally used in the manufacture of *jinrikishas*, and it is still much employed in cabinet-making and turnery.

PLANTS AND FLOWERS.

INDOOR PLANTS.

THE HONEY PLANT.

(*HOYA CARNOSEA*.)

Would you please name the enclosed specimen and also tell me what is the best compost to use for growing same. Does it require to be fed during growth? If so, what kind of manure should I use? How should I strike cuttings of same, and what kind of compost? Please give cultural hints.—LANCASHIRE LAD.

[This is the name of the plant flowers of which you send. The best soil for this plant is peat with a small proportion only of yellow loam (about one-sixth). The peat should be full of fibre, so also should the loam, the finer or dusty particles in both instances being cast aside, for this plant does not thrive for any length of time in a close or retentive soil. To the peat and loam should be added some charcoal broken up to about the size of nuts, or in lieu thereof some clean, broken potsherds would be a good substitute, the object in either case being to aid in keeping the soil porous. Silver sand also should be freely added. In potting take particular care to pot firmly, as by so doing the soil will remain much longer in a condition favourable to healthy root-action. For a time after potting some considerable care should be taken in watering so as not to sour the new soil. At no time is *Hoya carnosa* a moisture-loving plant as compared with the average run of plants. Before it is watered it should be seen that the soil is fairly on the dry side. The extreme of drought should, of course, be avoided. The leaves should not at any time become soft or flaccid. Rather more water will be required when new growth is being made both at the root and in the atmosphere, with an occasional dose of weak liquid manure. A sunny, warm position from the spring onwards will do much to encourage flowering. As young growths proceed do not tie the shoots to the older wood, but allow them either to trail about or train them upwards on small strings. In potting, be careful to use clean or new pots, also drain the pots liberally. If it be practicable we should advise that your plants be planted out, using the same soil as in potting, only in a considerably rougher state. Under this treatment the plant would, if favourably circumstanced, grow more freely, and in all probability flower sooner if not eventually so profusely. A deep border would not be needed, but this and many other plants enjoy an extended root-run. *Hoya carnosa* is a very good plant for training on a wall; grown thus, if the wall be a little damp, it will, Ivy-like, root into the wall. It has a tendency even to throw out these roots under pot culture. When the flower-trusses eventually appear do not cut them, for the same trusses will go on

flowering continuously for several years at least once, and often twice, the same season; thus it will be seen that cutting the trusses robs the plant of much of its beauty. It is easily increased from cuttings inserted in any open soil and plunged in a moist heat.]

NOTES AND REPLIES.

Hydrangeas losing their leaves.—Kindly tell me why my Hydrangeas in pots all lose their leaves? They turn yellow and drop off.—MRS. A. LONGFIELD.

[You say nothing as to the treatment your Hydrangeas have received, but we have little doubt that starvation is the root of the trouble. It may be from the pots being crammed with roots or from want of water, perhaps the two combined. Again, if the plants have been grown in a somewhat close and shaded structure and from that have been turned out where fully exposed to air and sunshine many of the leaves may, from the altered conditions, turn yellow and drop. In the case

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SAXIFRAGA COCHLEARIS MAJOR.

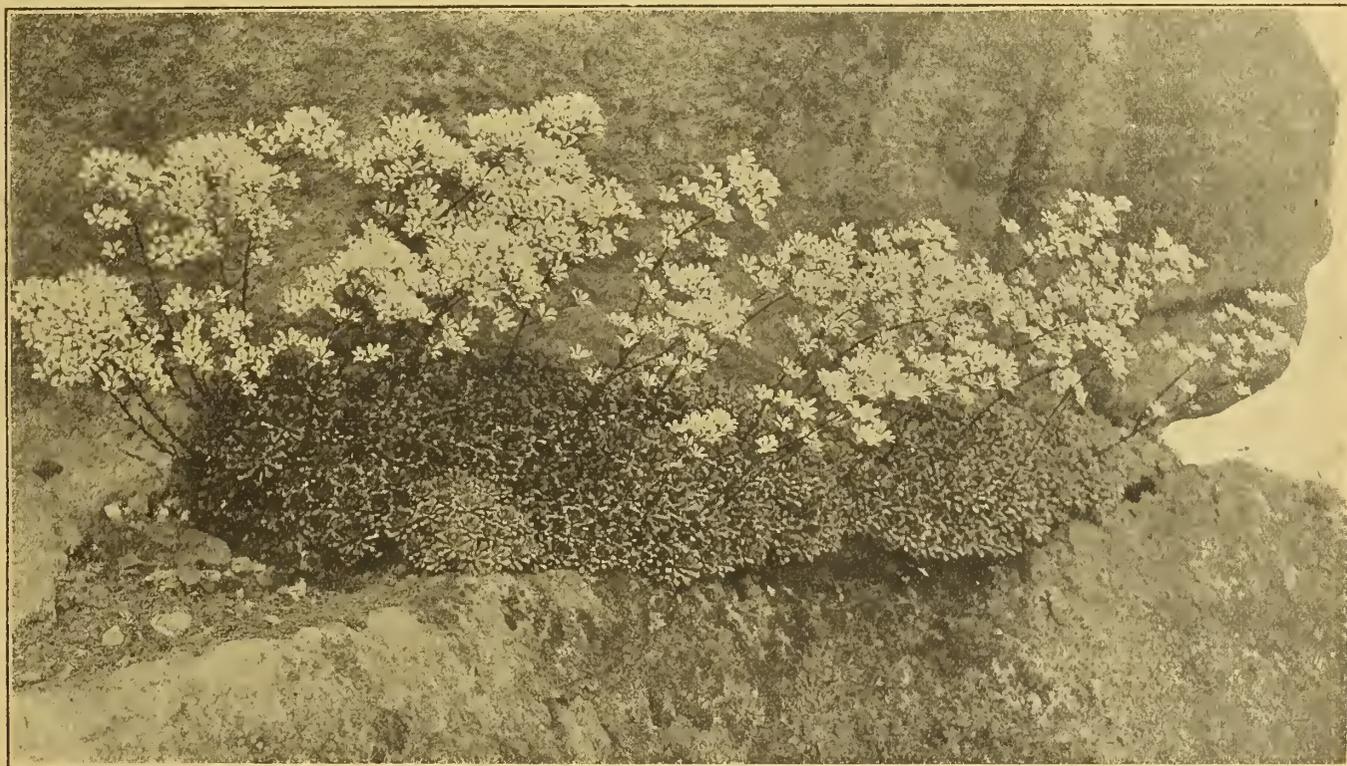
There is a nobility about this Saxifraga when in flower that distinguishes it from the majority of dwarf alpine plants. From a rosette not much bigger than half-a-crown is thrown up a foot high densely-branched flower-spike with about 100 pure white blossoms. The varietal term major is frequently applied without much reason, but in this case the type pales into insignificance by the side of the larger form. The accompanying illustration very faithfully depicts this fine Saxifrage and shows its decorative value when massed. For some years I grew the type under the name of major, and it strikes me that my experience is no uncommon one. I fancy that the majority of alpine plant growers are not aware of the existence of this major form, and as I got my plants in the first instance from a noted firm it is evi-

into which it can root and renew its vigour. After blooming the flower-heads should be sheared off at once to keep it in good health. There is a pretty white variety which, however, is not so vigorous as the type, and the foliage is of a lighter green. It is a precious plant even when out of flower for its beautiful carpet of tiny green leaves, which are pleasantly fragrant.

N. L.

THE ROCK NAVEI-WORT.
(OMPHALODES LUCILLE.)

This exquisite alpine has always ranked high among rock garden subjects, and one whose beauty must be seen to be realised, since no word picture could adequately portray its charm. Indispensable as it is to every good rock garden, it requires to be grown with the greatest care, keeping an incessant watch for slugs, which are almost sure to find it out. Just now it is in good condition in two opposite positions at Kew, one group receiving the morning sun the other the afternoon sun with



Saxifraga cochlearis major.

of Hydrangeas, if the pots are well furnished with roots an occasional dose of liquid manure or some other stimulant will be beneficial. As Hydrangeas are so easily grown your plants must have been sadly neglected in some way or other, but to what cause their ill-health can be assigned a personal inspection of the plants is absolutely necessary in order to give a positive opinion.]

Repotting.—The present is a very good time to repot Dracenas, Aspidistras, and Palms. Except, however, in the case of smaller specimens, repotting is not absolutely essential every year for the welfare of these plants. When it is needed there should not now be further delay, for with the advancing season root-action diminishes and the soil is apt to turn sour before they take possession. For potting Palms, if a good dark loam is available peat can be dispensed with. A little leaf-mould and sufficient sharp sand are necessary. Let the drainage be thorough, and pot firmly. Care is needful in watering, too much moisture leading to the collapse of the plant, while insufficient supply leads to the tips of the leaves turning brown and unsightly.

dent that some trade growers do not know it. The variety minor is very much smaller, not much bigger than cristata. It is a dainty little thing, but has not the stamina of the typical and major forms.

J. CORNHILL.

THYMUS SERPYLLUM.

This lovely native species is making the rock garden bright just now. The form usually grown is *T. Serpyllum coccineus*, a bright crimson, but the pink blossoms of the wild type are almost as nice, and both forms flower so profusely as to practically hide the foliage. It is one of the first rock plants I had, and I think it is still one of my favourites. It is of the easiest culture and will grow anywhere, either in sun or partial shade, provided the soil is light and fairly dry. It prefers soil of a calcareous nature, but is not at all particular in this respect. It is of rambling habit and likes to root as it goes along, hence it is not so suitable for hanging over a rock as for running along a ledge or down a wall which has plenty of crevices

shade at other times. As the plants of both groups appear equally happy, position might be regarded as not counting for much, though I look upon some measure of protective shade—as opposed to full exposure—during a part of the day as desirable. As to soil, I have usually had the best success from growing it in about equal parts of loam and peat, with fully a third of finely-broken brick and some sand intermixed. In short, a sparse-rooting subject always, perfect drainage appears essential.

Doubtless many during the last few years have given this unique subject moraine treatment, and the assured moisture during growth, with complete drainage at other times of such treatment, while going far to please it, should also assist to keep the slug at bay. Forty or so years ago the late Mr. James Atkins grew the plant to perfection in a small rockery at Painswick, the plant running about with considerable freedom in a rather low-placed position, which I also remember was mulched with slate chippings.

The soil was loam mingled with the magnesian limestone of the district, which suited many plants well. Given healthy, well-established specimens, it is not difficult to grow, though it is not one which the cultivator can do just what he pleases with. Disliking manure, which would appear altogether too gross for beauty so refined, it is fastidious also in the matter of moving and dividing established examples. Late in the year—September or after—is almost always fatal to success, and division, difficult at all times, and attended with uncertain results, should only be attempted in spring with the on-coming growth. Cuttings secured with a heel about the same period may also be rooted, though they require much care. Best of all ways of increase is by seeds, though a certain percentage of the seedlings, losing the soft, glaucous grey which characterises the original, appear with leaves of a pale-green tint. At flower time the soft grey, glaucous leaves, sky-blue flowers, and pinky buds form a pretty contrast. The "Dictionary of Gardening" gives 1873 as the date of its introduction from Asia Minor, etc. In that or the previous year, however, I saved a quantity of seeds from an established plant, hence I imagine a slight error exists.

E. H. JENKINS.

HYPERICUMS FOR THE ROCK GARDEN.

THESE are particularly welcome because they bloom in August, when, except for Campanulas and a few other species, the rock garden is getting bare of flowers. They are generally of very neat growth and seem for the most part to like a dry and sunny position. *H. Coris* is one of the neatest, making a pretty little miniature bush with tiny Heath-like foliage, crowded with little yellow stars of blossom. It is very happy with me in an exposed position in gritty soil. *H. polyphyllum* is a much more spreading plant, with long, almost prostrate, stems and large yellow flowers, with the usual big bunch of stamens in the middle. It succeeds in similar conditions to those that suit *H. Coris*. So does *H. olympicum*, which is somewhat smaller in flower and less spreading in growth, and with more glaucous foliage. Both this species and *H. polyphyllum* are readily propagated by layers or cuttings. *H. Coris* also strikes easily from cuttings. *H. reptans* is one of the choicest species, and this likes a partially shaded position where it can trail over rocks. Its flowers are more solid-looking than in the others, and remind one of a miniature *H. patulum*, as the flowers of *H. polyphyllum* suggest a very small edition of those of *H. calycinum*. *H. humifusum*, a native of this country, is a neat little trailer with small yellow flowers, and other good species are *H. repens*, *H. fragile*, and *H. cronulatum*. All can be propagated from cuttings.

H. Moserianum is a much bigger thing; in fact quite a shrub, but dwarf. It has very handsome, deep yellow flowers of good substance, and looks very well in the bolder parts of the rock garden. It seems a little tender if planted on the flat in ordinary loam, but grows very well with me on the lower part of a big retaining wall in dry, sandy soil, and is very easily kept within bounds by judicious cutting back in the spring. It is a hybrid between *Hypericum calycinum* and *Hypericum patulum*, and the flowers are almost as large as those of the former species, but of a deeper yellow and of a more solid texture. It flowers very freely and is quite one of the handsomest of the larger species.

N. L.

GARDEN FOOD.

THE TOMATO.

WE can remember the time when the Tomato was little known or liked, and yet to-day it is admitted to be one of our most useful and acceptable fruits of the sub-acid kind. Its peculiar nature makes it readily adapted for use, raw or cooked, and it is treated by some cooks as if it were a vegetable and by others as if it were a fruit. The Tomato is, in warm countries, best eaten raw, being useful either as a food or thirst-quencher. Eaten with brown bread and butter it makes an excellent form of sandwich. As a blood cleanser the Tomato, in our opinion, has no superior. It is purifying to a degree and has a tonic action on the liver that is most gratifying to those troubled at times with that organ. We have often thought, as we have read of places where Society meets for certain fashionable cures, that a Tomato cure, to be carried out at one's own home when the fruit is at its best, would be worth much more than some of the vaunted places of resort either in this country or on the Continent.

For those who prefer the Tomato cooked there is an abundance of forms available. As a salad in warm countries its use is frequent, as in America in summer. This vegetable is now in popular use in our country, judging by the excellent supplies of it in markets everywhere. The prejudice against it has died out to a great extent, and its excellent uses are acknowledged everywhere. With the Italian and Spanish cooks it is, of course, a most important aid, and therefore we consider it from that point of view, but it is even more important to consider its uses in the uncooked state. In all hot countries it is, perhaps, the greatest aid to the making of salads which people have, and its use in that way ought to be encouraged.

— The Tomato is easily cultivated. All who possess a garden with a moderate amount of glass can grow it successfully through the summer and autumn months, and in many localities it is possible to grow it satisfactorily in favourable seasons entirely in the open. However well Tomatoes may be grown in the open they always lack that high finish which they attain under glass, and without an average amount of sunshine it is certain that the work will be doomed to partial failure.

CULTURE UNDER GLASS.—Seeds should be sown thinly in well-drained pots or pans filled with a mixture of equal parts of good fibrous loam and leaf-soil, adding sufficient sand to ensure porosity. If the soil is in a medium state of moisture water will not be required before the seeds germinate. When it is needed, immerse the pots in a vessel of tepid water and let the moisture soak the soil from the crocks to the surface. Place the receptacles in a shady corner of a warm house. As soon as the seedlings appear place as near to the glass as convenient, and allow all the light and air possible to reach them. As soon as the seedlings are large enough to handle transplant them 4 inches apart into shallow boxes, afterwards potting them singly into 3-inch pots, using a compost of loam two parts, leaf-soil one part, and old Mushroom-manure and sand one part. Repot into larger pots as soon as necessary. A moderate temperature and a dry atmosphere suit the plants best. A close, moist atmosphere is conducive to disease, and plants subjected to such do not fruit satisfactorily. One of the chief causes of failure (especially among amateurs) is

finally placing the plants in too rich a soil and allowing them too much root-run. I much prefer growing Tomatoes in either 10-inch pots or suitable boxes to planting them out in open borders, as by so doing the growths are not so strong and the fruits begin to set much earlier and near the base of the plants. The soil for the final potting should consist principally of good, sweet, fibrous loam, to which should be added a little manure from a spent Mushroom bed, wood-ashes, and coarse sand or road grit. The pots or boxes should be well drained and sufficient fibre placed over the crocks to prevent the soil becoming mixed with them. When potting, make the soil very firm. Give a thorough watering after about the third day, and where possible the growths should be trained up the front of the structures on wires about 9 inches from the glass. Never allow any undue forcing, but endeavour to promote a sturdy, short-jointed growth. Give air freely both top and bottom when the weather is favourable, and a little ventilation should always be kept on the top through the night. Keep the plants to one main stem, and regularly remove all side shoots as soon as they appear. When the plants begin to flower give them a gentle tap during the day to distribute the pollen. Immediately the fruits swell, a moderate amount of feeding may be given.

OPEN AIR CULTURE.—The best position to grow the plants is against a south wall or a close-boarded fence. A west position is the next best. Failing this, choose a south border or the most sunny position available. The plants must have been sown and nursed along under glass, and good, strong specimens in at least 6-inch pots be ready for planting out by the end of May. Suitable varieties must be selected and the plants kept to one main stem, exposing both the wood and fruit to the sun and light as much as possible. Until a good crop of fruit is assured feeding must be withheld, after which mulch with good stable-manure, and keep the plants well supplied with moisture at the roots during dry weather. In late autumn it is often necessary to cut the fruit when quite green and ripen it in a warm place. Though these lack the flavour and high finish of those which are in a more advanced stage before cutting, they will be useful for cooking, sauce-making, etc.

VARIETIES are almost endless at the present day so far as names go, but many of them are much alike, being selections in many cases from well-known varieties. Nevertheless, a few sorts are not only quite distinct, but stand out prominently as among the best. Carter's Sunrise, I consider, takes first place as a variety for cultivation under glass or in the open. I have grown this under many and varied conditions and at all seasons of the year, and have never known it fail. It has everything to recommend it, being a very free setter even in the worst of weather, produces its trusses freely, of beautiful shape and colour, medium size, and of the highest quality. Other first-class and distinct varieties I have grown successfully include:—Under glass: Duke of York, Princess of Wales, Satisfaction, Best of All, Money-maker, Polegate, Ailsa Craig, and Winter Beauty. In the open: Sutton's Earliest of All, Magnum Bonum, Sutton's Mainerop, Abundance, and Sutton's Open Air, large fruits, somewhat corrugated, but of good flavour and one of the best for cooking.

F. W. G.

[In an early issue we hope to give some approved recipes for cooking the Tomato.—Ed.]

OUTDOOR PLANTS.

BROWN'S LILY.

We have known this Lily for many years, but never saw it so well grown as in the group shown at Hillbrook Place. The bulbs have been in five or six years and the bed they were planted in was not prepared in any way beyond trenched of the natural chalky soil. One curious thing about the bulbs was that in 1914 they flowered very well, while in 1915 very few came up and there were hardly any flowers, so much so that it was thought mice or disease had got at the bulbs. Then again this year they are excellent! This tends to prove that Lilies sometimes lie dormant for a year after prolific flowering. Perhaps the bulb of *L. Browni* dies

out very conspicuously against the ivory-white petals. *L. Browni* is, especially when dormant, very impatient of an excess of moisture, as the scales of the bulb are liable to decay just at their base; and sometimes the bulb, which, at a casual glance, appears to be sound enough, will fall to pieces on being handled.

Though by no means a rare Lily, it must be regarded among the more uncommon kinds. The only Lily with which *L. Browni* can be confounded is *L. odorum*, known also as *L. japonicum*, and in auction catalogues during the winter frequently called *L. japonicum Colehesteri*. Though a good deal of confusion has existed between the two, the points of difference are so well marked that there is really no excuse for it, as, commencing with the bulbs, those of *L. odorum* are

the fact that the English Iris (*I. xiphioides*) prefers a rather wet and cold soil to a dry, warm one. In a moist position the leaves do not become yellow so soon as in a dry one, where they wither long before the flowers have reached the zenith of their beauty, and are, indeed, frequently quite yellow before the blooms expand.—Ess.

AMONG THE HARDY FLOWERS.

PERENNIAL LARKSPURS FROM SEEDS.—Most of the seedlings from a good strain are useful, and a few may be found of sufficient quality to be considered worthy of a special name. Delphiniums are easily raised, either by sowing the seeds in a pot or box in spring under glass or sowing in shallow drills in the open later in the season. I have even had good plants from



Group of Lilium Browni at Hillbrook Place, Iver, Bucks.

after flowering and offshoots flower the next year.

— This is a beautiful Lily. The flowers, which are large and massive in texture, are ivory-white within, but heavily tinged with chocolate on the exterior, especially if they are in a position fully exposed to the sun, as where heavily shaded the marking is less pronounced. The bulbs of this are very distinct from those of any other Lily, being narrow at the base, widening towards the centre, with a peculiarly flattened top, the entire bulb being tinged with reddish-brown. Its flowers have an agreeable perfume, which is not so powerful as in many other Lilies. The foliage is very dark green, while the stem, especially towards the base, and the leaf-stalks are tinged with purple. When the blossoms are fully expanded the dark-brownish anthers stand

whitish, and in shape more like those of the longiflorum section, that is, broader at the base than in *L. Browni*, while the centre is somewhat raised. In all stages the stems of this are green, the leaves much broader and thinner in texture, while they are throughout of a dull pale green, very different from those of *L. Browni*. The flowers, too, are somewhat shorter and rather more widely expanded at the mouth, while the exterior is much less deeply tinged than in *L. Browni*. It is somewhat difficult to understand the specific name of *odorum* being applied to this Lily, as so many other members of the genus are quite as fragrant.

English Irises.—These have been late this season, but they are flowering better than last year, when a period of drought checked their progress. This bears out

self-sown seeds, but it is not wise to trust to these.

INCARVILLEA DELAVAYI DYING OFF.—I wonder what is the reason that old plants of *Incarvillea Delavayi* die off in many cases after having been established for several years. Some growers tell me that the tuberous roots get too big and old, and that decay sets in. Others assert that it is frost which causes the death of the plants, as the crowns are too shallow and are destroyed by severe frosts. Still others assure me that insufficient drainage rots the tuberous roots. I have come to the conclusion that a rather light, dry, well-drained soil is the best, and that the plants ought to be deep enough planted, so that the crowns may be 3 inches or 4 inches beneath the surface. I have been doing this with advantage, and some of my plants are now of considerable age.

By the way, *Incarvillea Delavayi* comes easily from seeds, which are plentifully produced by my plants. The seeds can be sown in the open in spring or summer, but it is preferable, I think, to sow them in a frame.

THE NETTLE-LEAVED BELLFLOWER.—*Campanula Trachelium*, which I have seen named *C. urticifolia*, is not up to the high level of beauty of most of the other varieties. At one time, I am told, a double white and a double blue variety were largely grown. I have in my garden several single-flowered varieties, but these are being gradually banished. This Nettle-leaved Bellflower seeds very freely, so that if a plant is allowed to ripen seeds a crop of seedlings soon appears. I do not think *C. Trachelium* is worth keeping, as it is far inferior to many of the Bellflowers which grow to rather more than a foot high, its usual stature.

WHITE PINKS.—I have an idea that Her Majesty is one of the best as regards the non-splitting of the calyx. The old double White Pink is pretty and satisfactory in many ways, but the splitting of the calyx is a great defect. As an edging plant it has been very largely employed in old gardens, and there is nothing so fragrant among the Pinks as this old-fashioned flower. I grow Mrs. Sinkins still, but it, also, is a bad splitter, and some do not care for the greenish-tinge in the centre of the flower. I can forgive both these faults, and appreciate the handsome, fragrant blooms.

SINGLE PINKS FROM SEEDS.—I have been admiring a lot of single Pinks raised from *Dianthus plumarius*. Some of these seedlings are charming and the shades of colour and markings are very beautiful. I have white, pink, rose, and nearly crimson-flowered forms, with zones and spots of different shades on the flowers. Some with dark chocolate, deep maroon, or red zones are very beautiful and quite equal to some named varieties.

AN AMATEUR OF HARDY FLOWERS.

CAMPANULA GLOMERATA DAHURICA.

THIS form of the clustered Bellflower is not only one of the best of its race, but it is also one of the showiest and hardiest of true herbaceous perennials. Quick and easy to grow in almost any class of soil, good in colour and free-flowering are among its many good points. Less than 2 feet high, producing leafy, sturdy stems surmounted by clusters of erect, bell-shaped flowers of a deep violet-purple tone, the plant is at once attractive when seen in flower. The flowering is long continued, the spikes also appear in profusion from a low, spreading tuft, which, if generously treated, will soon cover a ground area of 2 feet or more; indeed, were it so desired—and the plant is well worthy of it—a yard wide patch could readily be formed by pulling a few clumps into small pieces and replanting the latter a few inches asunder. No plant lends itself better to this particular treatment, and when, a year hence, the group reaches the flowering stage, it will be seen how amply repaid is the gardener for the trouble he has taken. Not only does the plant lend itself readily to this free increase, it is immeasurably benefited thereby, and the flowering proportionately increased and improved. Happily, the sturdy stems require no artificial support. March and the early portion of April are the best seasons for dealing with the plant as suggested above. Firm planting and a generous treatment—*i.e.*, deep digging and a free addition of decayed manure and leaf-soil—will not be in vain. There is a

white-flowered variety of the typical *C. glomerata*, and, if not quite so large in its individual blossoms as the subject of the present note, is still large enough and good enough to merit general cultivation.

NOTES AND REPLIES.

Phlox Aubrey Alder.—This is one of the new herbaceous Phloxes. It is the only variety, I believe, not in commerce that secured an Award of Merit at the Royal Horticultural Society's trial at Wisley last year. In that trial a great number of varieties, new and old, were included, and with good ordinary cultivation, such as might in any garden under normal conditions be meted out to them, some few naturally stood out well from the rest. That above-named was one of them. The colour is an intense brilliant salmon with almost crimson eye. It is of moderate height, 3½ feet or so, of good habit, and one which, apart from colour, may lay claim to distinctness by reason of its unusually dark stems.—E. H. J.

Nepeta Mussini.—All through June the garden has been brightened by the masses of deep lavender-blue flowers of this. It is seen at its best and flowers most freely when in a hot, dry position. I have it all about my garden here in London, but the best clumps are on top of a high retaining wall, where it makes a mass of lovely colour for weeks together. The greyish foliage is quite pretty, too, when the plant is out of bloom. It seems to appreciate a little lime in the soil.—N. L.

GARDEN PESTS AND FRIENDS.

WEEDS AND THEIR SUPPRESSION.

DAMAGE DONE BY WEEDS.—The most serious objections to weeds may be stated as follows:—(1) They absorb from the soil moisture and plant food which would otherwise go to nourish and increase the crop which is being cultivated. (2) They "crowd" the crop, restricting the amount of light, heat, and air necessary for healthy growth and for the proper assimilation of plant food. The effect is to hamper the growth of the plants during early life, especially in the case of crops of slow growth, while they prevent or retard ripening and drying, particularly in the case of Corn crops. The straw of cereals may be weakened and rendered liable to "lodge," thus making the work of cutting at harvest both difficult and expensive. (3) Weeds, especially such climbing kinds as Bindweed and Cleavers, hamper harvesting of Corn crops, both as regards cutting and drying. (4) Weeds interfere with, and render more expensive, proper and thorough cultivation, and the "singling" of root crops. (5) Weeds may harbour, or favour the development of, insect and fungus pests. (6) The value of samples of cereals is reduced by the presence of Cockle, Garlic, Cleavers, and Wild Vetch; the value of most farm seeds is lowered by the presence of the seeds of weeds; and the market value of Hay and other farm produce is similarly reduced by certain weeds or their seeds. (7) Some weeds—*e.g.*, Garlic—taint the milk of cows which eat them, whilst others—*e.g.*, Meadow Saffron and Water Hemlock—are poisonous to stock generally. (8) Other weeds (Dodder, Broomrape, Yellow Rattle) are parasitic or semi-parasitic, and directly feed upon the crops they infest. (9) The underground stems and roots of weeds may cause the stoppage of drains. It is impossible to obtain the best returns from the land when weeds are allowed to grow unchecked. Experiment has shown that on a properly weeded area of arable land the crop may be double that on an unweeded area.

MANNER OF DISTRIBUTION.—Before the suppression of weeds can be intelligently dealt with it is essential to have a clear conception of the manner in which weeds are spread broadcast amongst cultivated crops. The manner of distribution is very varied, but amongst the commoner processes are:—(a) Distribution by means of the wind. Many seeds, like those of the Poppy, are so small that they are readily scattered considerable distances from the parent plant. (b) Distribution by means of a special parachute-like apparatus, or other arrangement, of fluffy hairs and flattened wing-like projections, by which seeds, such as those of the Thistle, Dock, Groundsel, etc., are rendered buoyant, and easily carried about in a light breeze. (c) Distribution by means of farmyard manure. Screenings from threshing and winnowing machines, and sweepings from barns and hay-lofts, often find their way to the manure heap, while manure from cattle fed on inferior hay is also likely to contain weed-seeds. Many seeds of weeds may be uninjured by the heat of fermentation, and will in due course pass on to the fields. Some seeds may even germinate better after lying in the manure heap, or after passing through the stomach of an animal. Well-rotted farmyard manure will, however, contain fewer germinable weed-seeds than fresh manure, and is, therefore, less liable to introduce weeds. (d) The use of impure seed is a potent means of introducing weeds to a farm. The presence of 1 per cent. of Dock seed in a mixture of Grass and Clover seed means ten or more Dock seeds per square yard all over the field wherever such a sample is sown at the ordinary rate for leys. (e) Some weeds—*e.g.*, Creeping Thistle, Couch, Field Bindweed, Onion Couch—are spread by means of broken portions of the rootstock, which may be carried from field to field or farm to farm in a variety of ways.

METHODS OF SUPPRESSION.—Weeds may be annual, biennial, or perennial, and must be combated by somewhat different methods according to their habit of growth. It must be emphasised that, whatever methods are adopted, they must be promptly, vigorously, and faithfully carried out; systematic, well-timed effort is the foundation of success. (1) The most obvious means of suppressing weeds is to prevent them seeding. When it is recognised that an ordinary Charlock plant produces from 1,000 to 4,000 seeds, and a moderate-sized Poppy 10,000 to 15,000, and large plants 50,000 seeds, the force of the adage that "one year's seeding is seven years' weeding" is obvious. Further, as many weeds produce seeds which do not germinate uniformly, the mischief is greater than appears at first sight, for they may lie dormant in the soil and grow after several years. In destroying weeds of this type the frequent recurrence in the rotation of root and other crops which permit thorough cleaning is an advantage (see also 4, 9, 13). Seeding of weeds growing in hedgerows, on roadsides and waste places, and round farm buildings, should similarly be prevented. (2) Under no circumstances should imperfectly cleaned seed be either purchased or sown. Care should be exercised as to the disposal of refuse seeds from threshing, screenings, sweepings of hay-lofts, etc. Such refuse should be burnt. (3) Deep ploughing is sometimes resorted to with considerable success, many seeds rotting when deeply buried. Others, however, remain dormant under such conditions, without losing their vitality, and may subsequently be brought to the surface. Where practicable, shallow

cultivation and the preparation of a good tilth prior to the sowing of a crop will encourage the seeds to germinate, when they may be destroyed by further stirring of the soil. Such a method will help to clear the ground of many annual and biennial weeds, such as Poppy, Charlock, and some species of Thistle. (4) In view of the present shortage of manual labour, in districts where hand-hoeing is usually largely practised, Corn crops may usefully be drilled in rows wide enough apart to permit of horse-hoeing, say 8 inches to 9 inches apart. This is especially useful in the case of spring-sown Corn. (5) Where horse-hoeing cannot be practised, the wetter the climate, or the more the land is subject to the growth of annual weeds, the closer the drill coulters should be set. When weeds are plentiful it is advisable immediately after harvest to disc or lightly scarify the surface, with a view to encouraging the germination of annual weeds. These should afterwards

stored up in their rootstock and prevent storage of further supplies. Judicious cutting with spade, hoe, or scythe will destroy all weeds if the cutting is repeated often enough. Many weeds when cut near the ground send up new stems, and these are produced at the expense of food stored below ground in the previous season. The growth of these secondary stems weakens the plant as a whole, and if, when produced, they are immediately cut off and the process repeated, total destruction will be the result, no matter what the plant may be. The first cutting should be made early in the year, and as often after that, during the summer, as new shoots appear. If left too long the weeds may either seed, or again store up food in the roots in preparation for the next season's growth. One cutting in the case of perennials like Creeping Thistle, Field Bindweed, Couch, and Coltsfoot is quite valueless. (9) Fallowing, either bastard or bare, as a cleaning process, is largely

ing may so stimulate cultivated crops that many of the worst weeds will be crowded out, a fact which is of especial significance at the present time in connection with the growing of successive Corn crops. (12) Farmyard manure, believed to contain weed seeds in any quantity, should be allowed to rot well before application to the land. Many weed-seeds may be present when meadow hay and chaff (barren glumes) of Oats are fed to stock. (13) Weeds may often be suppressed or much reduced by the growth of dense, heavy "smother" crops which choke them out. On foul land such crops may be of much value before or after a well-hoed root crop. Suitable crops for the purpose are Vetches, or a mixture of Vetches, Peas, Oats, or Beans; Mustard, Rape, and Maize. The last-named is especially valuable, because it is not only thoroughly hoed, but casts a dense shade. It can, however, be grown only in the warmer southern counties. Where weeds are likely to be abundant it may prove a good plan to sow part of the root "break" with a Vetch mixture in autumn. This would not only "smother" out weeds, but reduce the labour bill for roots. (14) Close feeding with sheep will often check certain plants and prevent them seeding, e.g., Ragwort, Yellow Rattle, and Hardhead or Knapweed. (15) Finally, spraying crops with chemical substances, more especially with sulphate of copper (bluestone) and sulphate of iron, has been found exceedingly useful in destroying weeds. The destruction of Charlock in corn crops by spraying is dealt with in Leaflet No. 63. Solutions of the sulphates of copper and iron, however, may be employed against other weeds, some of which may be destroyed and others crippled. *Persicaria* or Red-shank and Spurrey may respectively be killed by spraying with 4 per cent. and 5 per cent. solutions of copper sulphate, while the following weeds are more or less crippled and seeding largely prevented by spraying with a 5 per cent. solution of copper sulphate, or a 15 per cent. solution of sulphate of iron:—Poppy, Corn Cockle, Black Bindweed, Dock, Groundsel, Dandelion, Perennial Sow Thistle, Cornflower, Thistles, and Coltsfoot.

LABOUR.—During the past year, no doubt largely owing to shortage of labour, weeds were unusually plentiful in many districts. The shortage in manual labour may largely be met in so far as the destruction of weeds is concerned by the employment of women and children, working when necessary in gangs in charge of one or two older and practised hands; and of temporary workers who may be in a position to do work of this kind for short periods. In regard to labour, more use should be made of the Local Labour Exchanges.—*Leaflet No. 112 of the Board of Agriculture and Fisheries.*

NOTES AND REPLIES.

Peas, insect on.—Will you kindly tell me what is wrong with the enclosed Pea pods? I have had a splendid and early crop, but so many of the pods have had their appearance spoiled by this marking and a kind of mould inside. I shall be very much obliged if you will kindly advise me as to future treatment and say what is wrong. Your paper is ever of great interest to me.—A. ROWAN.

[Your Peas have been attacked by an insect commonly known as Black Thrip. If the attack is allowed to develop, irreparable damage to the crop ensues. The great thing in dealing with this pest is to attack it in the initial stage, when, if the plants and pods are syringed daily with Quassia extract, the insects are quickly killed off and the crop saved.]



Flower of Lilium Browni. (See page 413.)

be ploughed down. (6) The eradication of perennials, such as Couch, Field Bindweed, and Creeping Thistle, needs careful and well-directed effort. These plants are propagated by underground runners bearing buds, and the object should be to remove the rootstocks as far as possible unbroken. This will usually be best accomplished by shallow ploughing followed by grubbing or cultivating, rolling and harrowing. The weeds should be collected and either be burnt or made into a compost with lime. Sometimes, however, as in fallowing, they may first be brought to the surface and left to the drying effects of wind and sun. (7) Hand-pulling, digging with fork or spade, and total removal of weeds are efficient means of destruction, but these methods are all expensive, and are only resorted to when other plans have failed or are inapplicable. In every case the weeds collected should be burnt. (8) Any perennial weeds may be cut down frequently to exhaust the supplies of food

practised with good results on the heavy classes of soils on which root crops are uncertain and expensive to produce. At present, however, bare fallowing should be reduced to a minimum, "smother" crops being introduced (see 13). (10) Rushes, Sedges, and Horsetails are indicative of a sour soil, which can be remedied by draining and liming. A dressing of lime is, more or less, a specific against Sorrel, Corn Marigold, Spurrey, and some other weeds. (11) The application of dung and artificial manures induces considerable changes in the character of the herbage on pastures and of the weeds on arable land. The application of 5 cwt. to 8 cwt. of basic slag per acre to pastures on stiff clay land often has a wonderful effect in encouraging Clovers and generally improving the herbage, while a mixture of superphosphate and sulphate of ammonia is often an effective means of reducing such weeds as Buttercups, Daisies, and Plantains. Suitable manur-

FRUIT.

GRAPES SCALDING AND SPLITTING.

The berries of all varieties are liable to be scalded just before they begin to colour, those of a few varieties splitting badly at the same stage. Madresfield Court is one of the sorts that split badly. If the treatment is good both the scalding and splitting of the berries can be reduced to a minimum, if not altogether avoided.

SCALDING.—Usually scalding occurs in the early morning. If the house has been closed through the night, directly the sun shines on the glass in the morning a lot of moisture condenses on the cold skin of the berries, and, a little later, if this moisture is not gradually dispersed, one side of the berry will be scalded, and sometimes many berries in a bunch will suffer. Rarely are berries thus scalded if the ventilators are opened early in the morning before the sun shines on the house. If the grower cannot make sure of thus opening them the best plan will be to open them nearly 2 inches wide at 10 o'clock at night, moisture not then condensing on the berries. Berries may be badly scalded if theinery is closed too early in the afternoon on a day when the sun is very hot. On such days it is much better to leave the ventilators open longer and gradually close them as the sun-heat lessens. The same atmospheric conditions that cause the scalding are conducive to the

SPLITTING of the berries. I have grown that superb variety Madresfield Court for many years and had berries split wholesale in the early days when I did not know how to treat it properly. But during the past twenty years I have not had much trouble from splitting. Allowing an extra growth of laterals, keeping the border drier, etc., will not prevent splitting if the house is kept closed in the morning and again in the afternoon when hot weather prevails. I have purposely kept the structure closed and watched the berries at the stage when colouring begins, and though not actually seeing the berries split, I have seen them whole one minute and in a split condition the next. To avoid splitting I always keep the soil in a regular state as regards moisture, and never entirely close the top ventilators night or day from the time the berries begin to take on the final swelling and colouring. I further cover the moist surface of the border with short litter or straw.

All Grapes, when colouring, should have plenty of air. I have removed squares of glass from ventilators opposite bunches of Madresfield Court and seen the bunches move to and fro in the breeze created on a very hot day, and the side of the bunches next to the opening, and facing north, was as black as Sloes when the other side was half coloured. BOURNE VALE.

Strawberry-beds.—Where Strawberries are grown on the three or four years system, which is the rule generally, a plot of ground must now be selected for the planting of the new bed. This should be well manured and thoroughly dug at once, which will allow ample time for it to settle down and be in excellent condition for planting early in August. In the meantime the requisite number of plants of the varieties favoured should be layered into small pots, and if done without further delay, so that the layers become well rooted and established by the end of the present, and planting out effected early in the succeeding month, a good crop of fine fruit results the first season. As to the utilisation of the ground which has been carrying the

Strawberries to be discarded, it can either be dug over and reserved for the planting of Cabbages for spring cutting, or after hoeing and cleaning the surface it may, without further preparation, be planted with maincrop and late varieties of Broccoli.—G. P. K.

NECTARINES AND PEACHES FAILING.

THE bearer will hand you two Nectarines. You will see that they are small and in very poor condition. Could you let me know the reason for the failure of these Nectarines? If you eat them, however, you will see that they do not taste at all badly. I have a Peach-house at Bromley, Kent, 20 feet long and about 9 feet wide. It has a wall at the back (north), and the front (facing south) is glass. It is ventilated on top and in front. I have a Nectarine and a Peach inside the house near the glass front (and not against the wall). Although the house is heated, I do not use heat, because I prefer the Peaches and Nectarines to ripen naturally, and usually the Nectarines are ripe by about July 14th, and the Peaches about the end of July. This year, however, no doubt owing to the cold, sunless summer, I have only just begun to gather the Nectarines, and I do not suppose I shall be able to gather any Peaches till towards the end of August. No rain, of course, gets into the house, but the gardener keeps the border watered at suitable intervals, using each time about two big tankfuls of water. He, of course, syringes the trees from time to time, but keeps the water clear of the fruit when it is near the ripening stage. After the fruit stones we put a top-dressing of cow-manure on the border. The border is about 9 feet deep, with cement foundation, and is composed of a mixture of loam, lime-rubble, charcoal, and $\frac{3}{4}$ -inch bones. There is a sump, which carries off any excess of water. I have had the Nectarine about fifteen years, and until three or four years ago it has always cropped splendidly and the fruit has ripened well, and it had a good appearance and flavour. For the last three or four years the fruit seems to have been going off, the tendency being:—(a) To diminish in number and size of the Nectarines. (b) To show a sort of rust on the skin on one side of the Nectarine (you will see the rust on one of the Nectarines herewith, though there is none on the other Nectarine). (c) No flavour to speak of. If you could give me an explanation of the deterioration I should feel much obliged. I am sure the gardener must be making some blunder. I might add that the Peach-tree has not been doing quite so well during the last three or four years as it used to do, though the falling off is nothing like so marked as in the case of the Nectarine.—NECTAR.

[The general condition of the Nectarines indicates that the tree is out of health, which is without doubt due to the roots being beyond the influence of air and warmth, or in other words through the border being of too great a depth. Instead of being 3 yards deep, 1 yard, including drainage material, would be an ample depth, and we fear that unless you take steps to remedy matters in this direction the condition of the tree will grow worse rather than improve. This means lifting the roots of the tree, which can be done with safety if undertaken just before it sheds its foliage in autumn, throwing out the soil to the required depth, viz., 3 feet 4 inches, and putting in a concrete floor or base 4 inches in thickness. When set, place 6 inches to 9 inches of drainage material in two grades, coarse and fine, all over it, and cover with whole furves Grass side down. On this place a layer of soil, spread out the roots at their various levels; cover with fine soil, making all very firm as the work proceeds. If the old compost is worth using again mix a modicum of new loam with it, but if it has become inert and worn out then use new material only. Have everything in readiness before lifting is commenced

with, so that the roots are out of the soil for as short a period as possible. Wet Moss placed in mats is an excellent material with which to enclose the roots as they are laid bare and liberated from the soil. It is also a good plan to shade the roof over the tree and to keep the foliage moistened with a syringe from the time lifting commences until the tree is replanted. The Peach tree alluded to is no doubt getting into the same condition, and would be best lifted at the same time as the Nectarine.]

NOTES AND REPLIES.

Fungus on Plums.—I send some Plums, most of which are going bad, as you will see. Gum exudes from many, and it is questionable whether, after removing those attacked, the remainder will reach maturity. It is unfortunate, as most of my other trees are very thinly cropped or have none at all.—SUSSEX DOWNS.

[The Plums have been attacked by the fungoid disease commonly known as the brown-rot fungus (*Monilia fructigena*). Your best course is to pick off all affected fruits and burn them. Then spray the tree three times at intervals of ten or twelve days with Bordeaux mixture. Next spring, some time before the buds expand, spray the tree with sulphate of iron, using $\frac{1}{4}$ lb. of the latter to every gallon of water required. After the tree has flowered and set its fruit, spray two or three times at fortnightly intervals with Bordeaux mixture at half or summer strength. The latter can be purchased ready for use from any dealer or maker of insecticides with instructions attached.]

Plum Coe's Golden Drop.—In a season when Plums are none too plentiful it is pleasing to notice that Coe's Golden Drop is bearing its usual heavy crop. Reputedly, in this district, a rather difficult Plum, I cannot recall a season during the past twenty years in which Coe's Golden Drop did not justify its inclusion in the collection, and amply repay the space upon the walls which the trees occupy. Ripening in late September and early October, the variety is specially useful, for even when the crops of Plums are heavy the most of the fruits are over before Golden Drop ripens. Of excellent flavour and handsome shape, being, in addition, a free-stone, this Plum is highly appreciated in the dessert. The red variety of the same Plum is equally useful, although, perhaps, hardly equal to the yellow sort in point of flavour.—W. McG., *Balmoe*.

Strawberries.—The plantations of these will be examined as soon as the fruit is gathered, and plants that have been upon the ground two or three years will be cleared off, and the soil prepared for late Broccoli or some other vegetable. Plantations intended to remain for another year must on no account be neglected, as the quality of the next season's crops depends greatly upon the way they are now managed. Having removed the nets, clear the plants of weeds, exhausted foliage, and runners. See also that the plants do not suffer from want of water, and, if possible, give necessary nourishment in the form of liberal applications of liquid-manure. This will encourage them to form strong crowns for next season's fruiting.

Morello Cherries.—These trees are trained very similar to the Peach. Shoots growing at right angles to the wall known as fore-right shoots—and others that are not required for fruiting next season should be cut clean away, for the Morello Cherry requires different treatment from the Sweet Cherry, which develops its fruit on spurs. A sufficient quantity of young wood should be trained in annually on Morello Cherries to furnish the fruiting wood of next season. Tie the growths in loosely and encourage a healthy, clean growth. The fruits should be protected from birds before they change colour.—G.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM AUGUST 9TH.—*Solanum jasminoides*, *Honeysuckles*, *Clematis* (in variety), *Magnolia grandiflora*, *Ceanothus* (in variety), *Buddleias* (in variety), *Carpenteria californica*, *Polygonum baldschuanicum*, *Olearia Haasti*, *Spiraea arifolia*, *S. Aitchisoni*, *Spartium junceum*, *Catalpa japonica*, *Raphiolepis ovata*, *Andromeda polifolia*, *Clerodendron trichotomum*, *Rhus* (in variety), *Daphne Cneorum*, *Hydrangeas*, *Hardy Fuchsias* (in variety), *Veronicas* (in great variety), *Amorpha fruticosa*, *Viburnum coriaceum*, *Jasminum affine*, *J. humile*, *Hypericums* (in variety), *Colutea arborescens*, *Cistus ladaniferus*, *Ozothamnus rosmarinifolius*, *Escallonia Langleyensis*, *Campanulas* (dwarf and tall) (in variety), *Androsace lanuginosa*, *Potentillas* (in variety), *Gentiana septemfida*, *Sedums* (in variety), *Mimulus* (in variety), *Convolvulus Cneorum*, *C. mauritanicus*, *Dryas octopetala*, *Sagina glabra*, *Potentillas* (in variety), *Linarias*, *Tunica Saxifraga*, *Veronica Lyalli*, *Lobelia cardinalis*, *Mesembryanthemums*, *Romneyas*, *Agapanthus*, *Tufted Pansies* (in variety), *Gazania splendens*, *Plumbago Larpenae*, *Oxalis floribunda*, *Monibretias* (in variety), *Heliotropes*, *Ageratum*, *Calceolarias*, *Marguerites*, *Pelargoniums* (in variety), *Phlox Drummondii*, *Cosmos*, *Clarkio*, *Godetia*, *Acrocliniums*, *Leptosiphons*, *Dionthus Heddeewigi* (in many colours), *Nemesias* (in variety), *Antirrhinums* (in many colours), *Pentstemons* (several varieties), *Candytuft*, *Petunias*, *Verbenas*, *Mignonette*, *Stocks* (in variety), *Gilia*, *Nigella*, *Salvias*, *Annual Delphiniums*, *Sweet Sultans*, *Scabiosas* (in variety), *Echinops* (in variety), *Agrostemmas*, *Oenotheras* (in variety), *Acanthus*, *Tritomas*, *Aquilegias* (in shade), *Phloxes* (herbaceous), *Chrysanthemum maximum* (in variety), *Eryngiums*, *Achilleas*, *Eupatoriums*, *Galegas*, *Anchusas*, *Erigerons*, *Aster Amellus*, *Corcopsis grandiflora*, *Labraters*, *Bergamots*, *Anemone japonica*, *Phacelias*, *Forgloves*, *Verbascums*, *Linums*, *Poppies*, *Hyacinthus candidans*, *Liliums* (in variety), *Gladiolus* (in variety), *Nepeta Mussini*, *Heucheras* (in variety), *Funkias*, *Sagittarias*, *Water Lilies*, *Spiraeas* (herbaceous), *Solidagos*, *Hemerocallis* (in variety), *Lythrum roseum*, *Senecios*, *Epilobium pedunculare*, *Lysimachias*, *Aponogeton*, *Roses* (many species and varieties), *Lavender* (in variety).

THE WEEK'S WORK.—Seeds of many herbaceous perennials, alpine and rock plants have ripened, and these have been sown during the week. If these seeds are sown a few days after they are gathered, when quite ripe, they germinate much better than if kept for a time. A bed of light, sandy soil was made up in a cold frame, and the seeds sown thinly in drills 6 inches apart, covering them with finely sifted soil. Afterwards the seed-bed was watered carefully through a fine rose can, the lights placed in position and shaded until the seeds have germinated. Ventilation is afforded as soon as the seedlings appear, increasing the amount of air gradually to induce the plants to grow sturdy and strong. Some varieties of early-flowering *Chrysanthemums* have been slightly disbudded. This is necessary with some varieties where flowers of moderately good size are desired, but the disbudding should not be so severe as to spoil or even alter the character of the plant. Now that the weather is so hot and dry these plants require frequent liberal waterings. *Azaleas*, *Rhododendrons*, *Camelias*, and all similar plants are amongst the first to suffer from want of moisture at the roots. These have been thoroughly watered and heavily mulched with leaf-soil. Borders of *Belladonna Lilies* have been cleared of all weeds and leaves, and the surface-soil stirred, afterwards giving a thorough soaking of water, which will enable the flower-spikes to come all the stronger. *Violets* have made good progress during the last few weeks. All side shoots are removed as they appear, and the Dutch hoe frequently used between the plants. It is necessary to syringe them freely twice daily—morning and evening. Good dustings of soot are applied frequently as a means of keeping red-spider in check. Hardy bulbous plants, such as *Narcissi*, *Tulips*, *Scillas*, *Lencojums*, *Grape*

and *Feather Hyacinths*, as well as many others that increase freely, deteriorate if left too long undisturbed. Where lifting and re-planting are decided on the present is the most suitable time to carry out the work. Lift the clumps carefully, separate, and replant without delay. F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Strawberries.—The perpetual-fruiting varieties of which St. Antoine de Padone is a good type, should now be allowed to fruit, and the same care taken to protect the berries from being splashed with soil and from bird attacks as is meted out to other varieties. If necessary, water freely to assist the berries to swell to full size. Plants which were forced and afterwards set out should be kept clear of runners and well watered at the roots to get them thoroughly established by the end of autumn. A mulch of short manure applied at that period will then protect the surface from harm however severe the winter may be. When well attended to, these plants yield very heavy crops the following season. The earlier young plants or recently-rooted layers are planted in August the greater the prospect of a crop of very fine fruit the next season. All preliminaries in the way of preparing the sites for new beds should, therefore, be expedited so that the planting may be done at an early date. If they are to follow some crop for which the soil was well manured, nothing beyond a levelling of the surface and treading it afterwards to render it firm—the latter being very essential—is needed. If, on the contrary, manuring and digging have yet to be done, the matter should have immediate attention. Strawberries succeed best on loamy soils of a medium texture. On light and sandy loams the plants suffer severely from drought in a dry season unless they are kept well mulched and watered. When possible, such soils should receive a dressing of loam and cowshed manure prior to digging. Heavy and retentive soils are the better for a good coating of well-rotted manure and charred refuse. When a long succession is desired, not only must early maincrop and late varieties be planted, but they must be planted in various positions to ensure the fruit ripening in its proper season. For instance, the earliest should be accorded a border having a southern or south-western aspect. The maincrop sorts should be out in the open, and the later and latest in a position under a wall facing north-west and due north respectively. Before planting, give the plants a thorough soaking of water, and after having firmed the soil open out holes for each with a trowel large enough for some fine soil to be worked in round the balls and make all quite firm. Finish off by treading round each plant and mulch the surface with short manure. Shallow planting is as much to be avoided as the reverse; the correct way being to set them in the ground just deep enough for the top of the balls to be lightly covered with soil and no more. The usual distance for planting is 18 inches between the rows, the rows from 2 feet to 2½ feet apart, according to circumstances.

Early Apples and Plums.—Of the former, *Beauty of Bath* will soon be ready for use. As the fruits become woolly and lose flavour if gathered and stored, the best way is to gather and send them to table as they become fit for use. Heavily-laden trees of *Codlin* varieties may be relieved of a good portion of their crops, the thinnings being of service for cooking and baking. If the best of the fruits are left on the trees they will then grow to a much larger size than if the crop is left unthinned. As to *Plums*, *Early Prolific*, on a wall and in the open, is ripe enough for cooking, but requires another fortnight to render the fruits fit for dessert. Birds are so troublesome that it is absolutely necessary to net the trees if the fruit is to be preserved.

Wasps.—An unprecedented number of queen wasps was destroyed during the spring, but, in spite of this, there is already evidence that these insects will be very numerous in the latter end of the summer and early autumn. A good few very strong nests have already been found; for some time to come they will be sought for over a considerable area and

destroyed. If every landowner would only do the same thing the numbers of these pests would soon be very considerably reduced and in time almost extirpated.

Spring Cabbage.—The second sowing of seed to furnish plants for setting out to form a succession to the earliest raised in the latter end of July should take place now under precisely the same conditions as mentioned for the previous sowing. If space is restricted, the seeds may be sown between the newly-planted *Strawberries*. A single drill drawn between every two rows of the latter will do no harm if the young *Cabbage* plants are not left in the ground later than February.

Lettuces for spring use.—These may be raised in the same way if necessary, making a good sowing now of *Winter White* and *Bath Brown Cos* and again in a fortnight's time.

Cauliflowers.—These may also be raised on newly-formed *Strawberry* beds. The middle of the month is, for all general purposes, quite soon enough to sow. The three best varieties are *Early Giant*, *Early London*, and *Walcheren*.

Onions.—So long as the war continues, and no doubt for some time after, the present large demand for *Onions* will not abate. To cater for this should be the object of growers, and extra large breadths should be sown accordingly this autumn. The actual sowing need not take place for another fortnight or in three weeks' time will be early enough for the south, but the site where the sowing is to be done should be manured and dug in readiness. A border under a wall facing south or westwards makes a good seed bed, and from which plants can be drawn for transplanting early in February. Those set out in February of the present year are now swelling fast and require their tops to be kept bent over on one side. As soon as the tops begin to die off the bulbs should be pulled and laid out in full sun on shutters or mats to finish off, after which they should be stored in a cool, dry place.

Turnips. Good-sized breadths of these should be sown for winter use as fast as ground becomes available. As a rule, the raising can be effected with far less trouble at this date than earlier in the season. *Early Snowball* may still be one of the varieties sown, but the bulk of the drills should be sown with *Red Globe* and *Green-topped Stone*. For later sowings *Chirk Castle Black Stone* should be included. Sifted ashes from recently-burnt refuse, so long as it has not been allowed to get wet, may with advantage be strewn in the drills instead of artificial manure when the latter cannot be spared. If plentiful, the surface of the plots may be dressed with this material and incorporated with the soil in the process of raking it down to a fine condition. A.W.

MIDLAND COUNTIES.

Melons.—Melon-growing from now onwards will be more difficult than in early spring. Plants setting their fruits must be grown in a temperature not lower than 75 degs., and if there is danger of the figures dropping below this during dull or damp days, the hot-water pipes must be employed. Expose fruits that are ripening to the light and air, and stop all lateral growths closely. In these gardens the last batch of plants was planted on August 1st.

Pears.—As a result of early thinning, the fruits are swelling rapidly and the growth and foliage are clean and healthy. Varieties that ripen their fruits early have to be protected by nets, otherwise birds will damage them. Once *Pears* are pecked by birds, wasps and flies soon complete their destruction. *Pears* often suffer from lack of moisture at the roots at this season, and the result is seen in small, immature fruits. Trees carrying heavy crops will be greatly benefited by applications of liquid-manure or some quickly soluble fertiliser, washing the manurial properties well into the soil with water. Trees growing in thin, gravelly soil naturally require much more water than those planted in heavy soil. If not already done, no time must be lost in removing all superfluous shoots of hardy fruit-trees of all kinds. Whether

they are espalier, dwarf, pyramid, or standard trained trees, not a single shoot that is not wanted should be retained, as there is no danger of the buds at the base of the shoots breaking into growth after this date. American blight has been troublesome on some Apple-trees. A sharp look out is kept for this pest and the affected parts rubbed over with a stiff brush dipped in methylated spirit. In bad cases and where the trees are not bearing crops they have been syringed with a strong insecticide, repeating the application as often as necessary. The season has been a very difficult one for keeping the ground clear of weeds. An opportunity to destroy weeds, however, presents itself in the present hot weather. Keep the hoe constantly at work and go over the ground several times in quick succession. Hoeing serves also to check evaporation from the soil at a time when moisture at the roots is essential.

Begonia Gloire de Lorraine.—Plants that have filled their pots with roots are regularly fed with liquid-manure and the shoots neatly trained to form good shapely specimens. The plants will not need to be syringed overhead so frequently after this date, and as the days become shorter syringing will be discontinued. Allow plenty of space to each plant and gradually expose them a little to the sunshine. Schizanthus seedlings have been pricked off into boxes and stood in a cool frame, shading from bright sunshine. A batch of Roman Hyacinths and Polyanthus Narcissus has been potted up for early forcing. After potting they are plunged in ashes in a cool position, first soaking the soil in the pots with water. The propagation of summer-bedding plants will now be commenced in order to maintain stocks of the various plants. Pelargonium cuttings are best put into boxes. Use light, sandy soil which should be rammed as hard as possible. This will ensure hard, sturdy growth that will winter well. After inserting the cuttings they should be well watered and placed in an open, sunny position, where they may remain until it is necessary to remove them indoors for the winter. Cuttings of Ivy-leaved Pelargoniums, Fuchsias, Verbenas, Ageratum, Heliotrope, etc., will be put in as they become available.

Autumn-sown Onions have been lifted. In order to have the bulbs thoroughly ripened they are turned daily for at least a fortnight. When they are removed to the Onion loft they will require to be carefully examined that they may be kept as late into the autumn as possible. Onions sown in heat and planted out have done remarkably well, and are now nearing maturity. It is most important in regard to the keeping of Onions that they should be ripened and lifted early. The beds should be examined and all deformed bulbs removed. The rough skins should then be removed from the perfect bulbs to prevent them holding water, when the outer skin will ripen to a brown colour. By the end of the present month the whole of the crop should be carefully lifted and harvested. The main crop sown in the open has also made good progress, and will now have the tops turned down. This is best done with the hands, exposing the bulbs to the sun as much as possible. Preparations will now be made for sowing Onions to stand the winter. I find the best plan is to sow these on an open piece of ground and transplant in early spring. Some excellent varieties for successional planting are White Emperor, White Leviathan (two good early varieties), Blood Red, and Lemon Rocca.

Runner Beans do best when the growths are not allowed to become overcrowded. After the top of the supports is reached the shoots should be stopped to induce some of the bottom growths to break away strongly. The Runner Bean is a moisture-loving plant, and it can hardly be given too much water at the roots, even though the weather may be showery. Excepting those required for seed, the pods should be gathered immediately they become fit, as nothing tends to weaken the plants more than allowing the seeds to mature.

Peas.—At the time of writing Peas are very plentiful and exceptionally good. Successional and late varieties have been well mulched and thoroughly watered. Should the hot weather

continue it will greatly benefit the plants if they can be thoroughly syringed early every morning. If necessary to hasten the development of the Peas, pinch out the points of the shoots and remove all lateral growths.

Spinach.—Frequent sowings are still made in order to maintain a daily supply, choosing a cool position so that the plants may escape the afternoon sun. Winter Spinach is being sown in quantity.

Winter Lettuce seeds will shortly be sown for raising Winter Lettuces, the varieties used being All the Year Round and Hardy White Cos. The seeds will be sown on a south border, so that the plants may be ready early in November. A quantity of seedlings will also be transplanted into cold frames as soon as they can be shifted, allowing the lights to remain off until frost or heavy rains occur. Excessive dampness is frequently the cause of failure amongst Winter Lettuces. Allow the plants plenty of room, and keep the soil well stirred.

F. W. GALLOP.

SCOTLAND.

Nerines and Hæmanthus.—These valuable and showy bulbs are now thoroughly ripe, and may for a time be placed at the foot of a south wall fully exposed to the sun. When the embryo flower-stalk begins to push, the plants may be removed under cover. As the soil will be in a dust-dry state, it must then be thoroughly moistened, and the best way to do this is to plunge the pots to the rim in a tank until the ball is saturated. Afterwards the watering-pot can be employed without any apprehension that the ball is not thoroughly wet to the centre.

Lorraine Begonias.—These, as becomes necessary, must be potted on. It is as well to do this work by degrees, for it will be noticed some plants grow more quickly than others and are apt to suffer if allowed to remain unpotted till the bulk of the batch requires attention. Although at times troublesome in their younger stages, these Begonias make rapid progress after they go into 5-inch pots. Syringing occasionally is of advantage, and a light vaporising now and then lessens any risk from thrips, which occasionally attacks the plants. Careful watering after repotting is needed.

Pinks. Despite the rather untoward season, Pinks have been wonderfully good, and the display has been a prolonged one. The old white Pink, Her Majesty, Mrs. Sinkins, and various coloured varieties, chiefly seedlings, have been very effective. Now that the blooms are over, the withered heads are being removed, the greyish foliage being not without a beauty of its own when freed from dead flowers and stems. Now is the time to propagate if any increase of the number of Pinks is desired. If cuttings are put in thickly in a shaded cold frame or even in a cool place out-of-doors, they soon root, and make useful little plants which can be moved to their permanent quarters in late autumn.

Hardy annuals. In the course of the week a little time was spared to spring-sown hardy annuals just on the point of flowering. These have been used freely, if not in quite such a large variety as usual, and the sowings have turned out well. Masses of *Eschscholtzia californica* are always telling, so, too, are *Saponaria calabrica*, the various *Godetias*, and *Nemophilas*, while *Virginian Stocks* and *Poppies* are indispensable. In the course of cleaning among these and similar hardy annuals no compunction was felt in rooting out a few plants in places where they appeared to be too thick. The period of effectiveness in the case of these things is largely decided by the weather, but as soon as their beauty is on the wane they ought to be dispensed with, for nothing is so untidy as hardy annuals when their display is over.

Sweet Peas in lines and in clumps now take up a certain proportion of the time, as, if the blooms are not kept closely picked, seed-pods form and the bloom ceases. It is, therefore, just as well to have stated days on which the plants are relieved of their flowers. For some time, owing to the cold nights, bud-dropping was prevalent. At the time it was said that

this might be to the ultimate advantage of the plants, and so it proved. These have made superior growth, and the blooms which are now being freely produced have long and massive stems. In the event of the plants showing signs of distress, a dose of liquid-manure is recommended. Let this liquid be weak, for if it is given too strong the increased growth which follows will react on the blooms, and bud-dropping is occasionally found to follow over-feeding quite as much so as when cold nights occur. Keep the soil among lines and clumps well hoed up now that there is a certain amount of tramping over the surface to pick the blooms.

Hardy-flower borders grow increasingly attractive and put summer bedding plants entirely in the shade. Variety is now great, and the improvement in the weather during the past week has resulted in a greater brightness than has hitherto been the case. While watering some wall fruit-trees in the neighbourhood of some of the borders with liquid-manure an opportunity was taken of affording a good drenching to many large clumps of *Kniphofias*. These rapidly exhaust the soil, and unless given occasional waterings of liquid-manure or some other stimulant they are apt to deteriorate. The early kinds, especially the yellow *Lemon Queen*, are coming on rapidly. A useful and lasting family may be noted at this time in the *Achilleas*, of which a good selection is grown. *Lycnis chalcidonica*, both single and double, is bright. *Coreopsis grandiflora* and the various *Heleniums* and *Helianthus* provide, with the *Anthemises*, plenty of yellow. *Clematis recta*—or *erecta*, as it is sometimes called—is in full bloom, and *Phloxes* begin to make their presence felt. *Chrysanthemum maximum*—several good named kinds—is on the point of expanding, and *Asclepias rubra* is at present very handsome. *Galegas* are useful, if a trifle coarse. *Campanulas* are numerous, and the season of the *Anechuras* has been prolonged over a longer period than usual. The spikes of the earlier kinds of *Montbretias*, especially *Gerbe d'Or*, are fast becoming prominent, and blue *Veronicas* are numerous and showy. Something has apparently gone wrong with a fine piece of *Romneya Coulteri* in a south border, the plant looking far from healthy and, contrary to its habit, blooming sparsely.

Figs in pots.—The second crop is now advancing rapidly, and to assist this as far as possible a fresh top-dressing was given. As soon as the roots get to work in the new material, occasional supplies of artificial manure in solution will be given. In the meantime the syringe is kept at work morning and evening, for while Figs are not especially liable to insect attacks, yet in a close atmosphere during sunny weather thrips and red-spider occasionally made their appearance. It is of advantage if the pots can be plunged to half or three-quarters of their depth.

Peaches and Nectarines on walls.—During the week some considerable time was devoted to tying in the young growths of Peaches and Nectarines on the walls. The shoots are fairly vigorous, and slightly more numerous than is required, so a certain amount of thinning has to be done as the work goes on. In the meantime, the shoots have to be laid in so that they do not interfere with the rapidly swelling fruits. They will, of course, be put into their correct places during the winter training. Any obtrusive foliage is removed from the front of the fruits in order that they may be fully exposed to the sun.

Summer pruning in the case of Apples, Pears, and Plums is rapidly approaching completion. As soon as time permits, Plums and Pears will be watered either with liquid-manure or with a chemical substitute in solution.

Peas.—For some time misgivings were felt as to the success of this important crop; but with the renewal of fine weather the pods are filling in a satisfactory way. In the absence of material with which to mulch the lines, the Dutch hoe is kept at work among them at fairly frequent intervals. This not only keeps down weeds, but the fine tilth thus formed acts to some extent as a mulch and checks, if it does not prevent, evaporation.

Turnips. Thinning was done in the case of recently-sown lines, and a final sowing was made. There has been an entire absence of the Turnip-flea during this season.

Carrots just appearing above the soil have been freely dusted with soot. There is not now the same danger from the Carrot-fly, which has two periods of activity—one in spring (which is the more dangerous) and the second in mid-autumn.

Brassicæ.—Among the various Brassicæ the hoe is being vigorously employed when time can be found for the work. Growth is well maintained, and is especially noticeable among the early Brussels Sprouts. There is yet time to fill up vacant corners with such things as Early Ulm Savoy, Kale, and Spinach.

Celery.—The earliest-put-out plants will soon be ready for their first moulding. Although I am not convinced that early moulding is in the best interests of the plants, yet from long usage the orthodox custom is followed year by year. Previous to the soil being placed to the stems the trenches will be given a thorough watering. W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Ageratum seedlings (Miss Barton).—The only thing you can do is to pot the seedlings off singly into small pots, shifting them on as necessary until they are in 6-inch pots, in which they may be kept during the winter in a warm-house. Keep all the flowers pinched out, and next spring, if you have managed to keep them, you can increase them from cuttings.

Roses not opening (T.).—Your Rose is one of the varieties that do not open well in our country owing to the misguided efforts of raisers to get very double flowers. In a dry, sunny clime the variety might open better, but even in such a clime a few wet days will often prevent Roses from opening. The best way is to discard the plant and replace with one that opens well in your district. Among likely ones, we should name Rêve d'Or, Bouquet d'Or, and Gloire de Dijon.

Growing Cacti (D. L. Castle).—The soil best suited for the different kinds of Cacti is good loam lightened by an admixture of sand and brick rubble broken about the size of Beans. When potting is necessary it should be done in March or April, but one thing to bear in mind is that most of this class thrive best when pot-bound, hence care must be taken not to overpot. From this time to the end of August the soil must be kept fairly moist, after which less water should be given in order to ripen

the growth, while throughout the winter months they should be kept quite dry. The Phyllocacti, being of a less succulent nature, must not be dried to the same extent as the others, but even these need very little water during the winter. Most of the different kinds of Cacti can be raised from seed without difficulty; that is, when good seed can be obtained. Sow in well-drained pans in a mixture of loam and sand, sprinkling enough soil over to thoroughly cover the seed, but no more. The seed-pans are best stood in a warm, shaded structure, and the soil must be kept slightly moist at all times. Under such conditions the seed soon germinates, and, if sown in the spring, the young plants will attain sufficient strength to pass the winter without injury. When large enough to be conveniently handled, the seedlings must be put singly into small pots, taking care that good drainage is ensured.

TREES AND SHRUBS.

Cutting a Holly hedge (Miss Barton).—It is too late to do this. It should be cut into shape towards the end of April just before growth begins, using a sharp knife. Many people, to save time, use the shears in pruning a Holly hedge, but the knife makes by far the best work.

Buddleia variabilis Veitchiana, pruning (Canterbury).—Any pruning needed by this shrub and its several forms should be done in the spring before the plants start into growth. Even then it should be limited to the cutting away of any exhausted wood, unless it is desired to keep the plant within bounds. From the leaves you send us, we should say that the plant is dry at the roots and that the soil is exhausted. The soil may look moist on the surface, while further down it may be quite dry. Your best plan will be to loosen the surface-soil and give the plant a thorough soaking of water, then mulch it with some well-rotted manure and water freely, so as to carry the goodness of the manure down to the roots.

FRUIT.

Neglected Raspberry bed (N. Matthews).—Seeing your Raspberry bed is in such a bad condition and, as you say, overrun with Bindweed, the only thing you can do is to go through the plantation in the autumn and select what you require of the strongest suckers and make a fresh plantation on a piece of ground that has been well manured and deeply trenched. Plant in rows 4 feet apart and in clumps of three at 2½ feet apart. Plant in November, and cut all the canes back to 6 inches from the ground in the spring to cause strong suckers to break up. You can do nothing to the present plantation owing to its being so overrun with Bindweed, and the only thing you can do is to dig the canes up, burn them, and then have the ground thoroughly trenched, clearing out as the work goes on every particle of the Bindweed you can find.

VEGETABLES.

Management of Cucumbers (C. W.).—It is not so very often needful to thin out the fruit on Cucumbers, but it is absolutely requisite to thin the branches, which should never be allowed to become a thicket. As the plants grow, stop the main shoots at 2 feet or so in length, then as the side shoots show fruit pinch out the point of each one a joint beyond the fruit, and continue to do so. Still the plants will in time become too dense, and then some of the side shoots must be taken out altogether. When the plants are thus kept properly thinned and in good health there are rarely too many fruits. Of course, if wanted for show, the plants should not be permitted to carry more than three or four large fruits each at one time. For ordinary domestic use a strong plant may carry some eight or nine fruits at one time.

MISCELLANEOUS.

Fowls' manure (N. Matthews).—The manure from a fowls' run is very good for almost anything, but the run should be covered with sand or ashes, from off which the manure could be raked every day or so quite clean. Then, as collected, it should be smothered with soot, placed in a heap, and mixed with its hulk of soil, allowing it to so remain for a month, then turning it in and giving it yet a

further dressing of soot, still allowing the manure to remain to sweeten and become incorporated with the soil. If allowed to remain for three or four months, so much the better. Then spread it on the ground in spring, and just fork it in. A thin dressing suffices. It is a mistake to employ this manure solely, as a different dressing is desirable the following year.

SHORT REPLIES.

E. D. Daniel.—Seeing you give us no particulars as to the soil in which the plants are growing and their treatment, it is very difficult to give a reason for the failure. Have you been giving the plants any liquid or artificial manure, as either of these given too strong would cause the injury. Can you kindly let us have a complete plant of any of the plants that have been injured?—*H. S.*—Kindly send us a few samples of your Bean leaves, and we will do our best to help you.—*Omega.*—It is not at all to be wondered at that all your plants are so leggy seeing the ground is so shaded by hedges, wall, and house. This trouble is increased probably by heavy manuring. The only remedy you have is to do away with the hedge, which, in addition to shading the plants you have in the borders, robs the soil of all its goodness.—*Angelina.*—We fear the Pear-tree has been moved too often. You say nothing as to the soil in which it has been growing. Judging from the shoot you send, it is in a very bad condition and not worth keeping.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*X. Y. Z., Stechford.*—1, Campanula; 2, Campanula sp., flowers too far gone to name with any certainty; 3 and 7, Sedum pruinaum; 4, Veronica cupressoides; 5, Veronica lycopodioides; 6, Santolina incana.—*J. S. Purden.*—1, The Bladder Nut (Staphylea colchica); 2, Rosemary (Rosmarinus officinalis); 3, Polygonum cuspidatum; 4, Aralia filicifolia.—*W. D., Halifax.*—Campanula muralis.—*M. C. G.*—1, Dianthus deltoides albus; 2, Dianthus deltoides; 3, Aubrietia Dr. Mules; 4, Aubrietia Peter Barr; 5, Sedum spurium.—*A. C.*—1, Hieracium aurantiacum; 2, Tradescantia virginica; 3, Lunaria biennis; 4, Thalictrum minus.—*R. F.*—1, Sedum spectabile; 2, Coreopsis lanceolata; 3, Centranthus ruber; 4, Astrantia major.—*A. R.*—1, Malva moschata alba; 2, Achillea ptarmica fl.-pl.; 3, Anteanaria tomentosa; 4, Inula glandulosa.—*W. C.*—1, Leycesteria formosa; 2, Alstromeria aurantiaca; 3, Campanula isophylla alba; 4, Borago officinalis.—*W. R. H.*—1, Leycesteria formosa; 2, Deutzia crenata fl.-pl.; 3, Diplopappus chrysophyllus; 4, Spiraea Douglasi.—*T.*—1, Epilobium angustifolium; 2, Centaurea candidissima.—*E.*—1, Sedum spurium; 2, Origanum Tourneforti; 3, Monarda didyma; 4, Rudbeckia laciniata.—*A. D. J. L.*—There being now so many of these Rambler Roses, it is quite impossible to name them with any certainty unless one has the means of comparing them with the flowers in a full collection.—*Angelina.*—The Sea Sapphire (Crithmum maritimum), only used for pickling.—*Sunbury.*—Leycesteria formosa.

CATALOGUES RECEIVED.

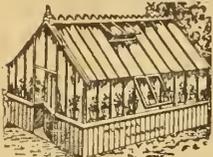
MESSRS. JOHN PEED AND SON, West Norwood, S.E.—*Bulbs, Forcing Roots, etc.*
CHARLES TURNER, The Royal Nurseries, Slough.—*List of Strawberries.*
JAS. DOUGLAS, Edenside, Great Bookham, Surrey.—*List of Carnations, Pinks, Auriculas, Autumn, 1916, and Spring, 1917.*

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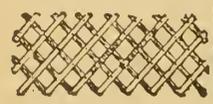
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As we have to print a large edition of GARDENING ILLUSTRATED, it is essential that advertisement copy should reach us not later than the Friday morning for the issue of the week following.

We commence printing on Friday, and no advertisement can be altered or stopped after first post on Friday morning.

GARDENING ILLUSTRATED is obtainable on the Wednesday preceding the date shown on the paper.

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The Offices of "GARDENING ILLUSTRATED" are at 63, Lincoln's Inn Fields, London, W.C., where all Communications, Advertisements, and Editorial matter should be addressed.

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No. 1955.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

AUGUST 26, 1916.

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NOTES OF THE WEEK.

A Chilean shrub (*Eucryphia pinnatifolia*) on a Kentish hill.—This was in profuse bloom in mid-August at Emmets, Ide Hill, the distinct effect of the erect mass of creamy-white striking, the close view of flowers lovely beyond power of words to describe. With such myriads of flowers and buds one wonders how the tall bush could carry them and live on, all this strange beauty coming fresh when most of our spring and summer shrubs have passed out of bloom. In no Elysian valley in its own land could the shrub have carried more bloom than on this Kentish hill, where it has been growing for some years quite hardy and vigorous in soil freely strewn with Kentish ragstone, the garden about 700 feet above sea-level. Dwarfier shrubs are placed around the tree as a precaution against exposure of the stem.

Kniphofia Red Cap.—A brilliant and vigorous sort, a vivid scarlet cresting, and falling into a spike of fine clear yellow. Worth a place beside John Benary or any of the best. From Messrs. Wallace, Colchester.

Cynoglossum amabile.—A handsome blue and unlooked for annual flower, rich in colour and of rather taller habit than in its fellows in the same genus. In bloom early August.

Roscea caulioides.—This is blooming for the second time this year. Several flower-spikes have been produced for the second blooming, but the flowers are smaller than they were earlier in the year.—N. L.

Pentstemon Myddleton Gem.—A good kind fit to rival the other well-known "Gems" of the race, with a clear white throat set in the fine rose-pink colour. Another fine large kind is Mrs. Fulford, a rich red with white throat. From Messrs. Wallace, Colchester.

Noble Water Lilies.—It is astonishing the beauty of these, in spite of the unfavourable weather this season. As we now have them they surpass in colour and form any flowers gathered in the hot-house. Escarboucle is splendid, and also Mrs. Richmond and Colosse. One of the most distinct of all is James Brydon. These are from Messrs. Wallace, of Colchester, who grow them well.

Gentiana lagodechiana.—This pretty and distinct species from the Caucasus is not the least worthy member of a race quite unique among blue-flowered alpine.

Forming a spreading prostrate tuft, the rich blue flowers, as large as those of a small *G. acaulis*, appear in clusters at the end of 9-inch long growths, the density of the trailing shoots preserving them well. The corolla lobes, widely parted and much reflexed, are connected at their bases by fringed divisions which give quite a distinct character to the flower, which is also marked by copious oblong, green spots. It is a good August-flowering kind.—E. H. J.

Water Lilies in Scotland.—The newer Water Lilies, which have done so much to adorn our ponds and lakes, are appreciated at Knockbren, Kirkcudbright, where Mr. James Brown has a good variety in the lake and in a little moat near the mansion. The best of the modern varieties of the *Marliacea* section and others are grown. This summer, since the warm weather has set in, these Water Lilies have been very fine.—S. A.

Fruit crops in the south of Ireland.—It is always interesting to compare notes, and I gathered from a friend who paid me a visit the other day that fruit appears to be quite a fortnight earlier in the south of Ireland than in the south-west of Scotland, Gooseberries, Currants, and Raspberries being finished before he left Waterford, while we were, at the time, in the midst of picking.—W. McGUFFOG, *Balmac, Kirkcudbright.*

Diplacus glutinosus in the open.—I had never previously looked upon *D. glutinosus* as being adapted for growing outside until the other day, when a gardener friend from the Waterford district of Ireland paid a visit to these gardens. Noticing some pieces of this plant in pots in a greenhouse he asked me if I ever tried it out of doors in this district, remarking that it succeeded perfectly, and, in a general way, proved quite hardy in the south of Ireland. I have no doubt that the plant would succeed here as well, for the climate is comparatively mild in winter; and I pass on the hint to those who may be interested in districts such as this.—Kirk.

The Californian Fuchsia (*Zauschneria californica*).—The spell of hot, dry weather which we have been having lately has suited this admirably, and it is now (beginning of August) in full blossom on a sunny retaining wall, its handsome, scarlet, tubular flowers supplying a welcome splash of bright colour at a time when there is not much in bloom on the wall. It grows very vigorously with me in a soil which has plenty of lime and

brick rubble mixed with it, and I fancy the dry conditions in which it is grown bring it into flower earlier, as I find many people complain of its being so late in coming into blossom that it is unable to do itself justice. Where it flowers freely and early it is an indispensable plant for the autumn rock garden.—NORTH LONDON.

Phlox Coquelicot.—Undoubtedly this is one of the best brightly-coloured kinds. When at Hampton Court at the close of July there were large groups of it in full bloom. Evidently it enjoys the cool soil by the way it grew. For years I have found this most useful grown from cuttings put into a close frame at any time in April. I put five or six cuttings into a pot, and when well rooted they are potted into 6-inch pots, grown on in the open, and planted out next year.—J. CROOK.

Rose Cardenia in the rock garden.—In the rock garden at Knockbren a prominent feature is a large plant of *Wichuraiana* Rose Gardenia, covering an artificial cliff with a veil of greenery and flowers. The value of these *Wichuraiana* Roses for covering sides of old quarries or steep rocky or other banks in the larger rock gardens has not yet been fully realised, but a look at Gardenia as grown at Knockbren should be sufficient to enable anyone to appreciate it. The long trails of glossy foliage and the hundreds of beautiful blooms make this Rose of high value for such a position. Although not a new Rose by any means, Gardenia is not easily surpassed. The blooms are yellow when opening, changing with age to very pale primrose.—S. A.

Dianthus Knappi.—If the dwarfier alpine species of the race—*alpinus*, neglected, and their like—obtain greater hold on the esteem of those who prefer the best of everything in plant life and beauty, room should be found for this distinct Hungarian species, which, rising to 1 foot or 15 inches high, produces its sulphur-yellow flowers in clustered heads after the manner of *atro-rubens* and others. While distinct in colour it offers a good opportunity to the hybridist to give us a new—probably intermediate—race of these plants, which might also link up the earliest flowering species with those of a later date. It is one of the flowers of the moment, and which gives of its blossoms to near the end of the month. Flowering profusely as is its wont, and becoming more or less exhausted as a result, it is best, despite its technically perennial

character, to raise it periodically from seeds in order to maintain an annual display. In other respects it offers no difficulty, succeeding well in loamy soils to which grit or old mortar has been freely added.—E. H. J.

Pernettyas.—I have always looked upon the berries as being the chief ornaments of these shrubs, and was surprised to find how handsome they can be when in blossom. Some fine specimens in the public gardens at Bournemouth, covered with the pretty white flowers, were very beautiful. *Pernettyas* must have peat to do their best, and if the soil has a tendency to moistness so much the better. They can be layered very readily; in fact, the branches which lie on the ground very soon put out roots without any assistance.—N. L.

Crocus Imperati.—As it is a good deal grown in this country it should not be difficult to obtain corms of *Crocus Imperati*, even if imported ones from Italy, its native country, are not forthcoming. In any case it is an inexpensive *Crocus*, which should be planted in some quantity for early bloom. It flowers from February to March, sometimes even coming in January. The fragrant blooms are of a pleasing lilac-purple, the exterior in most cases lined with deep purple. There are, however, self-coloured forms. The one called *C. l. longiflorus* is good, but the white varieties are rare and expensive. Corms should be ordered as soon as possible and planted about 2 inches deep in light soil in a sunny, sheltered position.—S. ARNOTT.

Gentiana Freyniana.—This is one of the most beautiful of the August-flowering species and one deserving well at the hands of all rock gardeners and lovers of alpine plants. From Asia Minor, the species has for companions at flowering time the Caucasian *G. septemfida* and its variety *G. s. latifolia* among others. Superior to the typical kind, it is equal, if not superior, to the variety named when richness of colouring and flower effect are taken into consideration, hence may be regarded as among the best, and, as such, good enough for all. Less erect, perhaps, than *G. septemfida latifolia*, it has leafy, foot-long, decumbent stems terminated by a cluster of large rich blue flowers that are paler internally and capable of fine effect when freely grouped. It does well in a deep, well-prepared bed of rich loam, leaf-mould, and sand. It is impatient of disturbance and root division, and easily raised from good, fresh seeds. By potting the seedlings singly, planting them out as soon as established in permanent positions a foot or so apart, the species is by no means difficult, while ranking with the indispensable at this season.—E. H. JENKINS.

Rose Gruss an Teplitz.—For colour, scent, and free growth this is to be recommended. I have noticed on strong soils it was shy blooming, especially if the knife is used too freely. In the light soil of West Surrey it may often be seen a mass of bloom for a long time. During July I saw a fine group of it in the gardens at Hawley Hill. Here many of the shoots had been left 4 feet long at pruning time. In a garden at Camberley the owner had used it in a big bed on a portion of the undressed grounds. In this instance the pruning was not severe, the object being to get a large mass of colour. In the centre of the bed many shoots had been left 6 feet or 8 feet, and when I saw it (about mid-July) nothing could be finer, the scent filling the air. The gardener at Hawley Hill told me nothing was more appreciated than big sprays of this cut 3 feet or 4 feet long and taken into the house. Another merit it has is that it

continues in bloom till late in the autumn. From its free growth it can be recommended for soils where many kinds would not do. Where space is limited then it may be grown on a pole or iron upright 8 feet or 10 feet high, treating it liberally at pruning time. This does well on its own roots.—J. C. F. C.

Hardy White Jasmines.—"K. R. W.," at page 382, writes interestingly of these, giving pride of place, or at least choice, to the typical white kind, *J. officinale*. I am prepared to go all the way with your correspondent in his admiration for the unequalled fragrance of this old garden favourite, but having conceded so much should thereafter give preference to the variety affine, because of its combining with fine fragrance a much more effective flower display and a decidedly less inclination to roam. Within a few yards of where this note is penned the variety affine has been giving hundreds of its clusters of white reddish-tubed flowers, the fragrance of which in the open, or gathered, is very pronounced, if somewhat less pleasing than in the type. In Sussex, on garden walls of less than 8 feet high, too, one recalls particularly good masses of its flowers from carefully trained specimens compressed into a space unsuited to *Jasminum officinale*, were its good flowering a matter for consideration. Where fuller scope is at hand the older kind may well find a place, and receiving due attention would give a better account of itself than it often does. Neglect is its frequent enemy, the density of a semi-wild state being responsible often enough for a rather sparse flowering.—E. H. J.

VEGETABLES.

SOWING SEEDS IN DRY WEATHER.

At the time of writing there is not the least sign of rain, and the surface soil is quite devoid of any semblance of moisture. Various rules are followed by gardeners who, from force of circumstances, have to sow for autumn and winter supplies, and this would apply with particular emphasis to Cabbages for spring cutting. One cannot afford to wait for the breaking up of the drought, or the possibility of a passing thunderstorm as an aid to the forwarding of Cabbage seeds, so the sower must devise some way of getting over the difficulty. The small grower might raise sufficient plants in a fair-sized seed-box, planting out as soon as opportunity offers. A spare light may do good service, as this can be shaded during the day and the light removed at night for the soil to benefit by the night dews. Some sow their seeds broadcast, and, after watering them, cover with mats or tar-dressed frame-covers. If fairly deep drills are drawn it is possible, with a fine-rosed pot, to water the lines each evening or early morning, the evening naturally being the better of the two. This course regularly followed will result in a fairly ready germination. Cabbages have been mentioned, and no one can gainsay the fact that this vegetable is one of the most important at the present time, though Carrots, Onions, Lettuces, Spinach, and Turnips are others that demand thought. The tropical nature of the past weeks has been very trying to the gardener with a lessened labour staff and probably a short water supply, all too common in the country. One might possibly sow and transplant from boxes or frames small numbers of such as Cabbages and Lettuce, but Carrots, Turnips, and Spinach cannot thus be dealt with, and these are each severally of much importance in the kitchen. W. STRUGNELL.

NOTES AND REPLIES.

Sowing herbs.—Kindly tell me what kinds of herbs it would be advisable to sow this autumn?—OLD SUBSCRIBER.

[It would, we consider, be useless to raise herbs from seed this autumn, as not only would the plants be too immature to stand the winter if planted out, but the risk of losses from damping off, etc., when placed in a frame or cold pit would be so great as to render the proceeding not worth the trouble. It would be far better to wait till after the turn of the year, and raise the various species of herbs you are desirous of cultivating so that the plants will be ready for setting out early in May.]

Globe Artichokes.—The cutting of heads now being over for the season the plants should be relieved of their old flower-stems and dead leaves, and after cleaning the ground between the stools loosen the surface with a fork and then well soak the plot with water. Follow this up with a good soaking of manure-water. New growth will soon push up and the stools become fully furnished ere winter sets in, and capable of resisting ordinary frost without protection. Where Globe Artichokes do not winter well it is always advisable to take up a sufficient number of suckers with roots attached some time next month and pot them. They keep well if the pots are plunged to the rims in a bed of ashes in a cold pit and kept well ventilated in favourable weather.—G. P. K.

Pea Alderman.—Nominally 5 feet in height, Alderman has, during the present season, run up almost 2 feet more. This is partly due to the excess of moisture during the growing season, and partly to the fact that the variety was given an exceptionally good place on soil which had been very deeply trenched and well manured. The pods are, perhaps, a trifle coarse, but no fault can be found with the Peas, which vary in number from nine to eleven seeds per pod, and are large and well flavoured. Unfortunately, the Hawfinch, a bird at one time practically unknown in the district, but now fairly numerous, has begun to sample the pods. By the way, Autocrat, if sown about the same date, makes a capital successor to Alderman—that is, in a general way—for in some seasons Autocrat is capricious and is inclined to develop mildew.—W. MCG.

Winter Spinach.—The prickly variety of Spinach generally used for autumn sowing is, like the round or summer Spinach, sown much too thickly. To have large and sturdy plants, not only should the bulk of seed sown be reduced, but, even so, thinning ought to be done. By this means the edible leaves grow to a larger size, the plants are not so apt to go to seed prematurely, and the plants are more robust and much better able to withstand the rigours of winter and early spring.—KIRK.

Hearting Kale.—While this variety is in some respects a most useful vegetable, I do not think that in Scottish gardens it will ever successfully compete with the old Curly Kale. The leaves are coarse in texture, albeit large, and they do not possess the hardness which is the chief characteristic of the older Kale. A severe winter would, I fancy, prove more fatal to the Hearting than to the Curly Kale, and for that reason it is wise to limit the planting.—SCOT.

Lettuce Henderson's New York.—In this we have a Lettuce of considerable merit. A Cabbage variety, it matures in a comparatively short time, is crisp and well-flavoured, and lasts in good condition over a long period. Even in hot weather the percentage of plants which bolt is very small. This Lettuce attains to a very fair size, and I think is one of the best all-round varieties in cultivation.—KIRK.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

THE LOSS OF THE CLEMATIS IN GARDENS.

THE Royal Horticultural Society may be in some degree responsible for the teachings of its lecturers, and it gives its agis to their conclusions in any ease. Mr. A. G. Jackman has read a paper on the Clematis before the Society, and he has not made the great question as to their frequent

hardy; eelworms and fungi do little harm; bursting the cells through excessive moisture is unusual; too much food does not hurt them; grafting, which is put last, is really the worst offender. Mr. Jackman says: "Grafting cannot be the cause, as my experience is that within a few weeks after the plant has been repotted it commences to form 'own' roots, and is then mainly supported by them and not by the roots of the 'stock.'"

This is not the case, as anyone who buys and plants may prove. In my Clematises, purchased from various nurseries, I wash

Then we come to Clematis Jackmani, and the author tells us that this was raised by his father. The plant is really the Niphon Clematis, found by Dr. Savatier on the rocky hills of the Island of Niphon. The account of its hybridisation is not credible. The plant is figured under its right name of hakonensis in Lavallee's book, "Les Clematites à grandes fleurs." M. Lavallee was a trustworthy grower of these plants, and his book is worthy of attention by anyone who would look into their history. It is embellished by true drawings of the Japanese kinds.

As to grafting, Mr. Jackman, whom I saw in his nursery over forty years ago, used to layer his plants, the only right way. But the young men coming on in following generations found the old way not quick enough for them, so they went on the hills and got the wild Clematis and grafted on that Japanese kinds—a fatal and cheap way.

It would be wrong to say that it is the only cause of disease. After the grafting, the mistake is setting the plants out fully exposed to the sun. The nature of the Clematis in the wild state is to run over bushes and copses, as one can see on the shores of Northern Africa. So if we plant beneath a bush it gets a little shade, and though the growth is not so free as when the plants are set apart, the life of the plant is longer and the effect is more beautiful. Lastly, more dangerous than eelworms and fungi are slugs, which bark the fragile stems as far up as they can get, and that means the death of the shoot in summer, but not the death of the plant if on its own roots. Lastly, lawn-mowers, hoe, or rake may smash the delicate stems if the plants are set out singly.

A correspondent, after reading the above, writes:—

"As to the name C. Jackmani. Even if it is the same thing as C. hakonensis the name C. Jackmani must stand for it, as it was first described under that name by Van Houtte in 'Fl. des Serres xvi' (1865), C. hakonensis being used by Franch and Savatier in their 'Enumer. Plantæ Japonicæ' considerably later. C. Jackmani was, of course, grown earlier than 1865, for it flowered in 1862 and got a first-class certificate in 1863 at Kensington."

P.S.—No publication of wrong description and wrong name should justify its use. The flora of Japan should be known to both Japanese and European botanists, and whether the plant is a natural species is a question of easy solution. To call such a beautiful plant a garden hybrid is to give an exaggerated idea of the value of hybridisation itself.—W. R.



Two sets of roots of Clematis on the same plant; upper one of the large Japanese Clematis, lower of our native Clematis Vitalba. Plant of a number bought recently at Barr's nursery at Taplow.

failure any clearer. It is the most beautiful family of climbing plants known, and yet, with hardiness and every charm, Clematises are rarely seen in gardens in the place they deserve. What should have been the essential part of the lecture, viz., the sudden "dying off" of the Clematis, Mr. Jackman gives as the probable causes of (1) frost; (2) eelworms or fungi; (3) the bursting of the cells through excessive moisture; (4) too rich food; (5) grafting. Now, none of these things is the true cause of the great losses of Clematises in British gardens. The plants in my garden are

out and find two distinct sets of roots, one that of the native Clematis and one that of the plant we wish to raise. The grafted plant is usually a plant of China or Japan, more fragile than our European wild kind, and being put on the root of our native kind, as strong as any Brier, it is reasonable to expect that the native plant will be the death of the graft in time, just as the common Quick kills American or Asiatic Thorns grafted upon it. Moreover, the nursery cultivation, which does not let the plants mature, is not the best way to study the question.

SWEET PEAS.

I HAVE read "Kirk's" note in the issue of August 12th (p. 402) with much interest. Two years ago I wrote in a similar vein but then drew cultivators' attention chiefly to the disease of Sweet Peas and the coarseness of the blooms as a result of the excessive manuring and disbudding of young side shoots meted out to the plants. At that time I could not help contrasting the crop of Sweet Peas in the garden of a friend who grew solely for exhibition and the one in my own garden grown for the supply of cut flowers under very ordinary treatment. His blooms were only available for about six weeks; then the plants shrivelled up, while my plants flowered all through the summer till the first week in October. The individual blooms were of medium size, highly coloured, and fragrant, and the foliage was green. The haulm was cleared away. I think much kindness has in many inst

sulted in the undoing of the Sweet Pea. If part of the labour expended on it were devoted to other kinds of flowers the general effect in the garden would be much more satisfactory. The clump system of growing Sweet Peas is to be commended, as they can be used in conjunction with other kinds of hardy border plants with charming effect. I well remember a cultivator telling an exhibitor that he could not compete with him then, but he would be able to do so two months later. By that date the exhibitor would not have any flowers to gather. Growing for exhibition is well enough, and instructive so long as the plants are not over-grown and the flowers rendered useless through coarseness. For purely garden decoration I am afraid we still sow the seeds too thickly. G. G. B.

Lupins from seed.—In the garden of Mr. Thomas Fraser, Maxwell Knowe, Dalbeattie, there has for some years been a wonderful display of Lupinus, raised by Mr. Fraser from seeds. Mr. Fraser's interest in the Lupins dates from some eleven or twelve years ago, when he observed the failing shown by most of the white herbaceous Lupins of dropping some of the flowers. The effort to overcome this by raising seedlings without this defect led him to take further interest in these flowers, and ultimately to try and secure a yellow variety of *L. polyphyllus*, by hybridising it with the yellow *L. arboreus*. In both of his aims Mr. Fraser has been successful, but he has ventured further and raised a vast number of varieties of many colours and shades, blue, yellow, white, purple, grey, bluish, and other hues abounding either alone or in striking combinations.—Ess.

Iris sibirica will do very well in a dry border, although it is not perhaps quite so vigorous as in a moist place or treated as suggested by "W. O.," on page 341. The Siberian Iris is easily raised from seeds sown in the open as soon as ripe or under glass in spring. I have a good many plants which have been grown from seeds, some of these being exceedingly handsome, with broad, well-coloured falls. Some of the white varieties are much superior to others, and selection is desirable.—DUMFRIES.

Gaillardia grandiflora.—For many weeks a large group in my garden has been lovely. If a few spray stakes are placed amongst them early they will grow up through these and need no other support. I find it pays to sow seed of this every year about midsummer, pricking the seedlings off into good soil and planting them into their flowering quarters in November. These young seedlings are far more vigorous than old plants.—DORSET.

Geum miniatum.—I am very fond of all the Geums, and this is a very good one for the rock garden. It is not so rampant as some, and, moreover, the flowers last much longer than those of many of the other Geums, the petals being of a stouter texture. It is a profuse bloomer, the blossoms being of a rich orange-red. Like all the members of this family, it is easily propagated by division of the clumps.—N. L.

Phlox Tapis Blanc.—Those who find pleasure in the dwarfer members of a race replete of tall-growing varieties may be glad to hear of this good white sort, which rarely attains more than 18 inches high. By reason of dwarfness, however, its sphere of usefulness is for garden purposes somewhat curtailed, though it might well figure in the small garden or as a marginal plant to the taller growers.—E. H. J.

Gypsophila elegans.—A light and graceful hardy annual, this is quite as elegant and useful as *G. paniculata*, and by successional sowings from March till May plenty of useful flowering material is available until the later *G. paniculata* comes into bloom. Thin early and sowing thickly, otherwise the plants will be weak and the display fleeting.—KIRK.

INDOOR PLANTS.

PARIS DAISIES.

(*CHRYSANTHEMUM FRUTESCENS.*)

Those who need pure white flowers early in the season should not forget the Paris Daisies. It is surprising the quantity of blooms that can be cut from a well-grown plant during the winter and early spring months. The great value of the Paris Daisy begins when the last Chrysanthemums are cut and the supply of white flowers is at a very low ebb. It is quite easy to have a constant supply of this flower from January onwards if the plants are prepared for this purpose during the summer months. Those who have any small plants remaining from bedding out should at once put them into 6-inch pots, as it is of the highest importance that the pots become crowded with roots by the end of the summer. When this is the case the plants get a foundation of hard wood, which increases the flower productiveness by 50 per cent., and the plants remain more dwarf and compact through the spring months. They cannot have too much sun, and should have the flower-buds pinched out until October. The old *C. frutescens* is the most free growing of the family. Halleri is not so leafy but produces more blooms in the space, and has grown much in favour with market growers. The value of Paris Daisies for summer decoration is well known, the plants being of the ordinary bedding size, but if readers wish to see this plant at its best they should use specimens three years or more old, and which have developed a tree-like habit.

On taking charge of a garden many years ago, in France, I found in 16-inch pots a number of specimens which were some ten years old, and had stems the size of a walking-stick. Such plants placed in the centre of a bed, or used as dot plants on the Grass, are impressive. They can be lifted in the autumn and potted, and although they may droop a bit, they will revive and be as good the following year. The value of the double white variety for cut bloom is very great, especially for wreath making, and those who have this kind of work to do should bear it in mind. Very early in the year the flowers are apt to come semi-double with a dark centre, but later on they are fine and very double. I have been using them for wreaths this season for the first time and found them most useful. This variety is not so vigorous as the single-flowered kinds, needs more culture, and does not strike so freely at the time when bedding plants are propagated, as the wood is apt to be rather wiry, and succulent cuttings are difficult to get from flowering plants. Plants put into rich ground and not allowed to bloom will yield soft shoots, and they ought to be struck a week or two earlier than the singles in order to allow a longer season of growth, which is needed if good plants in 4½-inch pots are desired for early summer decoration, as root action is comparatively weak.

Paris Daisies can be wintered quite safely in cold frames so long as they are guarded against hard frost. My cuttings were wintered in ainery under hand-lights. They were struck in small pots, taken out and shifted into 4½-inch pots, and made good specimens. They did not cost a penny for fuel. J. CORNHILL.

NOTES AND REPLIES.

Adiantums with long stems.—Can you tell me the best way to grow long-stemmed fronds of *Adiantum cuneatum*? I have tried potting them and starving them also, but with no suc-

cess. They are grown ininery under Vines. The stems are only 5 inches or 6 inches long in large pots, those in smaller pots are much shorter.—ADIANIUM.

[We regret being unable to tell you of any method whereby the length of stem can be increased to the extent you desire. Growing the plants in a heavily-shaded house with a moist and high temperature would cause the stems of the fronds to lengthen considerably, but it would be at the expense of the fronds, as these would be so fragile as to be practically useless, especially when cut for decoration. The best way to attain your purpose would be to grow those species of *Adiantum* the stems of which are of a considerable length even when the plants are grown under ordinary conditions. The treatment necessary for *A. cuneatum* will answer equally well for these.]

Double Ivy-leaved Pelargonium Kathleen Bunyard.—This is a very fine Ivy-leaved Pelargonium, and one that promises to take the market grower's fancy. The foliage is good, which is more than can be said of some of the other scarlet varieties. One of the first of this colour was Emile Lemoine. It was followed by several others, of which one, known as Scarlet Crousse, was for a time thought highly of. It, however, had no points in common with the well-known pink-flowered Mme. Crousse, which is so extensively grown. If Kathleen Bunyard takes the fancy of market growers, which appearances suggest it should, we may then expect to see it grown by thousands. The ways of the market man are, however, difficult to fathom, in proof of which I may mention that a few years ago one of the large growers was very much taken with some of the newer Ivy-leaved Pelargoniums. He grew a considerable number of each, but he assured me that they would not sell so long as he had any of the varieties Galilée and Souvenir de Charles Turner left. These two, with Mme. Crousse, form the most popular varieties of the present day. They are all very old kinds, having been sent out in the eighties of the last century, the most recent of the three being Galilée, which was distributed in 1887.—K. R. W.

Asclepias curassavica.—This *Asclepias* is in many parts of the tropics a troublesome weed, the silky wings with which the seeds are furnished enabling them to drift a considerable distance. In this country it is somewhat tender, but well worthy of cultivation as a greenhouse plant. The flowers, which are borne in terminal umbels, are orange-scarlet in colour. In the greenhouse its flowering extends over a very long period, and the same remark applies if it is planted out during the summer. Where fully exposed to the sun the flowers are brighter than when they develop in a shaded structure. Cuttings strike readily, and seedlings may also be raised in quantity. In winter the plants should be kept moderately dry and cut back to good eyes in the spring before they commence to grow.

Hibiscus Cooperi.—I first made the acquaintance of this plant a good many years ago in the conservatory at Mollance, Castle Douglas, in which, although strictly speaking a stove plant, it did well enough. For a *Hibiscus*, *H. Cooperi* is rather a small-growing plant, bearing its carmine flowers during the summer months. It is, however, attractive at all seasons by reason of its handsome foliage. Its leaves are of a deep shade of green, flaked and striped with white and rose. *H. Cooperi* may be effectively used for furnishing a back wall in a lean-to stove, and it is equally useful when grown in bush form.—W. McGUFFOG. *Balmæ.*

Freesias.—A hatch of *Freesias* will now be potted up for early flowering. They are shaken out from their flowering pots and the largest selected for putting into 5-inch and 6-inch pots, placing ten to twelve roots in a pot. They enjoy a light, rich compost with plenty of coarse sand.

ROOM AND WINDOW.**SOUTHERN HEATH IN THE HOUSE.**

This we find quite nice for the house; beautiful in colour and keeping well. We have already said so much about it of late that there is no need to enlarge more fully on such a precious plant.

FINE-LEAVED PLANTS IN THE HOUSE.

The finest of all plants grown for their foliage alone is undoubtedly the

ASPIDISTRA. There are other things as good—some perhaps more so—but the Aspidistra is a plant for everyone, and appears to be quite independent of the conditions which, in the case of things usually grown in rooms, are more or less indispensable. It requires no sun, very little air, and when stood in the corner of the room, where it does not get the full

was altered. This form requires plenty of light when growing, with only just enough shade to prevent the leaves being scorched. Grown in the house it must be kept in a window, not stood in an obscure position, and it must not be potted in rich compost, but just loam and leaf-soil in equal proportions.

THE INDIA-RUBBER PLANT is more difficult to keep in health, the trouble being to retain the lower leaves intact; in fact, this cannot be done indefinitely, as it naturally grows into a low tree of branching habit. The best way is to keep it until it becomes too tall for a window, and has a good bit of bare stem, and exchange with a florist, who is generally glad to get such plants for propagation. The leaves of the India-rubber are very leathery, and a healthy plant in a 4-inch or 6-inch pot can be kept several years in good condition if well cared for. In the first place it must

respectable retailer that it has come straight away from an expert grower. Given a plant that has been thoroughly well grown and that has never been exposed to adverse influences, the foliage will remain intact and retain its fine colour for several years.

ARALIA SIEBOLDI is wonderfully hardy; in fact, in the warmer counties it succeeds fairly well in the open ground, but, owing to the spread of its foliage, it is most suitable for good-sized bay windows. Like the Aspidistra, it can be maintained in good health when placed in a good-sized apartment where considerably removed from the direct influence of light and air. It is a good thing for corridors and entrance halls, as it does not fear draughts and variations of temperature.

GREVILLEA ROBUSTA is, perhaps, the most elegant of fine-leaved window plants. The erect, stiff habit and much-divided



Sprays of the Southern Heath (Erica australis) in a vase.

light, the colour of the foliage deepens. Not only is this the case, but it can be kept in the same pot without change of soil for several years, in fact it does better in this way than where it is frequently repotted. There is one thing in connection with this plant that should be borne in mind. Repotting or division should never be done until the young growths are a couple of inches long, as if shifted when at rest the plants will sulk and it may be the end of the season before young growths appear. The variegated variety thrives very well in a room, but in the course of time it reverts to the type. I daresay that some of your readers have come across old specimens which here and there show traces of variegation. These plants were in all probability quite variegated when young. I know they will go in this way. I have had them lose the white and recover it when the treatment

not be exposed to hot sun, and if kept during the winter in a constantly heated room the leaves must be sponged very frequently. I would strongly advise your readers never to purchase the plant from the hawkers who sometimes bring it among other things of a more hardy nature. The chances are that it has been away from the comfortable quarters where it was grown and has for a week or more been exposed to weather influences. Some plants, when thus treated, do not show the check experienced at the time, but the seeds of decay are sown, and, to the surprise of the owner, premature decay sets in, one leaf after the other turning yellow and dropping. The owner thinks he has been guilty of negligence, whereas he is quite innocent. My advice is, do not indulge in the luxury of an India-rubber unless you can buy one where it has been grown, or can take the assurance of a

foliage make it very attractive, and it can be kept in good health for a long time if well attended to in the way of watering and cleansing. It should be taken out occasionally and well washed with the rose or syringe.

ACACIA LOPHANTHA is of graceful growth, the bright green feathery foliage being very attractive, but it is of rapid growth, and, unless repotted annually when young, loses the bottom leaves. Therefore it is not a plant for windows of very moderate dimensions unless plants in 4½-pots are purchased every other year. If grown along into an 8-inch pot it may remain in good health several years, and nothing looks nicer where there is room in an apartment. When it begins to look shabby the best thing to do is to put it in the open ground for the summer and start again with a young plant. Not many, perhaps, have grown the

STAG'S HORN FERN in the house. It is a capital thing, very quaint and distinct, and apparently impervious to the atmospheric influences that obtain in a living-room during the winter.

CYRTORIUM FALCATUM is nearly hardy and good for corridors and similar places, and Asplenium bulbiferum and Pteris are two of the best room Ferns we have, as they may be kept in the same pots for several years without loss of beauty. Weak soot-water is good for them.

J. CORNHILL.

WINDOW PLANTS.

OLD-FASHIONED WINDOW PLANTS.—I often wonder what window gardeners of a past generation would think, could they see the display of Zonal Pelargoniums, Fuchsias, Paris Daisies, Begonias, etc., which can be made nowadays. Sixty years ago the window gardener had to be content with a very modest show, but some of the things then much favoured might well be grown at the present time. The Partridge-breasted Aloe (*A. variegata*) was a great favourite, and blooms freely when cared for, its distinctly variegated foliage being ornamental all the year through. The Mother of thousands (*Saxifraga sarmen-tosa*) is a fine basket plant and so easy to grow. The Hop plant (*Origanum*) was very frequently seen in cottagers' windows. Tom Thumb Fuchsia, a minute kind, is seldom seen nowadays. The Ice plant (*Mesembryanthemum*), the common Musk, the Rat's-tail Cactus (*Cereus flagelliformis*), a really fine thing when well grown (I once had a specimen in a basket, which annually produced quite a hundred blooms), several other kinds of *Cereus*, and the Candle plant (*Cacalia*), more curious than ornamental, perhaps, but of very simple culture, may also be mentioned. The old Musk was a great favourite, and the yellow *Mimulus* was in much favour. Another prime favourite was the *Auricula*, which some grew very well, and it is to be regretted that it is not much in evidence nowadays. It is a capital plant for the window-ledge, and, blooming early, can be taken away in time for the summer occupants.

EARLY-FLOWERING CHRYSANTHEMUMS.—The value of these is becoming more and more realised. They come just at a time when something is needed to keep company with the Michaelmas Daisies, and help to fill the void which autumn rains and frosts create. By the end of September the summer occupants of window-boxes are practically over. The Zonals and Fuchsias, which have done good work all through the summer, have come to the end of their tether, and this is the time when some nice plants of the early-blooming Chrysanthemums will be found very useful. Young plants put into 6-inch pots any time in June will be of the right size for window decoration. If propagated early in the season they will be too large unless they should be needed for entrance halls, corridors, or apartments of considerable dimensions, in which case the cuttings must be struck in February or early in March. The Desgranges family (white and yellow) is excellent, but there are many excellent varieties, this section of the family having been much improved and added to in late years. Intending growers should procure the list of some specialist, where they will find descriptions, including height, which is important, as the dwarf-habited kinds should be selected. I am sure that window gardeners would be pleased with these early-flowering Chrysanthemums, as they fill the void created by the sudden collapse of the tender plants.

BYFLEET.

GARDEN FOOD.

CHERRY RIPE.

I AM afraid I am in the same case with a great many people, as I never get any Cherries, although I have planted many. The birds get the fruit of the standard trees, and my wall-trees flower but do not fruit. I fear the soil and the situation are against them. It is a great pity that such a beautiful fruit as the Cherry should not thrive better than it does, and yet a large area of our country and Ireland must be well fitted for it where the soil suits.

The beauty of the Cherry should be taken into account. In countries like France and northern Italy, where the birds do not have it all their own way, the beauty of ripe Cherries is quite extraordinary, and the pleasure of getting them off the trees with the leaves attached is great. In our country, when the soil suits, it would be wise, perhaps, to depart a little from the wall business and develop the standard tree a little more where there is any hope of keeping the birds away. Having hunted Covent Garden without finding any ripe Cherries, in despair, I wrote to Mr. Bunyard for a sample, which I was glad to get, and he favours me with the following reply:—

For a dozen for garden use I recommend the following, arranged in order of ripening:—Early Purple Guigne, Early Rivers, May Duke, Governor Wood, Elton, Black Heart, Black Eagle, Waterloo, Black Tartarian, Bigarreau Napoleon, Florence, and Windsor. If only Royal Duke would fruit better it is, to my mind, most desirable for dessert and cooking; a true "Cerise," the jam made therefrom a revelation. Personally, I like all the soft flesh Cherries best.

W.

CULTURE.

Next to growing Cherries under glass, the best method, and the more certain way to obtain fine, handsome, thoroughly-ripened fruits is to grow the trees on walls. Excellent fruit is, of course, to be had from trees in the open, but owing to the inability of affording them adequate protection as soon as the fruit commences to ripen, it is seldom the latter is found to possess the same tenderness of flesh and rich flavour, neither does it approach in size examples ripened under glass or against a wall. The reason for the first named deficiency is readily explained because Cherries, when they commence to ripen, prove so irresistible to blackbirds, thrushes, and starlings that they have to be gathered while but partially mature in order to avoid, as a rule, a pecuniary loss. This is why the fruit as sent to, and seen in, the markets invariably lacks the essential qualities found in well-ripened samples. The same trouble has naturally to be contended with when the trees are grown against a wall, but in this case the difficulty is more easily overcome, as they can, at very slight cost, be netted so that the produce may hang unmolested until it has reached maturity. If wall space is available it is possible to have a supply lasting from the middle or end of May until the middle of August, by growing suitable varieties on walls varying in aspect from that of due south to north-west, and in favoured districts due north. On the first-named position should be grown such early maturing varieties as May Duke, Ludwig's Bigarreau, Guigne d'Annonay, Early Rivers, Frogmore Bigarreau, and Belle d'Orleans. Mid-season varieties to succeed those previously named, and consisting of Governor

Wood, Elton, Kentish Bigarreau, Bigarreau de Schrecken, Archduke Bigarreau, Noir de Schmidt, and others if desired, should have a position facing south-west. For a west and north-west aspect Bigarreau Napoleon, Black Tartarian, Bigarreau Noir de Guben, Emperor Francis, Noble, Waterloo, and Late Duke are a few suitable varieties which, of course, may be added to if accommodation for more exists. For a wall facing due north any of the early and mid-season kinds can be grown with success. With regard to

Soil, this, if unsuitable, must of necessity be made to answer the requirements of the Cherry, which are much the same as that needed for the successful cultivation of the Peach and Apricot, for instance. When very bad it should be excavated and a border or stations consisting of suitable compost substituted for it, the latter being the least expensive from a financial and labour-saving point of view. Heavy soils can easily be rectified by an addition of burnt soil and lime rubbish, the latter being very essential, while a moderate quantity of $\frac{1}{2}$ -inch bones and bone-meal will afford all the manurial aid the trees will require until they become established. For light and sandy soils a dressing of marl or clay, after it has been dried and reduced to a fine condition, will render them more holding and of suitable consistency. Here again bone manure will afford both a stimulant and the needful quota of lime. Where it can be spared or had for the digging new loam should not be omitted in either case, using as much of it as the circumstances of the case may appear to demand. Animal manure of any kind should be shunned as this only leads to the production of rank growth which fails to ripen properly. The right time to use such is when the trees come into bearing, and then only as a surface mulch, the properties of which will then be washed down to the roots by the action of rain, and in dry weather by artificial waterings.

Where the drainage is naturally good, and water passes quickly away, nothing further in this direction is needed, but when the subsoil is retentive of moisture, or if water is inclined to gather at a depth of 2 feet, it is useless to think of growing Cherries in such a position until it is properly drained. In ordinary circumstances the difficulty can be got over by putting in a good layer of brickbats or similar material, which will render the stations or border warm and dry and keep the roots out of harm's way.

FORM OF TREE.—What are termed fan-trained trees are the best for training on walls, and care should be taken when planting to see that they are not put in any deeper in the soil than they were when growing in the nursery. This remark, though applicable to the planting of all kinds of fruit trees, cannot be too strongly emphasised in regard to the Cherry. When the trees in due course come into bloom protection should be afforded in the same manner as for Peaches and Apricots, as the flowers are very tender. Black-fly is an enemy to be guarded against in spring, and to which special attention must be paid, otherwise the young growths and foliage quickly become crippled, which, besides affecting the current season's crop, ruins the prospects for the ensuing season. Tobacco-powder when fly first puts in an appearance, and later on Quassia extract, are the two best remedies, the first to hold the attack in check until the second can be safely applied. As soon as the fruit commences to colour clear water only should then be used for cleansing the trees.

A. W.

TREES AND SHRUBS.

ZENOBIA SPECIOSA.

I HAVE often had this plant and starved it in various kinds of loamy soil. The growth in the sun is very poor, and in clay soil, too. It is a native of the woods in Carolina, where the natural soil is mostly composed of dead leaves. At Hillbrook Place it is in a half-shady position. The place for the Zenobia in our gardens should be with American plants in peaty or leafy soils always.

SOUTH AMERICAN BARBERRIES.

MANY of the truly evergreen Barberries are natives of the Western Hemisphere, the pinnate-leaved species being freely represented in the northern portion of America. In the southern part of that

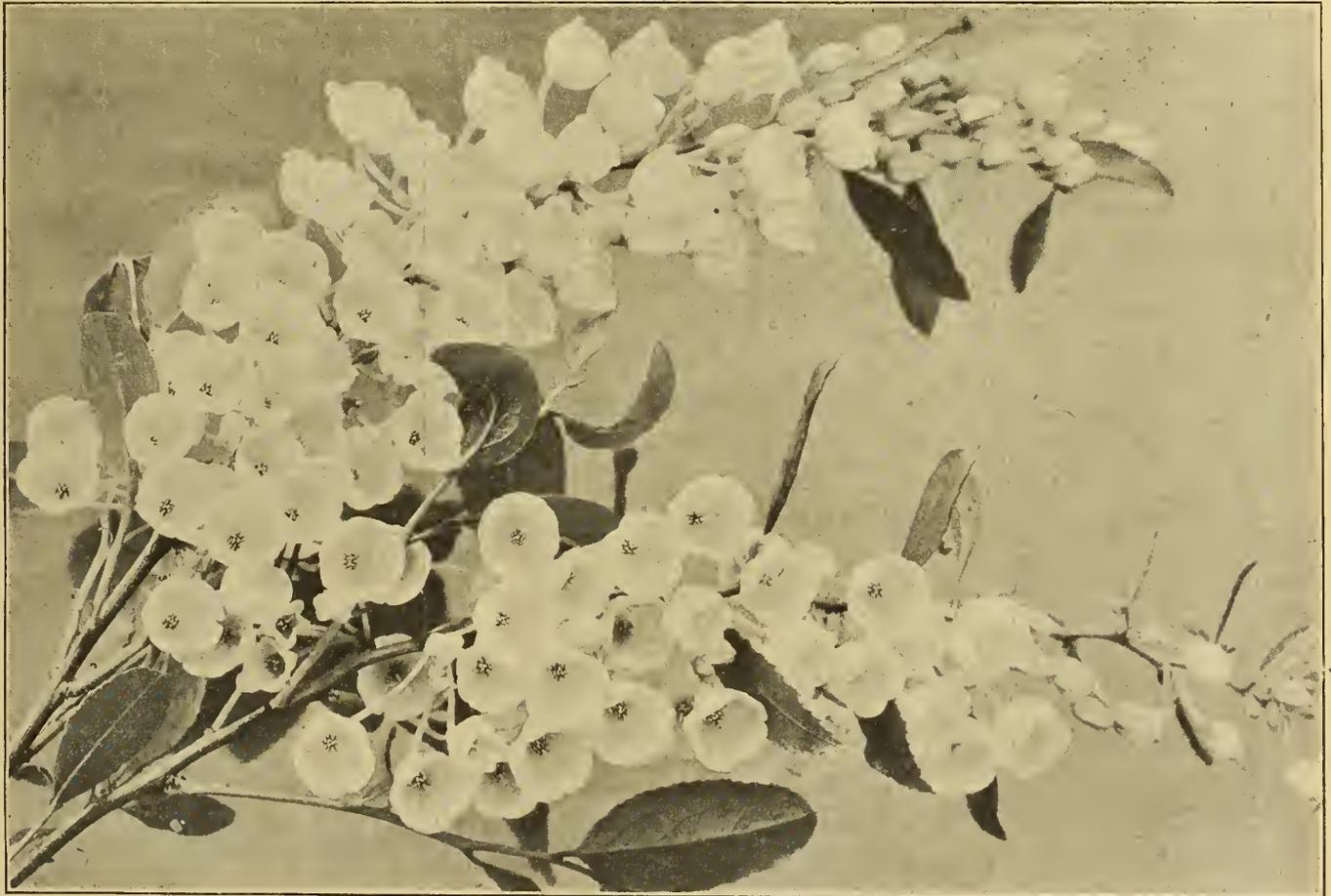
it flowers in May and is far more suited for the rock garden than for the shrubbery border. The blossoms are of a golden-yellow colour and freely borne.

BERBERIS HAKEOIDES. — One of the most distinct of all Barberries, and when seen at its best decidedly ornamental. It is of loose growth and under favourable conditions will reach a height of 10 feet to 12 feet. The roundish, hard-textured leaves, spiny at the margins, vary considerably in size, the largest being each over 2 inches in length. An interesting feature is that on the lower part of the specimen they are borne on long leaf-stalks, which gradually shorten till at the top of the shoots the leaves are almost, if not quite, sessile. The yellow flowers are small, but borne freely in dense, rounded clusters in April and May. Until the dispersal of the collection a fine specimen

actinacantha, *B. heterophylla*, and *B. ilicifolia*, but they are rarely met with.

BERBERIS STENOPHYLLA.—This claims mention with the South American Barberries, for though it originated as a chance seedling in this country its parents are conclusively proved to be *B. Darwini* and *B. empetrifolia*. It first appeared in the nursery of Messrs. Fisher and Holmes, of Sheffield, in the early 60's of the last century. It is commonly regarded as in beauty superior to *B. Darwini* itself, the habit of the plant being very graceful and the flowers borne in the greatest profusion. Its hybrid origin is shown by the fact that if seedlings are raised they often revert to the parents, chiefly to *B. Darwini*. K. R. W.

Tamarix pentandra.—In some gardens this is better known as *T. hispida aestivalis*, a name under which it was dis-



Zenobia speciosa at Hillbrook Place.

continent are to be found some desirable simple-leaved species, among them being one of the finest flowering shrubs of an evergreen nature that we have in this country. This is

BERBERIS DARWINI, whose orange-yellow flowers are borne in great profusion in April and May, while often during the autumn a second crop is produced. The spring blossoms are succeeded by berries which are a kind of bluish-black when ripe, and furnished with a bloom like a well-finished Grape. This Barberry is so readily raised from seeds that it is now one of the commonest of shrubs, for it readily adapts itself to our climatic conditions, far better, indeed, than most other natives of Chili.

BERBERIS EMPETRIFOLIA is, compared with the preceding, quite a miniature species, for though of spreading habit, it only reaches a height of about 18 inches.

(one of the original plants) stood in the Coombe Wood Nursery.

BERBERIS BUXIFOLIA, also known as *B. duleis*, is a rather stiff, erect-growing shrub that attains to a height of 6 feet to 10 feet, or even more. It is less of an evergreen nature than the species previously named, as in the event of a severe winter it loses most of its leaves. The yellow flowers are borne singly and hang suspended by long stalks. They develop earlier than any of the others, being often expanded quite early in April. There is a very curious dwarf form (*nana*) which forms a rounded tuft of foliage but rarely flowers. This Barberry is in a state of Nature spread over a considerable district, occurring as it does from the Straits of Magellan northwards to Valdivia.

Other South American species are *B.*

tributed by a French nurseryman a few years ago. Under normal conditions it forms a large bush or small tree after the style of *T. gallica*, but in gardens it is usually grown as a bush, cutting back the younger shoots during winter or spring to within a few buds of the base. Following this treatment, strong plume-like branches, each 2½ feet or 3 feet long, are formed by the end of July. These are clothed with dainty, bright-green leaves, every side branch on the upper two-thirds of the shoots bearing slender cylindrical racemes of pretty, rose-coloured flowers. The flowering period is from the middle of July throughout the greater part of August. To succeed with this shrub a sunny position on the outskirts of a lawn should be chosen and several plants should be placed together. Give good loamy soil and prune before the middle of February. The best method of propa-

gation is to take cuttings of ripened shoots 9 inches to 12 inches long in October or November, and insert them firmly in light, loamy soil out-of-doors. They should be allowed to remain undisturbed until the following autumn.—D.

Solanum crispum.—This flourishes in some of the south-western gardens of Scotland, and generous masses of its purple-blue flowers are to be seen in several places. Nowhere, however, have I seen it thriving so well as in Sir Herbert Maxwell's garden at Monreith, where big bushes give myriads of flowers in their season. In colder districts it requires a wall.—S. A.

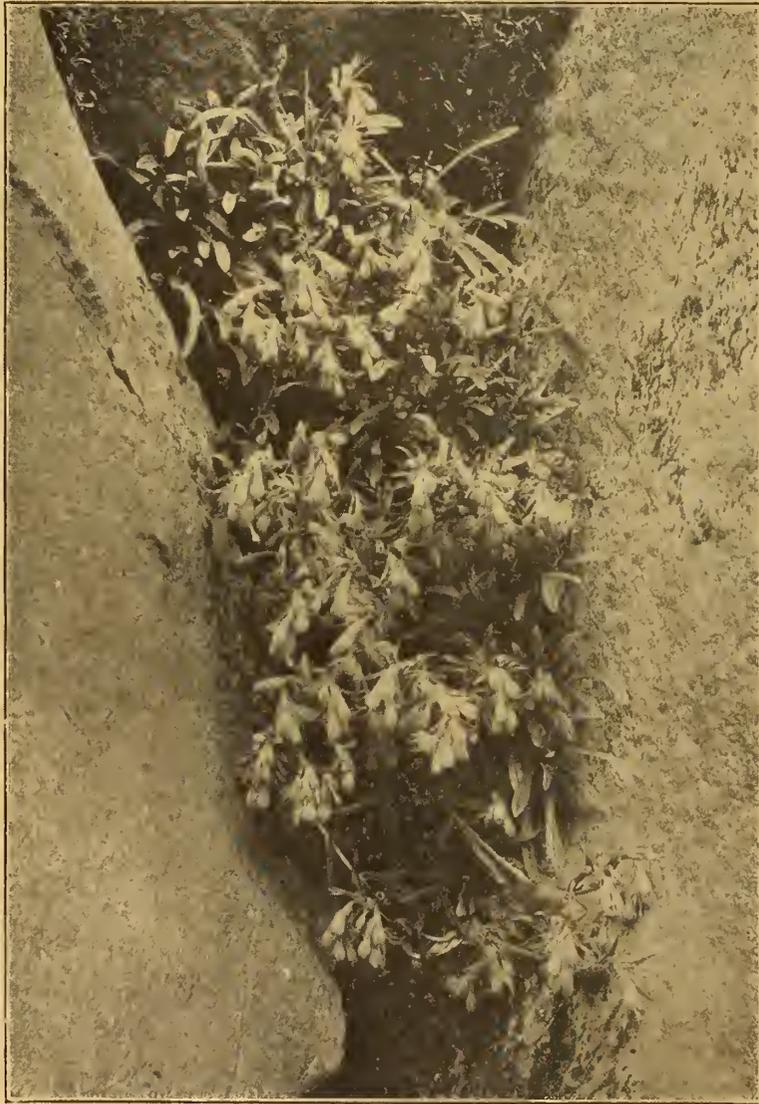
The Rock Roses.—The hardiest of the Cistuses with me is *C. laurifolius*, which will

sion. It is of vigorous growth, growing 6 feet high, flowers freely, and—in this district, at any rate—is not affected by spring frosts. The white blooms are produced in roundish clusters. Like others of the family, *S. bracteata* does best in a deep loam, and relishes a rather damp situation.—W. McG.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

THE GOLDEN DROP (ONOSMA TAURICUM).

This is one of the most beautiful of Borageworts, and one of the best and most free-flowering of all alpine plants. Per-



The Golden Drop (Onosma tauricum) in a deep crevice in the rock garden at Friar Park.

stand even more hard weather than *C. salvifolius*, which appears to come next in hardness here. *C. ladaniferus* is successfully grown in some of our south of Scotland gardens, but has suffered severely in bad weather. *C. purpureus* has pulled through some winters, but cannot be written down as hardy here.—S. ARNOTT, Dumfries.

Bryanthus erectus.—This is in bloom for the second time this season, although it has not so many of its pleasing flowers as earlier in the year. Planted in peaty soil at the base of a rock garden, it does very well with an almost due northern exposure. The pretty reddish-lilac, bell-like flowers go well with the varieties of St. Dabeoc's Heath, especially with the white variety.—DUMFRIES.

Spiræa bracteata.—Among the shrubby Spiræas, *S. bracteata* is well worthy of inclu-

fectly hardy, free-growing, profuse in flowering, bearing drooping cymes of golden blossoms that are delicately fragrant, it is a plant worthy of a good position in any garden. Its chief enemy is damp or a waterlogged condition of the soil. The plant dislikes manure. Plant it where a deep crevice—as in the illustration—is available for its roots, and, if possible, where its leaf-tufts may rest well above the surrounding soil, and the plant will give but little trouble. In sandy and light soils, generally, it is content on the level ground, though even here a few stones about the collar to keep the tuft free of the damp in winter are beneficial. Now is the best time to increase the plant, selecting as cuttings the

fresh bits of growth that can be torn from the stem with a heel attached. Such as these, in a cool and shady frame or hand-light, root readily.

NOTES AND REPLIES.

Lychnis Lagascæ.—This is one of the choicest plants for a retaining wall and has been flowering freely for many weeks with me. It likes a sunny, sheltered position, and must not be crowded up in any way with stronger-growing things. Its glaucous foliage and delicate pink flowers are lovely just now, and if it is in a dry position it will live and flourish for a long time. It ripens plenty of seeds, from which it can easily be increased, but there is a seed-feeding caterpillar which will clear most of the seed-pods in a night if it happens to be in the neighbourhood, so if seeds are required the plant should be watched, and if there is any sign of the caterpillar having been at work a visit with a lantern after dark will reveal the culprit. The same caterpillar will also work havoc with the seed-pods of any *Dianthus*, although its natural food is the seed-heads of the wild *Lychnis* and *Silenes*.—N. L.

Androsace lanuginosa.—A good grower of alpine plants tells us that this is the "tenderest of the lot," but this statement requires some qualification. It objects to winter wet and has also a curious way of going off without apparent cause when it has attained large dimensions. I have a photograph of a big plant from an English garden. This had been established for some years, but, unfortunately, a year or two later it died. Here we have a trying climate for plants which suffer from winter wet and spring frosts, but one of *A. lanuginosa* has survived these trials for eleven years, even though in some seasons it has not received the protection of a sheet of glass which it deserves. It likes a sunny place and a dry soil, with the protection of a piece of glass in winter and plenty of air.—DUMFRIES.

Platycodon Mariesi.—Maries' variety of *Platycodon grandiflorum*, the Balloon Flower of Japan, is much admired at this season, either in the bud or when the blooms are fully open. It is dwarfer than *P. grandiflorum*. Unfortunately there appears to be some ground for the complaint that the *Platycodons* are difficult to keep in winter, and there is a pretty wide consensus of opinion to this effect. Some attribute this to mice or slugs attacking the fleshy roots and destroying the young growths. Possibly the cause is wet in winter, as I find that *P. Mariesi* does much better in the moraine than anywhere else. As a late-flowering rock, moraine, or front border plant, *Platycodon Mariesi* is worth consideration. The white variety is very beautiful.—Ess.

Ramondia pyrenaica.—Apropos of the capital illustration and accompanying note on *Ramondia pyrenaica* on page 343, it is not generally known that the *Ramondias* make excellent wall plants, even on walls where there is but little soil in the chinks between the stones. Some notable examples of *Ramondias* on walls have come under my observation, none more interesting to me than in the Trinity College Botanic Gardens, Dublin, where the late Mr. F. W. Burbidge had established a number of *Ramondias* on a wall. Here they had seeded, and self-sown seedlings had appeared in some of the chinks.—S. ARNOTT.

"The English Flower Garden and Home Grounds."—New Edition, 12th, revised, with descriptions of all the best plants, trees, and shrubs, their culture and arrangement, illustrated on wood. Cloth, medium 8vo, 15s.; post free, 15s. 6d. Of all Booksellers or from the office of GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

FRUIT.

THE EFFECT OF VARIOUS DRESSINGS ON PRUNING WOUNDS OF FRUIT-TREES.

EXPERIMENTS were begun in 1911 with different substances on pruning wounds of fruit-trees in order to determine the effect of the various compounds in accelerating the cure of the injury and their preservative action against the attacks of fungi and injurious insects. These experiments have been made on Apple-trees (as representative of the pome fruits) and on Peaches (as representative of stone fruits).

The following substances were employed:—White lead, white zinc (both mixed with liseed oil), yellow ochre, coal tar, shellac, and Avenarius carbolineum. They were applied, at different times of the year, to pruning wounds of various sizes, some newly inflicted and others of some weeks' standing. The effects were observed, both in the case of the treated wounds and in that of those which were left open, at the end of the first and second season of growth. The principal results were as follows:—

In all cases the untreated wounds healed more rapidly than those protected by any of the substances enumerated. Amongst the latter, Shellac seemed, during the first period of growth, to exercise a stimulating effect on the development of bark around the wound; this effect, however, ceased at the second period of growth. Shellac caused the least injury to the tissues of the cambium, but, on the other hand, it had the least adhesive power. Avenarius carbolineum and yellow ochre did so much harm to the cambium that, in the writer's opinion, they should never be used for covering pruning injuries. The lesion produced by coal tar was less serious, but this substance disappeared more quickly, owing to absorption and evaporation. White lead and white zinc also produce a slight injury to the cambium tissues when they are first applied, but these tissues soon recover, and at the end of the first growth period hardly any trace of injury is left. White lead and white zinc were the most efficacious of all the compounds used, and the former was the better of the two. Nothing is gained by waiting some weeks after pruning before applying the dressings.

All the substances used in the experiments in treating the pruning injuries of Peach-trees produced such damage to the wood that the wounds did not close. Consequently, these substances should never be applied to the wounds of the Peach; this probably applies to all other trees with stone fruit.

In no case were the wounds, whether open or protected, observed to be invaded by fungi. As the substances used seemed rather to retard the healing of the wounds it may be concluded that the treatment of injuries to the wood is, to say the least, useless. Nevertheless, had the experiments been carried further, it is possible that they might have exercised a useful effect upon the healing of very large injuries; this, however, still remains to be proved.—G. H. HOWE in *New York Agricultural Experiment Station Bulletin*.

The Aribaud Peach.—The Aribaud variety of Peach (obtained by Dr. Aribaud at Condrieu, Rhône, France) has, for some years, been much cultivated in the part of the Rhône valley lying between Vienna and Saint-Rambert-d'Albon. Owing to its vigour, as well as the shape of its fruit, this Peach should be undoubtedly classified among the American varieties and

comes probably from a plantation of 'Precoce de Hale,' of which the trees were used as grafting-stocks. The Aribaud Peach-tree is very vigorous and prolific; its fruits are very large, weighing on an average from 5½ oz. to 7 oz. (some Peaches weighed as much as 10½ oz.); they are well-shaped, round and very firm, and therefore travel well. It is a freestone. The colour of the fruit is fine, although of a duller red than in other varieties, the pulp is white, of excellent quality, and very juicy. In the above-mentioned region the Peaches ripen, on an average, between August 5th and 15th.

GARDEN PESTS AND FRIENDS.

Gooseberries diseased.—Will you please let me know what is wrong with my Gooseberries? These are only small berries, though I have some berries as large as pigeons' eggs.—GOOSEBERRY.

[Your Gooseberries are very badly attacked by American Gooseberry mildew. All such berries should be gathered and burned at once and the bushes should be tipped as soon as fear of growth in autumn is passed, the tipplings being carefully collected and burned, as it is upon these that the winter fruits are generally produced by which the fungus is carried over to another year. In the spring, about the third week in May, the bushes should be sprayed with Burgundy mixture so as to prevent the first outbreak of the disease. Notice of the outbreak must be given to the Board of Agriculture, Whitehall Place, S.W., under a severe penalty for neglect.]

Rose leaves unhealthy.—I should be much obliged if you can tell me what is the cause of enclosed leaves being as they are. They grow quite far apart, but all seem affected in the same way. What causes Roses to die—not many whole plants, but a good many in parts? They are not old—some three years or four years, and a few planted last autumn. All are dwarfs.—MRS. COSBY TRENCH.

[The Rose leaves appear to be attacked by one of the sawflies, and they should be sprayed with lead arseniate to prevent further ravages. There are many causes for the dying back of Roses, but it is much more satisfactory to us if specimens with information as to the nature of the soil in which they are growing are sent which will enable us to say definitely what the cause of the trouble may be.]

Red-spider on Peach-tree.—I enclose some leaves from a young Peach under glass, and will be much obliged if you will inform me what is destroying them, and the remedy. The tree was planted last year in place of one which apparently died from the same disease. There are several other Peaches and Nectarines in the same house which do not seem to be affected by it.—E. A. COX.

[The leaves you send have been attacked by red-spider. Your only remedy if the tree has fruit on it is to syringe freely with clear water, taking particular pains to see that both the under and the upper surfaces of the leaves are thoroughly wetted. Then, as soon as the fruit has been gathered, take 2 gallons of warm water, in which dissolve 3 oz. of soft soap. To this add 1½ oz. of sulphide of potassium (liver of sulphur), and when dissolved syringe the tree with the solution, taking the same care to see that the leaves are well moistened as when using plain water. If one application fails to destroy the red-spider, then repeat it. Also see to it that the roots have a thorough soaking of water, as very probably the soil in which the roots are is dry, this also causing the attack of red-spider. Next winter, when the trees are quite dormant, either dress with Gishurst compound or spray with caustic alkali solution.]

Mealy-bug on Ceanothus.—Will you kindly tell me the name of enclosed insect? It appeared on a Ceanothus (grown as a climber on the house, facing east) two years ago. Last year I had the Ceanothus well syringed with insecticide, and a large number of the insects were removed by hand; but this year they are almost as numerous as ever. The Ceanothus appears to be quite healthy and has made good growth this year.—(Miss) A. M. HALL.

[Mealy-bug is most difficult to move if once it gets a hold. The waxy, cotton-like secretion with which the insects are covered renders syringing or dipping almost useless, fumigation also is of no use. The best thing you can do is to carefully examine the plant, and remove every trace of the insect with a small, stiffish brush dipped in soft soap and water, and then in about a fortnight look over the plant again. The plant should be unfastened and the wall limewashed so as to destroy any mealy-bug or eggs which may be in the cracks.]

ROYAL HORTICULTURAL SOCIETY.

AUGUST 15TH, 1916.

THERE was a decided falling off in the number of exhibits at the fortnightly meeting held on the above-named date, in great measure due to the exhibition having once been cancelled and subsequently reinstated. In some directions this gave rise to indecision, which probably kept not a few away. The result was the smallest exhibition of the year, one almost entirely composed of hardy flowers together with a few Orchids. There were, indeed, no Carnations, Roses, miscellaneous greenhouse plants, or Ferns, an unusual state of things at this season. The finer exhibits were of Phloxes and Gladioli from Haywards Heath and Langport respectively, and in both there was much to admire. Interest, too, centred in a well-grown collection of ornamental Vines and other Chinese plants from Elstree. Only three novelties received recognition.

HARDY PLANTS.

From one of the most comprehensive exhibits of herbaceous Phloxes seen this year—there were upwards of sixty varieties on view—we selected the following because of their distinctness. Le Mahdi, among the blue or violet shades, is well known as an indispensable sort, though, perhaps, Dr. Charcot, in deeper blue, surpasses it. Braga (lilac, white eye) is also good. G. A. Strohleim, a most brilliant scarlet with crimson eye, is not surpassed by any. Baron von Dedem is also of scarlet colour. Meteore (salmon) and Europe (white, with carmine eye) also stood out well. Fiancé, Ant. Buchner, Lassberg, Tapis Blanc, and Mrs. E. H. Jenkins are all first-rate among pure whites, while quite distinct and desirable. These were from Mr. James Box, in whose collection an exceptionally dark purple Aconitum labelled "Spark's variety" was remarked. The most distinct plant, however, was Campanula primulæfolia, an erect-growing species whose pale violet-blue flowers are conspicuously marked purple at the base. It is an old species rarely met with in cultivation. In a small exhibit from Mr. W. Wells, jun., some new Delphiniums were noted, the best of these being the sky-blue, white-centred Merstham Glory and Mrs. Kaye (royal purple and rich violet). Both are semi-double, the latter possessed of large individual blossoms and handsome spikes on which the flowers are easily disposed. Rev. E. Lascelles was also on view, and is still unbeaten. In Collarette Dablias, a new set having broad outer florets encompassing others of small size, we regarded the variety Bonfire a great advance. Of brilliant scarlet, it is 4 inches across, and,

tilted at a slight upward angle, looks at one. For the attributes named it should be good in the garden. Messrs. Dobbie and Co. were showing it. *Sollya heterophylla* and *S. Drummondii*, the former the Australian Bluebell creeper, are rarely shown in a collection of hardy plants, though they are charming at any time. They were, however, shown in company with such as *Eucryphia pinnatifolia*, *Poterium obtusum* (a new Japanese plant having arching spikes of rosy-carmine flowers), *Desfontainea spinosa* (with crimson and golden flowers), a lovely lot of *Berberidopsis corallina*, whose tresses of globular scarlet flowers on crimson pedicels render it an attraction wherever seen. *Saxifraga manschurica* is a distinct novelty, with tall stems of inconspicuous white and pink flowers, said to be a bog-loving kind. It and others named above were shown by Mr. G. Reuthe, whose collection also contained the rare *Spiraea caespitosa*, the graceful *Astilbe simplicifolia*, *Magnolia fuscata*, and *Desmodium Dilleni*, whose branches are terminated by clusters of rosy-purple flowers. All are worthy garden plants.

GLADIOLI.

Only one collection—and that of great extent—of these was on view. From the wealth of novelties shown we selected Queen Mary (ivory-white, with huge velvet-crimson blotch), Loveliness (yellowish-blush, shaded with delicate pink, a really exquisite blend), Mrs. G. W. Willcock (pink and yellow), Flag of War, and Kelway's Masterpiece (both intensely crimson), with Golden Measure, Golden Ray, and Yellow Beauty. Some Langprin (*primulinus* hybrids) were also shown. All came from Messrs. James Kelway and Sons.

CLIMBING PLANTS.

A score or so of giant specimen trained plants in big pots of new Chinese Vines and other plants were sent by the Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett). Of the *Vitis*, *V. armata* cyanocarpa and *V. Vicarii* were the most distinct, others of note being *reticulata* and *vitifolia*. Of *Clematis*, *C. Armandi* and *C. uncinata* are remarkable in foliage alone, the coppery-bronze of the young growth of the latter rendering it highly ornamental. Leaves of three species of *Gunnera*, *G. manicata*, *G. scabra*, and *G. Elwesi*, were shown, that first named the noblest of them all.

ORCHIDS.

Striking novelties of these in a group from Messrs. Hassall and Co. were the series of hybrids of *Cattleya Sybil* (aurca and iridescens), in which the most conspicuous variety was named Lord French. It has reddish or wine-coloured sepals, the lower half of the lip rich crimson, the upper half deep golden. The Duke of Marlborough gained an Award of Merit for *Cattleya weedonaurea*, whose rosy-mauve sepals and ruby-crimson lip render it attractive. Messrs. Charlesworth showed the very beautiful bronzy *Odontoglossum ardentissimum* Pintadeau and the new *Laelio-Cattleya Serbia*. For a graceful, pretty, and well-flowered specimen of *Odontoglossum aspidorrhinum* Mr. H. T. Pitt was given a cultural commendation. Messrs. Armstrong and Brown showed *Laelio-Cattleya Maqueda* and *Odontioda Cocksone*, the former a very dark-flowered variety, the more striking examples in a group from Messrs. Stuart Low and Co. being *Cattleya suavior alba* (very pure) and *C. Wavriniana* (rose and crimson).

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM AUGUST 16TH.—*Androsace lanuginosa*, *Dryas octopetala*, *Veronica Lyalli*, *Linarias*, *Sagina glabra*, *Convolvulus mauritanicus*, *C. althæoides*, *Plumbago Larpentæ*, *Gentiana septemfida*, *Mimulus* (in variety), *Pratia Arenaria*, *P. ilicifolia*, *Arabis*, *Aster alpinus*, *Anthemis Kelseyi*, *Francoas* (in variety), *Primula capitata*, *Potentillas* (in variety), *Geums* (in variety), *Sedums* (various), *Dianthus*, *Statice* (in variety), *Tunica Saxifraga*, *Thalictrum Delavayi*, *T. dipterocarpum*, *Cerastiums*, *Bergamots*, *Helenium pumilum*, *Erodiums*, *Achilleas*, *Platystemon*, *Lobelia cardinalis*, *Gazania splendens*, *Agrostemmas*, *Erigerons*, *Helianthus* (in variety), *Eryngiums*, *Acanthus*, *Echinops*, *Galegas*, *Hollyhocks*, *Tritomas* (in variety), *Romneya Coulteri*, *Oenotheras* (in variety), *Montbretias* (in variety), *Centaureas*, *Herbaceous Phlox* (in variety), *Chrysanthemum maximum* (in variety), *Aster Amellus*, *A. Novi Belgii*, *Rudbeckias*, *Campanulas* (in variety), *Linums*, *Anchusas*, *Delphiniums*, *Meconopsis*, *Anemone japonica* (in variety), *Gladiolus* (in great variety), *Liliums* (in variety), *Gysophilas*, *Scabious* (in variety), *Hyacinthus candicans*, *Carnations* (in variety), *Sweet Peas*, *Roses* (many species), *Clematis* (in variety), *Honeysuckles* (late varieties), *Salvias*, *Stocks* (in great variety), *Pentstemons* (in variety), *Antirrhinums* (in many colours), *Sweet Sultans*, *Acrocliniums*, *Leptosiphons*, *Lavateras*, *Verbenas*, *Salpiglossis*, *Coreopsis* (in variety), *Godetias*, *Nigellas*, *Clarkias*, *Cosmos*, *Phlox Drummondii*, *Dianthus Heddeiwigi* (in variety), *Annual Delphiniums*, *Nemesias*, *Collinsias*, *Heliotropes*, *Ageratums*, *Calceolarias* (in variety), *Buddleias* (in variety), *Hardy Fuchsias* (in variety), *Ceanothus* (several), *Olearia Haasti*, *Rhus* (in variety), *Viburnum coriaceum*, *Veronicas* (shrubby) (in variety), *Calycanthus floridus*, *Magnolia grandiflora*, *Hydrangeas*, *Berberis Wilsoni*, *Spiræa Aitchisoni*, *Andromeda polifolia*, *Spartium junceum*, *Polygonums* (in variety), *Astilbes* (in variety), *Senecios*, *Epilobiums*, *Solidagos*, *Lysimachias*, *Lythrum roseum*, *Aponogeton*, *Arrow Head*, *Nuphar*, *Water Lilies* (in variety), *Flowering Rush*, *Cimicifuga racemosa*, *Verbascums*, *Nepeta Mussini*, *Hypericums*, *Jasminum affine*, *J. humile*, *Bocconia cordata*, *Catalpa japonica*, *Daphne Cneorum*, *Clerodendron trichotomum*.

THE WEEK'S WORK.—Up to the time of writing no rain has fallen in these gardens since July 17th, and almost everything has to be watered every second or third day. *Violas* have been denuded of their seed pods for the third time and other plants have needed similar attention. As soon as the flowers of stock-flowered Larkspurs begin to fade the spikes are cut off to encourage the formation of fresh inflorescences. *Pentstemons*, *Antirrhinums*, *East Lothian Stocks*, and many other plants are (as far as possible) given the same attention. The autumnal display of flowers depends very largely upon the treatment the plants receive during this month. The rock garden requires frequent attention as regards watering, weeding, and cutting off of spent flowers, also saving of seeds of choice subjects it is desirable to increase. This with a large collection is an important matter, as many subjects are short-lived. Where much watering has been done and the soil partially washed away from choice alpine, they have been given a top-dressing of fine soil to which plenty of coarse sand and grit was added. This will induce them to make fresh roots and the stock of choice subjects may often be readily increased by this means. The late-flowering varieties of *Deutzias* have been very fine. The flowers being now past, the shoots have been cut back to allow more space for the flowering shoots of next year. The plants are pruned so that flowers may be produced from the base instead of from the upper parts only, which they have a tendency to do unless corrected by judicious pruning. *Spiræa arifolia* and *S. Lindleyana* have also finished flowering, and these have been slightly pruned, merely taking out a shoot here and there to ease the plants where overcrowded. *Canterbury Bells*, *Delphiniums*, *Potentillas*, *Foxgloves*, and *Pyrethrums* raised from seed

sown last month have been pricked out into nursery beds on a warm border. It is necessary to shade the plants from the sun for a few days and water morning and evening.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Flower gardens.—To keep Zonal Pelargoniums with a minimum of trouble during the winter they require to be propagated early, so that they may be well rooted before winter sets in. The present is the best time to take this matter in hand, as the cuttings will now strike in the open either in boxes, pans, or dibbled into a border facing south. The box method gives the least trouble, as the cuttings, when struck, can remain in them till the following February or the usual time for potting off. The boxes should be filled with a mixture of loam and leaf-mould and then surfaced with sand. If the compost is passed through a ½-inch sieve the rougher portions come in for placing in the bottom of the boxes and over the crocks, of which but few, and those over the drainage holes, are needed. If the boxes are prepared beforehand the cuttings can then be inserted as fast as they are taken and made. Care must be taken not to spoil the appearance of the beds when this is done, labelling each variety correctly at the time to avoid having trouble in future in regard to nomenclature. If given a good watering at the time they will need no further attention for a week, if the weather is dry. If the cuttings are dibbled into a border the soil should be raked down to a fine condition and some compost of a similar nature to that named above added to the surface if the staple is in any way unsuitable. A dressing of pit sand will leave it ready for the reception of the cuttings, which should be dibbled in in rows 5 inches apart, the cuttings distant some 4 inches from each other. Soft-wooded and more tender subjects, such as *Heliotropes*, *Lobelias*, *Ageratums*, etc., should be struck in pans in a frame. From a good stock secured in this way any quantity can be propagated after the turn of the year.

Carnations and Picotees.—These must be layered without delay so that the resulting plants may be potted up and become well established before winter sets in; they will then winter well in a cold pit or frame.

Crassula coccinea.—This brilliant-flowered subject, useful alike for the embellishment of the greenhouse or for the filling of flower beds, should now be propagated. From four to five cuttings made from the top portion of the old plants should be inserted in 5-inch or 6-inch pots—four round the outside and one in the centre—filled with sandy compost. Being of a succulent nature, beyond that applied to settle the cuttings in position, water must be rather sparingly given afterwards until they are well rooted.

Pansies.—Seedlings to the requisite number must now be pricked out in a partly-shaded position outdoors or cold frames, the chief aim being to obtain good robust plants for the filling of beds and planting out in borders after the summer occupants get shabby.

Dahlias.—These now require all the time that can be spared in the way of thinning growths, staking, tying, and watering, if the hot weather continues.

Strawberry potting.—This should be got on with and brought to a close as soon as possible, so that the plants may have every possible chance of becoming established and the crowns ripened by the end of the autumn. Six-inch pots are quite large enough for the plants which will be forced early, but they may be one or two sizes larger for those intended for later work. Good fibrous loam should form the basis of the compost, adding a little well-rotted manure and lime rubble also in the case of heavy loam. Potting should be firmly done with the aid of the potting-stick, and when finished stand them in blocks in their several varieties in full sun on a hard base coated with fine cinder ashes to prevent worms gaining ingress. Until well rooted, the pots may stand fairly close together, afterwards sufficiently far apart for air to

circulate freely round them. Watering must have careful attention, and in hot weather the syringe freely plied over the foliage night and morning. When the roots commence showing at the crock holes, the pots should be moved round every week to prevent them from laying hold of the soil.

Figs.—The second crop being finished on early-forced planted out trees, all further shows should be suppressed, pulling off fruits which are of any size, and preventing as far as possible the further development of others by keeping the house as fully ventilated as circumstances permit. The roots, so long as the foliage remains firm and green, must have all the water they require, and to keep the former free from red-spider attack ply the syringe freely in fine weather. Root-pruning where necessary can be undertaken in regard to early forced trees by the end of the present month.

Marguerites.—Plants of both the single and double varieties which flowered earlier in the season and were subsequently cut back are now ready for a shift into larger pots. For these plants a too rich compost is a mistake. Firm potting is essential to free blossoming, while a little lime rubble added to the compost is also an aid in the same direction.

Cucumbers.—Plants which have been in bearing since early spring need every encouragement if they are required to continue yielding fruit until the end of the season—in the way of frequent top-dressings, stimulative waterings, thin training of the old bine, and the preservation as far as is needful of new growths. The crop should also be so regulated that too many fruits are not ready for cutting at one time. Plants exhibiting signs of suffering from eel-worms at the roots should be rooted out and burnt, there being no cure for this malady.

Tomatoes.—For winter supply a stock of plants should at once be raised either from seed or cuttings. Plants now in full bearing require plenty of stimulants and top-dressings, dispensing with all superfluous foliage in order that the sunlight may play freely on the fruit. To relieve the plants as far as possible, gather the fruits directly they become coloured, as they will finish on a shelf or stage.

A. W.

MIDLAND COUNTIES.

Early dessert Apples, such as Irish Peach, Gladstone, and Langley Pippin, will soon be ready for gathering. These early varieties of Apples will not keep long after they are gathered. The trees should be frequently examined with a view to picking off any fruits that are ready. They are best gathered before they are dead ripe, and only by careful judgment can they be sent to the table in their best condition, as they quickly lose their flavour and become mealy.

Apricots.—The crop is a very thin one. As soon as the trees are divested of the few fruits they are carrying they will be given a good washing with soapy water, and, as the roots are dry, the border will be given a thorough watering. Any secondary shoots are pinched back to the first leaf, and any robust shoots on young trees shortened, in preference to pruning them in winter.

Loganberries require much the same treatment as Raspberries. All the old fruiting growths should be removed as soon as they have been cleared of fruit to make more room for the young shoots for fruiting next year. Secure five or six of the strongest to the trellis or poles, according to the space available, to prevent their being damaged by winds, and apply liberal supplies of liquid manure or other stimulants to the roots. The same treatment should be given to Blackberries. Both plants being gross feeders, they require liberal treatment, especially when planted on light, poor soils.

Strawberries.—Continue to remove all runners as fast as they appear, and keep the soil frequently stirred between the plants. It is a good plan to set out a few rows of plants for supplying runners next season, whether for forcing in pots or forming new plantations. The ground should be well prepared by double

digging and manuring. Set out the plants in rows 1 foot apart, allowing about 9 inches between each. All flower-spikes must be removed throughout the season. During the present hot, dry weather fruit-trees on walls require daily attention in the matter of watering and syringing.

Hippeastrums.—As the earliest batch of these has completed its growth, and the foliage is turning yellow, water is gradually withheld and the plants exposed to the full sun in order to ripen the bulbs. At this period a lower temperature is advisable, and fresh air is admitted freely whenever the conditions permit. A quantity of Roman Hyacinths having come to hand, these are being put into boxes. I prefer to use boxes in the early stages of growth. It is a very easy matter to make them up into pots or bowls before they come into flower, taking care to select bulbs of the same size and stage of flowering for each particular pot or bowl. By adopting this method the pots or bowls frequently present a better appearance when the plants are in bloom than when the bulbs are grown during all their stages in pots. The bulbs are started in ordinary cutting boxes, using a sandy, porous compost, placing the bulbs at a distance of 2 inches apart each way. After the boxing is completed apply a good watering and stand them in a position where 6 inches deep of ashes (that have been well exposed to the weather) may be placed over them until the bulbs commence to grow, at which stage the ashes should be removed and the boxes placed in an unheated frame. When the roots have begun to extend freely into the soil the boxes may be placed in a warmer atmosphere, as required to force the plants into flower.

Cauliflowers.—A sowing of Early London will be made at the end of the month to provide plants for wintering in a cold-frame. As soon as the young plants are large enough they will be pricked out into their winter quarters. When established air liberally to keep the plants as sturdy and as hardy as possible. Plants of this description will be better able to stand the winter, and will not be likely to suffer a check when planted out in spring.

Potatoes.—All early and second-early varieties of Potatoes will be lifted as soon as possible and the tubers placed in a dry shed from which the light can be excluded. It is not wise to make very large heaps or the Potatoes may become heated and their quality affected. Tubers for next season's planting should be selected and allowed to remain in the open for a few days before they are placed in their winter quarters. A shed where light and air can be freely admitted is the best place in which to store them.

Herbs that have been cut and dried for winter use will be stored away in a dry loft where there is a free circulation of air. If seed of Basil is sown now and the seedlings pricked off into pots as soon as they are large enough, the plants will furnish a plentiful supply of green leaves throughout the winter. Grow them in a temperature of 65 degs. Frequent small sowings of Chervil are made in a sheltered part of the garden, the plants being watered freely in dry weather. About the middle of September a good sowing of Chervil will be made to furnish plants for the winter, choosing a sheltered site where protection from frost and snow can be afforded. Plants of Sweet Marjoram set out about six weeks ago will be cut down to within 2 inches of the ground and allowed to make fresh growth before they are lifted and potted for winter supplies. The plants are wintered in a slightly heated frame, removing the lights during fine weather to prevent the foliage from damping.

Clearing up.—Continue to clear and burn all exhausted crops. The ashes will provide excellent material for dressing the soil later. Growing crops should be hoed frequently and watered as often as circumstances permit. Liquid manure is of great assistance to such plants as Celery, Leeks, Runner Beans, French Beans, and Cauliflowers. Late Peas must be afforded liberal supplies of water. Mildew is one of their worst enemies, and the best remedy is flowers of sulphur applied as soon as mildew makes its appearance.

Cucumbers for winter use should be planted without delay, so as to cover the trellis before it is necessary to crop the plants. The house should be thoroughly cleansed previous to planting, so that no insect pests may remain from summer crops. Very little air will be necessary, provided the plants are shaded on bright days. Keep up a humid atmosphere and encourage growth by frequent light top-dressings of loam and manure from a spent Mushroom bed in equal parts, with the addition of slight dustings of soot from time to time. This will give the foliage a dark green colour, and will also add to the colour and good appearance of the fruit. Avoid a high temperature by fire-heat, this in my opinion being the cause of more failures than many are aware of.

F. W. GALLOP.

SCOTLAND.

Flower beds.—Growth has been slow among bedded-out plants—indeed, the display is not general yet. The cold weather, accompanied by wet, which followed planting, gave the various subjects a check from which they were slow to recover. In such a season as this has been, no matter how carefully hardening off is done, there must always be a set-back to tender plants. With a renewal of heat, however, progress is being made, and, given favourable conditions during August and September, a good display may yet be anticipated.

Fruit picking is now in full swing, and occupies a considerable portion of the available time. No picking is done on damp days, and until the sun dries up the dew in the mornings the fruit is left alone. Crops of bush fruits and Raspberries are, on the whole, satisfactory, Gooseberries being decidedly later than usual.

Morello Cherries.—These are quite a good crop on old trees, but on younger trees the fruits have not stoned well. During the week it has become necessary to net the trees. Birds are numerous, and inclined to be destructive in respect of this crop; while, in addition, squirrels at times develop a fondness for these Cherries. This, I am inclined to think, is more for the sake of the kernel of the stone than for the pulp of the fruit. When these are numerous they soon do considerable damage, cotton nets being no obstacle to their sharp teeth.

Vines.—Unless attention can be given regularly at this time there will be an outbreak of insect pests. The best preventive of red-spider or of thrips is robust foliage, and this can only be obtained by strict attention to details, especially in the way of admitting plenty of air on all suitable occasions. Should red-spider attack the leaves of Vines upon which the berries are colouring it is a serious matter, for the syringe cannot be used, and the sponging of the foliage is an utter impossibility. Therefore, it pays to devote some time at close intervals to the needs of Vines, even if other work be pressing rather severely.

Winter-flowering plants.—Salvias and Eupatoriums which have been planted out ought to be inspected occasionally and pinched at intervals in order to induce a shapely habit. If the weather is at all hot or dry the roots must be kept moist either by watering or mulching. Genistas, generally grown during summer in pots, may, with advantage, be plunged. The roots by plunging are kept cool and consistently moist, while the plants retain their colour in a higher degree.

Cinerarias and Primulas.—These, too, must at this time be grown as coolly as possible. Cinerarias especially appreciate a slight shade during the middle of the day when the sunshine is strong. The leaf-mining maggot may at times be troublesome. On the first signs of an attack the plants should be looked over, and the intruders, which are easily detected in the tissues of the leaves, squeezed between the finger and thumb.

Chrysanthemums.—Owing to pressure of work in other directions the staking of Chrysanthemums has been somewhat retarded. The work, however, is being persevered with, and it is hoped soon to bring it to a conclusion. The pots being now full of roots, weak

liquid manure, varied by soot water, is of much assistance to the plants. An occasional change of stimulant may with advantage be given, guano or some concentrated fertiliser in solution making a good change. If top-dressing has not yet been done, it ought to be attended to at the first opportunity. Other work among Chrysanthemums at this time comprises the regular removal of side shoots and the securing of the stems to their supports. Should carwigs be troublesome they must be persistently hunted for until they are exterminated. Pots of small diameter inverted upon the stakes, with a little Moss in them, make as useful traps as anything else, although slices of Potato laid on the surface of the pots or in their neighbourhood have been found to be of some use.

Ferns under glass.—Now is the correct time at which to sow spores of Ferns cultivated under glass. Spores can, of course, be sown at any time, but those who grow a collection of Ferns will notice that the spores on the backs of the fronds are ripe, and therefore it is more satisfactory to sow now than in spring, when the vitality of the spores may quite conceivably be less. The soil must be in an equable state of moisture, as, if this is neglected after germination occurs, the seedlings will perish. Any young Ferns which require more pot room should be shifted on without delay. The Filmy Ferns and some others are very interesting, but they are not so useful in a general way as the majority of Ferns, for they cannot safely be employed in rooms.

Hardy fruit.—During the week summer pruning was brought to a close. Growth is satisfactory, being good but not excessive. Much depends on the weather from now till the end of September. If the conditions are favourable the wood will mature well. Trees carrying normal crops were well watered. It must not be inferred from this that those which have thin crops are being neglected. This is not the case; but, in the meantime, those which are more heavily laden are given precedence. As time permits, the work will be continued until all have been watered. Some thinning was done among young Appletrees on dwarfing stocks, which, differing from older and orchard trees on Crab, are bearing good crops. Mulches were given where necessary, both to these trees and to Pears.

Soil for cuttings.—Cutting time will again shortly be at hand, and a sufficient quantity of suitable soil of a light, somewhat sandy nature is being got ready in order to prevent delay when it is needed.

Autumn Onions.—During the week a full sowing of autumn Onions was made. More seeds than usual were sown. Sowing in heat during spring has to a large extent ousted the culture of autumn Onions; but owing to the scarcity in late spring of the present year in many gardens, autumn Onions will be more extensively sown than has been the case for years. A quarter which had carried a crop of early Potatoes was selected for sowing. Having been well manured for that crop, it was considered rich enough. No digging was practised, the soil was merely cleaned and levelled and made very firm. A distance of 14 inches was allowed between the lines, and sowing was done rather more thickly than in spring.

Spinach Beet.—At the same time a sowing of Spinach Beet was made. Leaves from this sowing will not be numerous during winter, but may be depended upon to keep up a supply during spring and almost until the end of June next season.

Cabbage seed was sown in bulk at the same time. Small hearting kinds are, as previously indicated, preferred, and plants from this sowing are more reliable than those sown previously. The latter will shortly be transplanted to nursery beds.

Curly Kale.—A small quantity of this to provide a few lines of plants in spring was also sown. These plants, although they go to seed early next autumn, are useful for providing a substitute for Spinach in the event of a hot, dry, summer. W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Red-spider on Violets (L. W.).—Your Violets have been attacked by red-spider, due in great measure to dryness at the roots and neglect to keep them well syringed during the summer. Your only plan now is to syringe the plants well with Quassia extract, seeing to it that the leaves are thoroughly wetted on both sides.

Larkspur disease (M. B. Newman).—The disease on the Larkspur you send is the mould known as *Carospora Delphinii*, and you should at once root up and burn every plant. If possible, apply a lighted wisp of straw or paper to the plants where they stand in order to prevent the distribution of the mature spores, subsequently destroying the plant and not a little of the surface soil around by burning.

Mildew on Rose (J. S. Purden).—Your Rose has been attacked by mildew, due in great measure to the exposed position and the gravelly soil in which it is growing. Next spring, on the first signs of mildew, well syringe the plant with a solution of sulphide of potassium at the rate of $\frac{3}{4}$ oz. to a gallon of water, repeating this when it reappears. Rambler Roses, when trained on a wall, are very susceptible to mildew, the best place for them being an arbour or a pergola.

Asters diseased (M. B. Newman).—Your Asters have been attacked by a fungus common to these plants. Your only remedy is to pull up and burn all the affected plants and give the soil a good dressing of lime. This might be repeated next spring, though it were better to avoid the contaminated area and plant the Asters elsewhere. Where the attack is of a mild nature it may if taken early be checked by dusting the bases of the plants and the surrounding soil with powdered lime and sulphur mixed.

Oleander flowers failing to open (E. A. M.).—Oleanders will occasionally behave as yours are doing, some varieties being more liable to do so than others. The cause of it has given rise to a good deal of speculation, and it is generally considered to arise from the roots having at some time received a check, particularly in being allowed to get too dry, for, given thorough drainage, the Oleander is a moisture-loving plant. In the case of some large old plants that we once had we used to give them, about once a fortnight, a dose of weak liquid-manure, beginning just as the flower-buds were seen and the blooms opened freely.

Rose leaves spotted (A. G. C.).—Your Rose leaves have been attacked by a fungus known as Rose-leaf blotch (*Actionema roseæ*). The infested leaves should be picked off and burned, and if many leaves are affected the whole shoot should be cut away. Next spring spray with Bordeaux mixture when the buds are about to burst, and again in a week or ten days' time. The following mixture is also very good:—Take 3 oz. of carbonate of copper and make it into a paste with a little water, then add slowly a pint and a half of strong ammonia. This should produce a clear blue fluid, which dilute with 22 gallons of water before using.

Roses from cuttings (H. B.).—October is the best month to take cuttings, which should be procured from shoots that have flowered. They should be, if possible, from 6 inches to 8 inches long, the ripest and firmest being selected. When taking the cuttings it is well to remember that the nearer they are cut off to the old wood the better, all the leaves with the exception of one or two at the extreme points being removed. The soil should be of a sandy nature and made fairly firm, proper drainage being ensured. It is also important to choose a position where shelter can be afforded during severe weather. The plan of inserting some coarse sharp sand in each hole before putting in the cutting is a good one, and goes a long way to the formation of roots.

FRUIT.

Scale on Peach-trees (W. M.).—There is no insecticide we could advise you to use now your trees are advanced in growth that could

be said to be both safe and effective. You could soon reduce them with a pointed stick, going over the branches one by one. This is a practice we have often had recourse to in summer when scale that has escaped winter dressings makes its presence felt. The scale will be found mostly on the older wood now, and can be easily crushed with a thinly-cut piece of wood. It is better, because safer, to spend time thus than to run the risk of injury to trees and fruit with strong insecticides. Make a point of dealing with the scale after the crop is cleared.

MISCELLANEOUS.

Clover in lawn (Moreton).—Next spring try what a few dressings of nitrate of soda will do, beginning as soon as growth shows signs of starting. This will encourage the Grasses and enable them to stand up against the Clover. You may apply this at the rate (roughly) of 1 lb. to 2 lb. per square rod. Have you been using any manure on your lawn? We ask this question because it is well known that certain kinds—one in particular—have a tendency to encourage the growth of Clover, and as farmers like Clover in their pastures, this tendency is one of the reasons why they use basic slag.

PLANTS AND FLOWERS.

R. Nolan Ferrall.—Such protection as you refer to would be of no use, as when the haulm is destroyed the tubers would do no more good and might as well be lifted. Besides, August is too late to plant Potatoes.—M. F.—You may now cut out any of the weak and old wood that has flowered, but do not cut off the leaves. The "black, dirty stuff" on the leaves is probably due to mealy-bug, which may be also on other plants in the house, and so long as this pest is present you will never be able to clean the Rose. If such is the case, all badly-infested plants should be burned. The hardy slipper Orchids are best grown in the open air.—G. B. R.—You may cut the shoots back during the winter. Doing this will not stop its flowering. The only thing will be that the flowering will be delayed for a year. Do not use the shears—cut back with a sharp knife. It would, however, be far better if you could possibly allow the tree to grow naturally, as in this way its beauty will be emphasised.—C. Champernowne.—We cannot trace the plant you refer to in any book of reference we have. Kindly send us a specimen shoot of the same, and we will do our best to help you.—Pat, Dublin.—The best remedy in the case of the caterpillars is to persevere with the hand-picking. You might also try what syringing the plants with Quassia extract and soft soap will do. This insecticide will certainly clear off the green-fly.—Norah.—Please send specimens of the white insect you refer to.

NAMES OF PLANTS AND FRUITS.

Names of plants.—F. M. A. H.—*Campanula rapunculoides alba.*—How, *Halifax.*—Costrmary (*Chrysanthemum Balsamita*).—J. Knight.—*Echinops Ritro*, so far as we can say without leaves.—J. A. K.—Looks like a small bloom of *Arctotis grandis*. Please send better specimen in small box to prevent its being crushed.—Norah.—We cannot undertake to name Roses.—J. N. B.—*Mauve flower:* *Chelone Lyoni*; *Pink:* *Godetia var.*, please send better specimen.—Edwin Griffiths.—*Spiræa Douglasi*.

CATALOGUES RECEIVED.

LITTLE AND BALLANTYNE, Carlisle.—*Bulbs, Roses, Fruit-trees, etc.*, 1916.

SUTTON AND SONS, Reading.—*List of Bulbs for* 1916.

T. SMITH, Newry.—*List of Hardy Bulbs*, 1916-17.

Parcels sent to our office insufficiently stamped will, in future, be refused.

Bulb growers will oblige by sending early copies of their Lists and Catalogues to MANAGER, "Gardening Illustrated," 63, Lincoln's Inn Fields, London, W.C.

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NURSERYMEN AND SEEDSMEN AS LANDSCAPE ARCHITECTS.

GOING up Hatfield way through the north of London roads last autumn, I saw, as one may often see, a board sticking out of a garden announcing occupier to be a landscape gardener; and now are seen bold advertisements of seedsmen advertising that they are ready to lay out gardens. The business of a nurseryman is a very useful and honourable one, and we are indebted to the great houses—such as Lee, Waterer, Veitch, and others—for what they have done for gardening in England; a man who keeps a good nursery in working order must be an able and busy one. But landscape design, in any bold sense as it would be carried out in a country place, is entirely outside his province. A man of genius may rise in the worst conditions, but the work of a nurseryman is so arduous and constant that it wants all his time and energy.

There is always the temptation for a nurseryman to put his own stock into any place he lays out, and he often does it with no niggardly hand. That ought not to be; all the plants in a place laid out in any spirited way should be under the control of an independent artist, just as the materials for building a house should be under the full control of the good architect. Some years ago I went to see a public garden made at the cost of six thousand pounds. It was not a big one, and it was almost completely filled with Privet, Laurel, and nursery rubbish planted there without artistic control of any kind. A good grower of a special race of plants may be trusted to plant them, but under artistic control. As to the question of the specially working in with other features of the place. Some of the most hideous things in British gardens are ill-formed rock gardens, bad for the plants and spoiling the natural landscape around. Often one sees ten stones used in such rockeries where three would have given a better result. That is why the character of the ground and the district should be studied by the designer of gardens, and there is a danger of letting the specialist come in to make too much of his own work.

Then we come to the seed merchant. His, also, is a very serious and important business, both at home and in examining his crops through half of Europe. His plants are grown in lines or plots, and his work is carried on usually quite away from beautiful country. The seedsman, more than the nurseryman, should keep to

his business—a very important one for all concerned.

Any person may call himself a landscape gardener, and many do so without the least knowledge of or preparation for it.

The men who practise landscape gardening do so very often in such a stereotyped fashion that one can see at once their stamp around any great city. This should not be, and it shows that no thought is given to the main thing—the study of the ground itself. Therefore the best way in the present state of landscape gardening is that each owner should think out the thing for himself, not hurriedly, but patiently. He will then, generally speaking, do better work than those people who profess to be landscape gardeners. We mean by "landscape" anything in the broad sense of picture-making, not a patch of ground in the suburbs.

"Landscape plans by mail" are now offered by a nurseryman in America, and also one in France. A surer way to get stereotyped plans could not be pursued. All this sort of design shuts out all study of the ground itself, the only thing that matters really in designing a garden.

Some nurserymen advertise themselves as "garden architects," a ridiculous term. Any walling or other essential stone work about a house or garden should be the work of a real architect, otherwise there may be a sad ending. The idea of a nurseryman or seedsman with pretensions to any kind of architecture is absurd.

W.

NOTES OF THE WEEK.

Primula nutans.—A lovely soft lavender Chinese mountain Primrose, flowers in a well-set powdered spike. The flowers have a delicate fragrance. Clearly a gem for the rock garden. From Messrs. Wallace, Colchester.

Yellow Gladioli.—A yellow series of these opens up a new interest as to the effects to be sought from this noble group of summer and early autumn flowers. By the good use of *G. primulinus* there are large as well as medium-sized flowers, all of distinct charm. They are not named but classed as yellows. From Messrs. Wallace, Colchester.

Rose Noella Nabonnand.—This Rose was very good in a Kirkcudbright garden I visited the other day. It was grown, as it should be, as a climber, and was giving a number of its immense, though not ungainly, fragrant, semi-double, rosy-crimson flowers. It is one of the hardiest of the

Teas and has been proved by long cultivation to be a satisfactory variety to employ as a climber for a trellis or arbour.—S. A.

Rubus arcticus.—This pretty miniature Bramble seems to like a fairly heavy soil in a cool position, where it runs about freely without becoming aggressive. It grows about 6 inches high and has pretty rose-coloured flowers followed by golden fruits which have a strong sugary perfume. The foliage colours up well in the autumn, which is an additional attraction to a really charming little species.—N. L.

Lilium Browni.—On page 413, in an article on Brown's Lily, I notice a statement to the effect that the entire bulb of this Lily is tinged with reddish-brown, and am wondering what possible authority the writer can have for such a statement, which is entirely contrary to the facts. The bulb of *L. Browni* is, indeed, very distinct from that of any other Lily, and one of its outstanding characters is that it is white throughout and has no suspicion of a trace of reddish-brown or any other colour at all on it. The proper name of *L. odorum* is japonicum Colchesterense.—A. GROVE.

Chrysanthemum maximum Caledonia.—Mr. William Angus, of Penicuik, who raised that standard variety of *Chrysanthemum maximum*, King Edward VII., was also the raiser of the above variety. Its flowers are fully as large as those of King Edward VII., but the ray petals have a slight tendency to reflex and are nicely lacinated, this making them much less formal. I have grown *Caledonia* since the year it was exhibited, and this year my plant is finer than ever, giving a great number of flowers. In some seasons the varieties of *C. maximum* have the purity of their flowers sadly defaced by flies, but this season there is much less of this than usual.—S. ARNOTT.

Spiraea Aitchisoni.—This, found wild in Afghanistan and Kashmir, is a very vigorous bush and may exceed 12 feet in height. The leaves, made up of numerous narrow leaflets, are each often 12 inches to 15 inches long. The white flowers are borne from the middle of July until September in long panicles, the larger ones exceeding 18 inches in length. No one who is unable to give this plant abundance of room should attempt to grow it, for it is only when well developed and given plenty of space that its full beauty can be seen. It is improved by a little pruning during late winter. At that time the previous year's wood may be cut back well beyond the

base of the flower-heads, the actual amount of pruning being determined by the vigour of the bushes. It is a good plan to remove old wood now and then when specially vigorous young shoots are available to replace it, for the finest inflorescences are from young wood. It is easily increased from seed.—D.

Potentilla dubia.—The dwarf *Potentilla*s are very useful for the rock garden, and this is one of the brightest. It is of quite neat habit and an easy doer in a sunny position in an open pocket of light soil. It spreads fairly quickly and seems more dependent upon an annual top-dressing to keep it vigorous than some of the other members of its family. It is easily increased by division, and a large patch of it looks very pretty when studded over with its bright yellow flowers.—N. L.

The Hollyhock disease.—It is disappointing to learn that the Hollyhock disease is again virulent. I have been much struck by the comparative immunity of a group of plants in a small garden by the roadside, where they are subjected in summer to clouds of dust. These Hollyhocks, which are old plants, suffer very little, and are quite healthy this summer. Possibly the dust has a deterrent effect, although it certainly detracts from the appearance of the plants and flowers. Those of us who were familiar with the Hollyhock ere the disease made such havoc recall with regret the handsome plants once so plentiful in gardens.—S. ARNOTT.

The Mummy Pea.—Will you kindly name the enclosed? A friend saw it last year growing at a railway station in Wales, and the station master gave her some seeds. Both thought it a Sweet Pea, but obviously it is not. The plant grows to a great height and the flowers are sweet-scented. Colour, standard white; keel, red.—M. B.

[The specimen you send is the so-called Mummy Pea. It is really the Crown or Cluster Pea (*Pisum sativum umbellatum*). The leaves appear at some distance apart on the lower part of the stem, but towards the top they form a kind of cluster, the stem becoming fasciated by producing a number of leaves from the axils of which the flowers issue. The Peas are smooth and of a light yellow colour. There are two forms of this Pea, one with white and the other with bicolor flowers (the latter being the one you send). Neither is of any value in gardens, and this Pea is only worth growing as a curiosity.—Ed.]

Phlox varieties at Kew.—One of the most attractive features at Kew at the present time (the middle of August) is a long border between the rock garden and Orchid-houses planted with varieties of *Phlox*, all of which are in full flower. The border is exposed to the west, but gets a good deal of sun during the greater part of the day. Unfortunately, the soil at Kew is too dry for these plants, and success is only gained by the addition of heavier loam to the sandy loam of the locality and by a liberal surface-dressing of decayed leaves each year, with frequent watering in dry weather. Amongst other varieties the following were noted recently as being in full flower:—*Steigler* (2½ feet, white, striated with pink, very fine heads of flowers), *Elizabeth Campbell* (a very pretty pink with lighter eye), *Tapis Blanc* (1½ feet, white, large, compact heads of flowers), *Voile de Feu* (scarlet), *Etna* (2½ feet, scarlet), *Miss Willmott* (3 feet, white), *Frau Antoine Buchner* (2 feet to 2½ feet, white), *Mrs. Jenkins* (white), *Selina* (rose, deeper-coloured eye), *Harrison's Seedling* (2 feet to 2½ feet, white, with a faint pink eye), *Cyrano* (3½ feet, lilac, with light marks), *Le Mahdi* (2½ feet

to 3 feet, rich purple), *Friefraulein von Lassburg* (2 feet, white), *Daniel Lesueur* (lilac, with white eye), *Iris* (rich reddish-purple), and *W. Watson* (1½ feet, rose, with darker eye). Whether seen in separate masses or in clumps in herbaceous borders, these *Phloxes* are amongst the most useful of late summer-flowering hardy plants, and few people fail to appreciate their charms.—K.

Pentstemon rupicola.—In all probability this beautiful and distinct Californian species is already in cultivation in many collections of alpine plants as *P. Davidsoni*, by which name it has been exhibited at the Chelsea Show of the Royal Horticultural Society for two or three years past, and by which name it will still be found in catalogues of choice alpine. It was so exhibited at the Chelsea show this year, and in my opinion constituted the most brilliant alpine of that great gathering. Imagine an inch-high sub-shrub having small glaucous, slightly toothed leaves and carmine-red, horizontally disposed tubular flowers, usually in pairs, and nearly 2 inches in length, and you have some idea of one of the sweetest of alpine gems, and for which no praise would be too great. Brilliant and effective in flower, and ranking high with the choicest of alpine, it is good enough for all, and if far from common is all the more desirable on that account. For a plant of such small stature it does well amid broken rock and loamy soil. It is also good for crevice work or in rock walls, where its roots can descend into well-prepared soil.—E. H. JENKINS.

Plans or Mother Earth?—This from Mr. J. W. Elliott, of Pittsburg:—

In the main I agree with what you say; but it is practically impossible for a landscape gardener to do his work—at least, in this country—without paper plans. If people were willing to pay liberally for his services so that he could afford to give the time necessary to the making of and carrying out the plans on the ground, I think this would be the better way, but people are not willing to pay such fees. I have been practising landscape gardening for some thirty years, and I think that you would admit, if you saw it, that the most of my work is good. I have always used paper plans, and could not have done one-fourth as much work without them; but I have made it a rule when the work was important and in "up-and-down country," as you say, to make the drawings for the plan on the grounds so that the bit of ground that would be treated was immediately under the eye of the draftsman. Then, again, the majority of clients demand estimates in advance, and it is impossible to give these without a plan and specification.

[For professional work and charges, the plan is essential, and for simple schemes in level prairie country or quite level, treeless land in any, it may serve. When it comes to the question of artistic results in an up-and-down land, like much of France and our isles, riddled with old roads, old trees, abandoned quarries, river cliffs or mountain rocks, and buildings of old time, then the plan can never do the work that close study of the ground itself may give. Also, some problems can only be solved by long study of the ground by one living on it for months. The vegetation, native or planted, may have considerable influence on design, hence the need of men versed in knowledge of these is essential. Otherwise, how are we to get the best results from any given spot of earth?—W. R.]

FRUIT.

FRUIT PROSPECTS IN SOUTH-WEST SCOTLAND.

THE general impression, gained by reports furnished by growers in south-west Scotland, is that, all over, fruit crops will be decidedly thin and under the average of the past few years. In some districts this is attributed to the unceasing wet which prevailed during the time that the trees were in bloom; in others it is said that a severe and unlooked-for frost which occurred on the night of June 3rd or the morning of June 4th is responsible. The following are details gleaned from reliable sources in the Stewartry of Kirkcudbright and the neighbouring Shire of Wigtown:—

STRAWBERRIES.—Generally later; crops medium; berries smaller than usual and deficient of flavour and colour.

RASPBERRIES.—Late, but, on the whole, a satisfactory crop, especially on heavy soil. The Raspberry moth (*Lampronia rubella*) has given more trouble than usual in many gardens.

CURRENTS OF ALL VARIETIES.—A fairly good crop. Black Currents are scarcer, owing to the attacks of mite.

GOOSEBERRIES.—The crops are variable, in some districts being of average bulk or over; in other places the yield will be much less than usual.

APPLES.—Like Gooseberries, the crop varies. In sheltered districts there will be a moderate but not heavy crop; in more exposed situations Apples are practically a failure.

PEARS.—The general reports indicate that the yield will be about half of the average. Some trees bear a heavy crop, others are barren. The Pear midge has been active in a few areas.

PLUMS.—The crop, generally, will be much lighter than has been the case for the past two years. Victoria maintains its reputation as a consistent bearer, but the finer dessert varieties are disappointing.

CHERRIES.—Sweet Cherries were, on the whole, satisfactory. Morello Cherries did not stone well, and will be but a moderate crop.

W. MCGUFFOG.
Balmae Gardens, Kirkcudbright.

STORING APPLES AND PEARS.

CAN you tell me how to store my Apples and Pears so as to prevent them from going rotten or shrivelling up as they did last year? They were laid singly on sheets of paper on the floor of a billiard-room on the top floor of the house, which is a newly built one. They all went bad in no time. I have a cellar, but it would not do as everything in it goes mildewed.—J. G. S. B.

[Immense loss takes place from want of thought in making the fruit-room, and Pears and Apples, our most important fruits, suffer the most. The common way of keeping fruit in dry rooms leads to early decay. The walls of the fruit-room should be thick; the windows should open to the north; the doors should be double, the outer door thick, the inner door not so thick. A ground floor over a cellar is the best, or an upper floor, provided it be not under the roof. The temperature should be uniform, and never much below freezing point. The shelves should be wood, and, if possible, of open work, so that the fruit can be aired on all sides. Fruit-rooms are often built in any convenient spot regardless as to whether the position is a suitable one, and their general character is frequently quite the opposite of what is required for keeping Apples and Pears over the longest possible period. In the first place, fruit-rooms should never have

a south aspect, nor yet be lofty. The reason for this is apparent, as the sun, especially during October and November, runs up the temperature to far too great a degree, the fruit ripens speedily, and is soon past and gone. Lofty structures become too dry, and thus also hasten premature ripening and speedy decay. The best fruit-room we know of is constructed behind a high bank of earth and facing due north. It is entered by descending several steps, and is covered by a heavy, thatched roof, ample ventilation being provided. A cool, even temperature is what is wanted to preserve fruit, and to enable late sorts of Apples to retain their weight. So long as actual freezing does not occur the fruit will take no harm in winter. We prefer to lay sheets of coarse brown paper over the

is a thorough knowledge of the variety, so that it may not be gathered till quite ready. Those without the convenience of a fruit-room might adopt the plan of storing in boxes, barrels, or tubs, leaving these open for a few days in order to let any moisture escape, keeping them closely covered and arranged one on top of the other in a cool loft or spare room. Never place straw or hay under Apples, nor use it for protecting them, as it quickly becomes musty and taints the Apples.

A very good fruit-room was that in the Royal Horticultural Society's Gardens at Chiswick, which was a lean-to built against a north wall. In this the shelves, which were in tiers, were latticed and ran from east to west, with a flat shelf running along the centre of the room on which

TREES AND SHRUBS.

THE REST HARROWS (ONONIS).

The Rest Harrows belong to the Pea family and consist of shrubs, sub-shrubs, and herbaceous plants, several of which are well worth growing in the herbaceous border or shrubbery. A familiar representative of the family is the common Rest Harrow (*Ononis arvensis*) of our commons and waysides, which is conspicuous during summer by reason of its many flowers, which are less brightly coloured, than those of several of the exotic species that may be grown. These species are natives of Southern Europe, their cultivation presenting no difficulty except in the colder parts of the country, where the more



The Shrubby Rest Harrow (Ononis fruticosa).

shelves when storing soft-fleshed, tender-skinned sorts, but firm, thick-skinned, long-keeping Apples do very well simply laid not too thickly on the bare shelves. Where there is plenty of space, the more thinly Apples are stored the better, as the greater the pressure the greater the liability to rot, and by thin storage faulty fruit is more easily detected, and the labour of sorting reduced. Apples will keep well in cellars, provided they have no windows facing south into which the sun can shine. It is not, however, the fruit-room or its construction that is all-important, but the

HARVESTING of the fruit at the right moment. All fruit that is to be stored must be carefully picked, as any bruising, however slight, quickly develops and eventually spoils the fruit. Another point

specimens of each kind were kept for reference. To enter it one had to go down three steps, and the floor was an earthen one. A path went right round the whole room, so that it was easy to get at any of the fruit when wanted. The windows were fitted with shutters, which, if the weather was severe, were always closed. We never knew frost to do any harm—in fact, during a period of thirteen years we never knew frost enter. The Apples were always kept on the north side, the Pears being on the south side. The fruit, both Apples and Pears, used to keep and ripen well. A great point we think in the proper keeping of fruit is always to have an equable temperature, the earthen floor going a long way towards this. The temperature in this fruit-store ranged from 40 degs. to 45 degs.]

tender ones are not hardy enough for outdoor planting. All are easily increased from seeds sown indoors in spring, and one or two specimens may be grown from cuttings.

O. FRUTICOSA, here figured, is an attractive little bush 2 feet or so high with deep pink or pinkish-purple flowers produced in erect clusters from early summer until the end of August. A native of S. Europe, it is said to have been introduced about 1680. As it is a sun-loving plant an open position is desirable, and it may either be planted in the front of a shrubbery or in the rock garden.

O. ARAGONENSIS is, perhaps, the most generally useful of the shrubby species. Introduced from the Pyrenees a hundred years ago, it is known here as a dwarf, rather densely-branched bush 1½ feet high,

with yellow flowers in erect racemes up to 6 inches long. The flowers, borne very freely during May and June, are attractive, especially when the plant is given a prominent position in the rock garden.

O. SPINOSA, though not really shrubby, is more shrub-like than the other British species. It is very common in many parts of the country, forming well-branched bushes up to 2 feet or so high, which bear pink flowers freely during summer. It is a good plant for waste land in either light or moderately heavy loamy soil, in addition to being one of those subjects that can be established on colliery waste heaps.

O. ROTUNDFOLIA grows about 1½ feet high and has soft, though persistent, stems and pink flowers which are larger than those of the other species here mentioned. It is found wild in Central and Southern Europe and is suitable for the front of the shrubbery, the herbaceous border, or the rock garden. D.

PLANTS AND FLOWERS.

CHRYSANTHEMUMS.

CHRYSANTHEMUM NOTES.

We will presume that all the plants are in their flowering pots and now standing in their summer quarters, being all securely fastened to stakes as supports. Twice a week the shoots should be gone over, tying those required to the supports, as those plants intended for large blooms make such rapid growth at this stage that neglect quickly causes disappointment in the loss of tops of new growth. It is at the time the plants have just made a new start into growth after the formation of the first break that they are more liable to snap off; the shoots being then so succulent, and being bent somewhat to get them into position, a broken shoot is almost sure to result if timely attention is not given to ease any ties in securing the growths. As growth progresses, shoots will sometimes appear a few inches above the soil and in many other places, owing to the dormant state of the buds when a complete check was given to the plant in growth. When the first flower-bud forms, nearly all joints at one time or another push out growths, and these must be removed as fast as they are seen. Pinching them out is the best plan. Of course, the removal of suckers must be carried out as fast as they are formed, as also must all weeds be removed which grow on the surface of the soil. Any dead or bruised leaves should be constantly removed, if only for the sake of tidiness.

Watering the plants properly is important—in fact, success or failure depends upon how this is carried out. It is wise, when possible, to allow one person always to take charge of the watering of the plants. He becomes accustomed to their wants, as some varieties need more than others. The plants should never have water applied to them until they require it, particularly when the soil is of a heavy character. Tapping the sides of the pots with the knuckles is the surest means of judging whether water is necessary or otherwise. During hot days in summer, water at the roots will be required, in some instances three times. Where rain-water can be had it should be used in preference to any other, but where it comes direct from wells or water companies' pipes in a cold state, as is often the case near towns, means should be taken to expose it to the sun and air some time previous to its being used. If used in a cold state a severe check may be given to the plants, as during hot weather the soil

in the pots is many degrees warmer than the water from the sources named. This mode of application gives a chill to the roots and accelerates the spread of mildew, which is hard to eradicate. Water which contains a large percentage of carbonate of lime in solution is hurtful to the plants and should be softened by some process before being used. Anticalcaire, more commonly called milk of lime, will precipitate the chalk to the bottom of the tank if mixed at the rate of 2 lbs. to 500 gallons of water. If thoroughly stirred and allowed to stand for twenty-four hours it renders the water soft. Common washing soda dissolved in a small quantity of hot water at the rate of ¼ lb. of soda to 35 gallons of water also answers as a stimulant to the plants. Water that is very hard should always be softened by some means before using.

Syringing the plants promotes a healthy growth and checks insects. Syringing is best done in the afternoon, or evening, of a hot day. It is only in bright weather that syringing should be done. Where the plants are numerous and placed in rows the garden engine is the best instrument to use, and the water should be directed to the foliage, both underneath and on the surface with some force, by going between two rows of plants and returning in the opposite direction. The plants then receive a thorough washing, which is better than a light sprinkle with the hand syringe. In the evening after a hot day is the best time to perform this detail, and again early in the morning, if the weather is hot and dry and without any dews. In cold, sunless weather, syringing the plants should not be practised, or mildew would be encouraged, and this ought to be averted. Insects should be eradicated upon the first signs of life. Search for Celery fly and earwigs. For mildew use black sulphur in a dry state sprinkled on the foliage. Beware also of the jumper fly.

GARDEN PESTS AND FRIENDS.

THE MUSTARD BEETLE ON WATERCRESS.

The following note has been communicated to the Board of Agriculture and Fisheries by Mr. A. Roebuck, Assistant Lecturer in Botany at Harper Adams Agricultural College:—

For some years past the Watercress beds on a Shropshire farm have suffered severely from the attacks of the mustard beetle (*Phædon cochleariæ*), the Cress plants being thickly covered with grubs or beetles from May to the end of the year, so that the leaves were completely stripped off and even the outer layers of the stems were also eaten away. The grubs occur only on the plants in the beds, but the beetles, in addition to occurring in dense clusters on the shoots standing out of the water, are also found all over the sides of the beds and in the field and hedges round about. They shelter in crevices of bark and in hollow-stemmed weeds through the winter. On the slightest alarm the beetles drop to the ground. The insects cause considerable monetary loss by seriously curtailing the cropping season. The Cress on this farm is grown for marketing from March to June. The general progress of attack is as follows:—The first sign is the arrival on the beds of the beetles at the end of April or beginning of May. They have in the great majority of cases walked the short distance across the field (1 yard to 20 yards) from their winter shelters under loose bark, crevices of palings, hollow stems of weeds, etc. Towards the end of May the Cress leaves begin to

vanish rapidly and the plants become covered with large numbers of the grubs, which soon render further cropping impossible. Few beetles are seen about the end of May, but more appear in June, and from then to the cutting back of the plants both beetles and grubs abound. Although there is considerable overlapping, apparently there are at least two broods on the Cress during a season, the beetles of the first brood appearing approximately in the middle of June and those of the second towards the end of July. From the beginning of July, when most of the beds have had the plants finally cut back for new shoots to form, the larvæ have all left the beds and the beetles move into the field and hedgerows. The pupæ may then be found in little holes in the banks above the surface of the water, especially round the roots of Grasses. The beetles soon emerge from these and swarm over the beds and sides until these are cleaned out. They are to be found during the autumn dotted over the ground or clustered on various plants, chiefly on the hedge side of the beds, but as the cold weather appears they take up their more sheltered winter quarters.

TREATMENT.—It seems probable that if the following measures be taken the beetle may be so held in check that it is no longer a serious pest:—

(1) On the appearance of the beetles for egg-laying in May the beds should be flooded, the plants being stirred continually to keep the beetles in the water. Rubbish should be put round the beds to catch the escaping beetles. The beetles usually collect at one end, when they can be taken off in buckets and destroyed. After a final stirring of the plants the water may be run off and the rubbish around burnt. (2) Should any larvæ make their appearance towards the end of the month the beds should again be flooded to get the grubs to the surface of the water and away from their food for a few days. After about a week the water may be run off. (3) If the beetles collect on the beds in July another flooding would be necessary. Where the sides project above the flood-water they should be pared about 1 inch to throw any contained pupæ into the water. Cut weeds and old Cress stems put round the beds collect large numbers of beetles. These may then be burnt or buried deeply. The beetles may again be taken out in buckets. After about a week the water may be run off. This will kill also the pupæ in the sides of the bank. (4) After a severe attack attention might be given to the removal of as much winter shelter as possible. Much good might be done by cutting down the weeds, especially hollow-stemmed ones, and Grasses, cutting them low down to the ground; keeping hedges trimmed and cleaned, preferably using wire fencing or good tarred palings (stakes with bark on should never be used); and not allowing the cleanings from the Cress beds to lie about and rot on the ground, since the hollow stems afford admirable shelter. All these cleanings can be left for a time round the beds to collect as many beetles as possible, and then should be burnt during the winter or early spring.

BRIEF DESCRIPTION OF PHÆDON COCHLEARIÆ.—The grubs or larvæ, which appear on the plants in large numbers from May to July, are of a smoky-brown colour, somewhat hairy and spotted with black. They have six legs towards the head end and a caudal foot or pro-leg. When full grown they are not quite ¼ inch long. They are widest about the middle of the body, tapering towards each end. Along each side is a row of tubercles, from which they can protrude a yellow gland. The pupa, formed at the last moult of the larva, is

bright yellow in colour, with a row of blue spots down the centre of the back. The body is broader and slightly shorter than the larva and is slightly curled in on the underside. The small undeveloped wings and legs can be seen tucked in on the underside. These pupæ are hidden just under the surface of the soil around the sides of the beds. The perfect insect is a shining blue or green beetle of an oblong-oval shape and about $\frac{1}{2}$ inch long. The thorax and wing cases are minutely punctured, the latter in lines parallel to the length of the body. These can only be seen under a magnifying glass. The antennæ, legs, and under-surface are black.

NOTES AND REPLIES.

An uncommon fungus.—I enclose a sketch (life size) of a very curious fungus, which I should much like identified. I have never seen

course, interfere with the drainage; the ants are running over the plants in the hope of finding aphides. The only remedy that we can suggest is to find out where the nest is, and then, if it is in such a position as to render it possible to do so, to open it with a spade when all the ants are within for the night, and thoroughly soak it with boiling water, which will kill every ant with which it comes into contact.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

PRUNELLA WEBBIANA.

WHILE the Self-heals have little claim to be regarded as first-rate among herbaceous plants, as these are known to-day, the best of them are still possessed of distinctive attributes of their own which, with a moderately generous treatment, ensure for

spikes is ensured, that let alone flowering earlier—probably also better—than the divided group. There is a variety called rosea, and another grandiflora with rich violet-purple flowers. Alba has whitish flowers, but it is less effective than the rest.

E. H. JENKINS.

VEGETABLES.

CROWDED PLANTING.

THE errors of close planting are more apparent in the kitchen garden than probably anywhere else. It is generally in the smaller gardens where this mistaken economy is practised to the greatest extent. That the system cannot be too strongly condemned we have almost daily proof, for where the various crops are so crowded together the sun and air, which



Part of a group of Webb's Self-heal (*Prunella Webbiana*) in the rock garden at Friar Park.

anything the least like it before. It came up in one night, and was quite faded the following evening. The drawing gives the colour and form. It had eight legs, all joined by a rim of the same thickness on the top. On the inner side of the legs a liquid brown matter oozed out. This had a very strong smell of a dead animal and attracted numerous flies. The fungus was very brittle and inside was full of cells resembling a sponge. Perhaps you could identify this species for me and return the sketch at your convenience.—KENNETH McDOWALL, Logan, Straunraer.

[The fungus you send drawings of is *Clathrus cancellatus*, a very beautiful but exceedingly foetid fungus, generally found in woods, but not very common. It is, we think, figured in Cooke's "British Fungi" and in Masseur's "Mon. of Gastromycetes.]

Ants on Chrysanthemums (A).—The ants will not injure the plants at all unless they make their nests in the pots. This would, of

them a place in the front of the border or in the larger rock garden. Easily cultivated and soon forming goodly patches, they well repay annual or biennial division and replanting, which, while admitting of the fullest development, is also responsible for a more abundant display of blossoms. Spring (March and April) is the best time for the work, though in this the plants are by no means fastidious. That named above is one of the showiest of these plants, and, seen in a considerable mass, its purplish-crimson flowers are distinctly effective. Less than a foot high, the finer display is produced during June and July, though often enough a profusion of spikes is maintained into September. To some extent methodical cultivation and division assist this. That is to say, given two groups, by dividing and replanting one each year a longer succession of good

are so beneficial and desirable, cannot perform their allotted functions.

The first error of this crowded planting is generally seen in the seed-bed as regards those crops which have to be transplanted elsewhere, such as Lettuce and the various Brassicas. In the majority of instances the same amount of seed spread over three times the quantity of ground would produce plants which would defy the drought of summer, and also the cold of winter. Where Lettuces are sown thickly the plants soon become crowded together, and instead of forming sturdy little plants, the main stem lengthens to such an extent that the formation of hearts is an impossibility, and the plants quickly run to seed. The more widely disposed the plants are the better they will be able to successfully withstand frost and damp, for during a wet time this latter is almost as destructive as frost,

and where the plants are crowded together these often remain damp for days together. Take the Brussels Sprout as an illustration. It is impossible for this to prove profitable with close planting, for, hardy as it is, damp is often answerable for more failures than frost, and the more sheltered the garden the greater is the precaution necessary to avoid planting too closely together. During a warm and wet autumn the plants keep on growing until very late in the season, and the closer together the plants are the more likely are they to draw up and fail to form solid sprouts. At this time the error is generally seen, and to guard against destruction from damp, those in charge resort to lopping off the side leaves, so as to obviate the evil as much as possible, or else they soon become a decaying mass. With free exposure to the sun and air the stems, instead of drawing up to an inordinate length, grow steadily and well, and the side leaves, instead of dying away, form a natural covering to the side sprouts.

Planting Winter Kales, Broccoli, Savoys, or any of the dwarfier-growing winter greens between rows of Potatoes is a system to guard against if possible, as the plants when first set out are overshadowed by the Potato haulm; consequently they draw up weakly and are devoid of that stamina which is so essential to enable them to pass through a severe winter, and are also not nearly so productive as they should be. The rows of Celery are often arranged far too closely together, and here we may resort to double cropping with advantage, so as to economise the room where the rows are set out from 5 feet to 6 feet apart. Lettuces never thrive better than when planted along the ridges, and as the autumn draws near the plants are effectually guarded against destruction from damp. Not only Lettuce, but such vegetables as French Beans, Turnips, or any dwarf quick-growing crop, may be planted with advantage, so that these may be off by the time the soil is required for earthing. The want of sufficient soil for earthing is often the cause of the destruction of Celery by frost. Turnips, again, also suffer from the evil of close cropping, especially in the case of those for winter use or storing. Not only are the rows arranged far too closely together, but the seed is sown much too thickly, and, besides the loss of time entailed through the process of thinning, the bulbs do not form as they should do. It must also be understood that the varieties which make their growth during the late summer and autumn months form much larger tops than those of summer growth, so the rows must be arranged accordingly. Each plant, as it were, must have sufficient space allowed in the operation of thinning to have room for developing both the bottom and top growth.

Among the various crops grown for winter and early spring use Parsley is one of the most prominent, but yet in many gardens it is ill-provided for, and there are more failures through the error of allowing the growth to become crowded during the earlier stages of growth than from any other cause. Allowing each plant room for free development, so that the growth may be enabled to become well matured, goes a long way towards ensuring satisfactory results.

Coleworts.—Make good any failures that may have occurred in former plantings, and continue to make fresh plantations, for, although Coleworts are not particularly hardy, they will, if the autumn is favourably, come in useful before there are any severe frosts.

GARDEN FOOD.

TOMATO COOKERY.

THE Italians make much use of the Tomato with their meat dishes, but we have to deal mainly with garden food here:—

MUSHROOMS WITH TOMATOES.—As the Mushroom season is upon us some use of them with Tomatoes may be tried as a change. Put a pint of Tomatoes in a saucepan and cook for fifteen minutes until all the water has evaporated. Season lightly, add a tablespoonful of butter, a tablespoonful of breadcrumbs, and a half pint of young Mushrooms chopped fine. Cook until the Mushrooms are tender. Have some bread, cut in nice slices, toasted. Pour the Tomatoes and Mushrooms over, and serve very hot.

SAUTE TOMATOES.—Wipe 1 lb. small, firm, even-sized Tomatoes with a cloth, and cut into slices. Peel and chop two Shallots finely. Melt $\frac{1}{2}$ oz. butter in a sauté pan; when hot put in the Shallots and fry to a golden brown. Be careful not to let them get too brown, else the flavour of the Tomatoes will be spoilt. Place in the Tomatoes, and cook lightly over a brisk fire—they will take about ten minutes to cook.

SWEET CORN AND TOMATOES.—Boil dried or fresh Corn until perfectly tender, add to each cup of Corn two cupfuls of stewed, strained Tomatoes, either canned or freshly cooked. Salt to taste, boil together for five or ten minutes, and serve plain or with a little cream added. Sweet Corn is now in use, and this makes a good dish.

TOMATO PILLAU.—Slice one or two small Onions, and fry them in a stewpan to a golden-brown in 2 oz. of butter. Add 1 pint of Tomato purée and $\frac{1}{2}$ pint of vegetable stock. Season with salt and pepper, and bring to the boil. Skim, and add $\frac{1}{2}$ lb. of well-washed rice, and cook gently until the liquor is almost absorbed. Melt 2 oz. of fresh butter in a stew-pan, when hot add the rice, and stir over the fire for a few minutes. Cover the pan, and place it on the stove for about 15 minutes.

BROILED TOMATOES are delicious at the morning hour. Cut solid ripe Tomatoes into slices, season and dust them with crumbs, and broil over a quick fire. Serve on a hot platter, with cream sauce, the slices laid on toast, if desired.

PANNED TOMATOES.—Cut large Tomatoes into halves, put them into a baking-pan in a cool oven for a half-hour, and, when done, lift carefully without breaking on to a meat platter. Add a half-pint of milk to the pan, then one tablespoonful of flour mixed to a paste. When boiled, season and pour over the Tomatoes. When you put the Tomatoes into the pan, put a little butter in the centre of each and season well.

BAKED TOMATOES.—Cut out the centres of six large Tomatoes. Mix with the pulp one cup of breadcrumbs, a little Onion and green pepper cut very fine, one tablespoonful of butter, salt and pepper. Stuff the shells with the mixture, put a little butter on top of each and bake for one hour in a pan set in a pan of water.

TOMATOES AND MACARONI.—Scoop out the centres of large, fine Tomatoes, and stuff with the following filling:—Three ounces of macaroni broken into small pieces, boiled until tender in salted water. Drain and mix with one cup of cream sauce, two tablespoonfuls of grated cheese, salt, and paprika. Fill the Tomatoes and cover with butter and breadcrumbs. Bake until tender.

BOILED TOMATOES.—Choose small, firm Tomatoes and rather under than over ripe. Wipe them and remove the stalks without damaging the skin in any way. Put them into a saucepan of boiling water slightly salted and let them boil slowly from 5 to 7 minutes. Then lift them out with a draining-spoon, or a frying basket may be used for putting the Tomatoes into and lifting them out of the water. After draining, place them in a hot vegetable-

dish and serve at once. A little plain or *maitre d'hôtel* butter should be handed separately, the Tomatoes being eaten from the skins, like boiled egg, with a little butter, pepper, and salt put inside.

TOMATOES AU GRATIN.—Three or four Tomatoes, three tablespoonfuls breadcrumbs, two tablespoonfuls grated cheese, 1 oz. butter. Salt, pepper. Put the Tomatoes into a basin, cover them with boiling water and let them stand a minute or two. Then lift them out, dry them, and remove the skins. Cut them in slices, keeping them on a plate, so as not to lose any of the juice, and season well with pepper and salt. Mix the breadcrumbs and grated cheese together and grease a small pie-dish or fireproof dish. Put first a layer of the Tomatoes at the foot of the dish, then some of the breadcrumbs and cheese, more Tomatoes and so on, arranging them in layers until all are used up. The last layer should be the breadcrumbs and cheese. Lay the butter in small pieces on the top and bake in a moderate oven.

STEWED TOMATOES.— $\frac{1}{2}$ lb. Tomatoes, sugar, 1 oz. butter. Salt, pepper. Wipe the Tomatoes and remove the stalks. Place them for a minute in a basin of boiling water, then lift them out and peel them carefully with a sharp knife, commencing at the stalk end. Now cut the Tomatoes in slices or quarters, removing the hard pieces from the inside, and put them into an enamelled or earthenware saucepan. Season lightly, put the lid on the pan and stew slowly until tender. Add the butter and serve in a hot dish. A little finely chopped Onion or Shallot may be added if wished. Time to stew, 15 to 20 minutes. Sufficient for two or three persons.

TOMATOES WITH CURRIED RICE.—Six Tomatoes, salad oil, seasoning, 3 oz. Rice, some light stock, one teaspoonful curry powder, two or three tablespoonfuls brown gravy. Choose large, firm Tomatoes, wipe them, remove the stalks and cut them in half transversely. Squeeze out the seeds and watery part from the centre, and arrange the pieces on a greased fireproof dish. Season them with pepper and salt, sprinkle with a little salad oil, and cook in a moderate oven about ten minutes. Wash the Rice and cook it in light stock until tender and without making it too moist. Season with the curry powder and a little salt if necessary. Fill the Tomatoes with the curried Rice, sprinkle them with some good brown gravy, pouring the remainder round, and return the dish to the oven for a few minutes. Serve the Tomatoes on the dish on which they have been cooked. Sufficient for five or six persons.

TOMATOES A LA FRANCAISE.—Six small ripe Tomatoes, one cupful white or béchamel sauce, a few browned bread or biscuit crumbs, a little butter. Wipe the Tomatoes, remove the stalks, and peel them. Grease half dozen small china or earthenware dishes and put a little sauce at the bottom of each. Place a Tomato on the top with more sauce over and sprinkle a few crumbs on the top. Lay a small piece of butter on the top of each and bake in a moderate oven until the Tomatoes feel tender when tested with a skewer. Serve the Tomatoes in the dishes in which they are cooked as a separate course at dinner, or as a supper or luncheon dish. Time to cook, 10 to 15 minutes. Sufficient for five or six persons.

TOMATOES A LA PORTUGAISE.—Six Tomatoes, 1 oz. butter, one tablespoonful chopped Onion, seasoning, 3 oz. Rice, one cupful light stock, two tablespoonfuls grated cheese. First prepare the Rice mixture for filling the Tomatoes. Wash the Rice and dry it well. Melt the butter in a saucepan, put in the chopped Onion and fry it until lightly browned. Add the Rice and cook it a few minutes without allowing it to take colour. Then pour in the stock, season to taste, and cook until the Rice is tender and the stock absorbed. Wipe the Tomatoes, cut a slice off the stalk end of each and scoop out the soft inside. Fill up with the rich mixture, piling it high in the centre. Sprinkle with grated cheese, put a small piece of butter on the top of each Tomato and cook in a moderate oven from 12 to 15 minutes. Serve hot, garnished with Parsley. Sufficient for five or six persons.—*Jack's Cookery.*

OUTDOOR PLANTS.

MISTAKES AS TO MIXED BORDERS.

A MIXED border may be, and often is, the ugliest thing in a country garden, and may also be a beautiful feature. The things to avoid are as follows:—(1) Silly repetitions, a very common fault and easy to avoid. It often concerns some favourite plant and it is repeated along the border with the view of impressing its charms on the beholder, the plan destroying all the beauty of the border. The best result is often got from a single group of a fine plant. I would not repeat at all if satisfied with a group, as there are so many things worth a place both for foliage as well as flower.

(2) CURIOSITIES, BOTANICAL, AND UNTRIED PLANTS.—In the good mixed borders

a botanical garden that is another affair. It is descriptions in books and lists we have to think of, and usually to avoid.

SOIL, ASPECT, AND BACKGROUNDS.—Thin, very dry soils are best avoided or well improved so as to avoid failures in dry years. A depth of 3 feet of good soil is the best. Borders running north and south on sloping ground are not so good as east and west. Backgrounds are a great gain—the best an old stone wall. Where borders run through a kitchen garden it is best to have a bold trellis of Oak, where Oak is plentiful, to separate the border from the crops. This, covered with Roses and Clematises, gives a lovely background, and a place for climbers which may not come well in the mixed border. Where Oak is not at hand an iron trellis will do, but it should be painted stone colour and covered in most

should be on its own roots, i.e., not grafted in the usual trade way.

BORDERS OF ONE COLOUR OR OF ONE SEASON.—These, which appeal to some, and may be well done, are not such as come under well-made mixed borders. There is no sufficient choice in them and no room for the variety and contrast that should be seen in a good border, which should attract for all summer and well into autumn.

CHOICE OF PLANTS.—That is the most important thing of all, and a very high standard should be sought. We have often dealt with such a choice in these pages in the past, so there is no need to elaborate it here, though we may repeat it.

GAPS.—These often occur through failures, changes of taste and new ideas, and want of time to replant during winter



The flower border at Penhros.

a high standard of quality is essential, therefore it is better to omit these. No plant should go into it that the planter does not know and like. Both from the botanical and trade sides danger must be looked for! Novelty is best in a nursery-bed apart until fairly tried. This is important and may save from mistakes. The relation of botany to gardening is well to think of, as the two things are quite apart—botany a world science and gardening an art that must arise out of the ground in any given country. To the botanist all plants are of equal value, and rightly so. To the gardener their beauty and fitness for his climate and soil are the first things to think of. Therefore, plants coming from botanical sources should be tried in the nursery before getting a place in the choice border. If we have the gain of seeing a good plant in

visible parts with Oak or other battens or strips of Rattan or Reed.

SHORT BLOOMERS.—Some of these are handsome, but better kept with other plants to relieve them, as, say, the Giant Asphodels (*Eremurus*), which, imposing as they are, soon give over and leave blanks. Many plants used have too short a season of bloom, some Lilies among them. Roses that bloom a long time, like the Tea and China Roses, may often be used with good effect in the mixed border, and both the Clematises and Roses on the trellis should be kinds that flower long or give a second bloom. Late bloomers like *Solanum jasmuoides* should have a place on the trellis, while room should always be found for a plant of the fine red Rose Cramoisie, the climbing form, which, like all the China Roses,

and early spring. These should be made up with good plants only—*Heliotrope*, Carnations out of pots, tall red *Lobelias*, blue *Salvias*, and the finest *Verbenas*.

W. R.

***Achillea Wilczekii*.**—This is one of the stronger growing of the silvery hybrid Millfoils. The leaves, each 3 inches to 4 inches in length, spatulate in outline, and with deeply-gashed margins, are greyish-green rather than of the conspicuous silvery hue characterising such as *A. Clavennæ* for example. At the same time it is one of the most distinct of a rather numerous race, its silvery or grey colour dependent doubtless to some extent upon exposure and influenced considerably by soils. The large-spreading corymbs of white flowers are very effective, and not a little suggestive of the in-

fluence of the coarser growing *A. lingulata* buglossis, modified it may be, and whitened by reason of opposing influences from the other parent. Withal it is a good plant, one whose finer attributes are likely to be forthcoming in poorish soils or rocky ground.—E. H. JENKINS.

HARDY FLOWER NOTES.

DRABA BRUNLEFOLIA.—Very neat and compact of habit, this species is not difficult of culture, increases with tolerable freedom, and blooms freely where the conditions are to its liking, but if this is not the case it is liable to a sudden collapse, the plants turning brown and eventually dying off. When examined it will be found that there has been a failure more or less complete of root action, and this is, in nine cases out of ten, brought on by an unsuitable rooting medium. This *Draba* does not make any quantity of roots, and these are fine and very sensitive to excess of moisture. At the same time it is apt to turn brown in a time of severe drought if planted in very light soil deficient of organic matter. Pounded brick and mortar rubble, with a little loam in which the roots can remain in a healthy condition during the winter and which does not allow of the free admission of a parching air in the growing time, is best calculated to ensure permanent vigour in this little alpine.

CAMPANULA GRANDIS.—A fine, easily-grown species, with 3 feet spikes of bloom when the season is fairly favourable, and doing well in very light soils that quickly lose their moisture. The white variety has never been so vigorous with me, but it is very reliable. This is a true mixed border *Campanula*, as it is capable of holding its own when in intimate association with other straggling perennials.

THYMUS AZORICUS.—I am growing this for the first time, and cannot say much in its favour. As a carpet plant it has merits, but the flowers are inferior to those of the common Thyme, which is much superior. What it may be as a wall plant I cannot say; the colour of the flowers may be better.

ASPERULA GUSSONI.—A pretty little member of the Woodruff family this, and well worth a place in the rock garden if only on account of its very neat, compact habit and fresh verdure, which is of a very enduring nature. The flowers are, however, pretty and produced abundantly. It grows freely in ordinary fairly light soil and is one of those things that the beginner in the culture of alpine plants can safely take in hand.

OURISIA COCCINEA.—The first plant of this I had flourished exceedingly, and in the course of a couple of seasons covered a piece of ground quite 1 foot square. No plant could have done better. There was a demand for it, and a number of well-rooted pieces were taken off, allowing enough to remain to fill up the gaps. To my surprise and grief, however, by the end of the season only a few miserable shoots were left. For some time I left it alone, and then thought I would give it another trial. I procured a couple of nice, healthy plants; one was placed in a sunny position, the other was put on the north side of a low wall. The former dwindled, the latter grew and bloomed well. I took several well-rooted pieces from it, and from that time it never flourished, and the young plants died. It is evident, however, that it cannot behave in this way everywhere. There must be places where it can be lifted and where propagation can be effected without injury, otherwise it would in time disappear from cultivation. There are some hardy plants that in some

places give no trouble to the grower, increase very freely, and can be transplanted and divided at will, but in others it is a matter of chance if they thrive and take on permanent vigour. This *Ourisia* is evidently one of them. I would advise all who may have a nice, healthy specimen to be very careful and neither lift, divide, nor in any way mutilate unless they are well assured that they can do so with impunity. In the case of things of such an uncertain nature it is well to start with two plants, one to remain undisturbed, the other to be divided or propagated from in some way.

SAXIFRAGA OPPOSITIFOLIA.—Can any of your readers say what the conditions are that induce the maximum of free flowering in this species? It is easy enough to grow, but in a general way cannot be depended on to bloom with even a fair amount of freedom. The best specimen I ever saw was at Wisley. It was very fine and large, and sometimes bloomed. I have been told that it flowers much more freely in Scotland than in the southern parts of England. If so, it must be a question of atmosphere and moisture at the roots. The dry spells we are apt to get in the south probably affect the formation of flower-buds, which, in the case of such an early-flowering species, must be dependent on the condition of the little creeping growths at the close of the autumn. I have never managed to get more than a dozen flowers on a fair-sized plant, and have been content to obtain that number, but it has not infrequently happened that a solitary blossom has been the reward for a season's careful culture. It is an interesting species and very attractive in bloom so early in the season. The pity is that it cannot be induced to flower with greater certainty and freedom.

J. CORNHILL.

OURISIA COCCINEA.

I WROTE of this plant recently, in the hope that a considerable practical experience of it in diverse localities might be helpful to some of those who had despaired of making it a success. I gave, indeed, one notable instance where the plant had puzzled a good gardener and where failure had been reversed. Pointing out some of its peculiarities, I referred to the need for ensuring "a perennial continuity of growth," and, knowing full well that this does not occur in all soils alike, I wrote "to this end occasional division and replanting are necessary." I believe it was Mr. Arnott who remarked recently that the plant was "the despair of many gardeners," hence it is odd that he should find fault with my trying to put an end to some of that despair. The fact that it does well in some districts and less well in others is known to many, while the inferior results secured in some could be often enough turned into complete success if gardeners would but give the plant the special care it needs. In one instance I recall, where the nursery stock plants to the extent of some 300 were planted out in poor soil only watered from above, hardly any of them made sufficient growth to produce a flower, yet the pot-grown examples in plunging beds taken from a part of them, cultivated in prepared soil, and receiving daily attention in watering and other ways, flowered as well as could be desired. It is object-lessons of this sort, coming as they do within the region of personal observation for months on end, which give backbone to experience, and carry far greater weight than the knowledge gained by casual visits to gardens, be they ever so good or well tended. Mr. Arnott says he knows gardens where the *Ourisia* "flowers well

annually, and where it is never lifted." How many years this has been so is not stated, but a plant of its nature and mode of growth cannot go on indefinitely, and may already, as often happens in the case of three-year-old planted clumps, be only flowering on the outskirts of the group. That, however, is not success in the measure it should be gauged in a garden where the plant succeeds at all, though it may be made so by the "occasional division and replanting" I have recommended, and which, rightly done, tend to the fullest development of existing rhizomes, while affording opportunity for the formation of new. This, in the case of a mat-forming, rhizome-making subject like the *Ourisia*, is essential to complete success, and the sooner gardeners realise it and act up to it the earlier will they reap the brilliant harvest the plant is capable of giving.

Nor am I in the least sympathy with the suggested idea that the plant can only be grown in one spot in some gardens. Indeed, it is inconceivable. I am not denying that the repeated failures to which Mr. Arnott refers have actually occurred. I fully believe they have, knowing of like instances. Traced to the source of their origin, however, they are usually found to be due either to planting clumps of too solid a nature, which rarely make a good start, to indifferent planting, to lack of soil preparation, or subsequent inattention. The first is a fundamental error. Best of all ways of establishing fresh colonies is to lift a clump or portion of it, wash away all soil in water, detach the youthful-growing rhizomes with roots, and pot them two or three together—singly where a small stock obtains—in 3-inch pots in well-prepared soil, placing them in a close frame to recover. This may be done in August or September, or in March. If the former, the permanent planting would be better deferred till spring, though in some districts the newly-established plants may be put out as soon as ready. Quite naturally this involves a little extra trouble, though the success it ensures is well repaid.

E. H. JENKINS.

A BRIGHT CORNER.

ONE can understand the difficulty experienced in growing and flowering successfully such things as *Gentiana acaulis*, *Alstromerias*, and the *Ourisia* named in a recent issue, but it is not so easy to account for failure with a plant like the double Sneezewort (*Achillea ptarmica* fl.-pl.). In the majority of places it is impossible to include it in borders devoted to high-class hardy plants, as in two or three seasons, if left to itself, it will monopolise four or five times the space allotted to it and is a perfect rambler. It is, however, a beautiful flower, associating well with many that may be termed rough, hardy flowers and reminding me of its value in a corner of my garden, where it is at home with the old *Anchusa*, equally difficult of eradication, the two making a very pleasing contrast, together with batches of the annual Cornflower in blue and white, or, rather, light grey. In the background are many clumps of the lilae and white forms of the Goat's Rue, *Galega officinalis*, also a most accommodating and enduring plant, and one that can be kept in flower for a long time if cut back a bit when the early blooms are decaying, and occasional soakings of water given. In common with many hardy plants endurance is prominent in the Goat's Rue, for if planted at first in a soil that is good and holding, it will grow and flower satisfactorily undisturbed for many years. With the Goat's Rue are associated clumps of Everlasting Peas raised from seed, and consequently showing, so far as

the rose-coloured sorts are concerned, several different shades. These are growing on some live Willow stakes. I cut some fairly stout, straight bits about 8 feet long from a tree that was overhanging the garden, trimmed them a little and stuck them in by the Peas. They nearly all lived, and since the Peas commenced to flower the effect in association with the little Willow twigs is very pleasing. Also in the background there are clumps of *Artemisia lactiflora* and *Aster Mrs. C. H. Rayner*, which attain about the same height. The foliage of this *Aster* seems to be more strongly scented than that of any of the family, quite a strong perfume being emitted when one rubs against it.

There were a few vacant places in the central and back parts of the corner affording the opportunity of putting an occasional plant of Dahlias like *Souvenir de Gustave Douzon* (scarlet) *Jeanne Charmet*

NOTES AND REPLIES.

Increasing bedding Lobelia.—A good hint was recently given in GARDENING ILLUSTRATED by, if I remember rightly, Mr. J. Cornhill, about the sowing of seeds of the above at this season instead of early in the year, as is the custom. I should like to mention that now is a good time to set about increasing the named sorts by means of cuttings. For some years I had to raise large quantities—30,000 or 40,000, and, finding some difficulty in obtaining cuttings by the old method of lifting plants in autumn, I hit upon the plan of rooting a batch in August or September. By planting a batch out in reserve, cutting them hard back in early August or thereabouts, earthing up with fine, sandy soil, and giving frequent sprinklings of water in the absence of rain, a new and vigorous growth was secured which, rooting afresh into the new

sight. It grows rapidly in any good loam, but wants plenty of room, as a well-grown bush will often be 40 feet or 50 feet in circumference. It is easily propagated by layering.

Gazania splendens.—The rich orange colour and the contrasting dark centre of the flower combine to make a very effective display in borders which are naturally rather dry. It should be propagated early, as the best results—earlier and freer flowering the following year—follow. I have tried plants this year on a rockery, and they have done well. Old specimens wintered in sand may be started in March and finally planted round the sides of outdoor vases with good effect. The *Gazania* forms a splendid carpet to half or standard *Fuchsias*. The closing of the blooms at night and during dull, rainy weather is a drawback.—BOURNE VALE.

Antirrhinums.—These are now in full beauty. To prolong the flowering period the seed pods must be picked off as fast as they



Mixed border, Gravetye; July. (See page 439.)

(pink), and *Yellow Colosse*. These are too large to suit some tastes, but they make a fine show and there is no mistaking the size and symmetry of the flowers; in fact, there is nothing quite like them of their height in the garden. There were some nice clumps of *Antirrhinum* in different shades, but these disappeared suddenly and somewhat mysteriously last winter, and their places have had to be filled for the summer with *Cornflower* and *Clarkia*. In the *Clarkias* the colours in some of the later introductions are exceptionally brilliant. A bit of occasional foliage is supplied by some small bushes of *Choisya ternata*, which, the situation being very sheltered, are doing remarkably well. This was not included in the list of scented shrubs recently published in GARDENING ILLUSTRATED, but I should put it among the very best, quite in the first half-dozen.

Hardwick.

E. B. S.

soil, afforded an unlimited supply of the best type of plant at a minimum of cost and labour. All I did was to lift the tufts when ready, pull them into small pieces, and replant in shallow propagating trays in sandy soil. Placed in a close frame and watered they gave no trouble whatever. Two months later the boxes were a perfect sward of growth, with vigorous cuttings available by the thousand. The method is applicable to other plants—*Ageratum*, *Alternanthera*, etc.—and, as a great time-saver, is worthy of consideration.—E. H. JENKINS.

Spiraea Lindleyana.—This has been very fine this year as a specimen bush on the Grass. It grows from 8 feet to 10 feet high, or even more, its finely-cut, Fern-like foliage being always handsome, even when out of flower. At the end of July, when covered with its large plumes of cream-coloured blossom, it is a beautiful

form and the roots kept supplied with water. After the first flush of bloom is past a successional crop of spikes will quickly appear if the plants are given a look over, cutting the old ones down as low as possible and picking off dead leaves, etc. Those who have not the conveniences for raising a number of plants in spring should do so now either by sowing seed or propagating them from cuttings, the latter being the better method if necessary to keep the different varieties quite distinct and true to colour. If a large number is required, the best way is to prick the cuttings out into a frame in the same way that *Calceolarias* are treated.—A. W.

Stokesia cyanea laevis.—This is a much larger-flowering form than the type, and, coming into blossom early in August, is valuable on that account. The light blue colour, too, is paler than in either the old typical kind or that occasionally met with as *S. c. praecox*, though it approximates to the latter. It is now in flower in the herbaceous ground at Kew.—E. J.

INDOOR PLANTS.

THE SCARBOROUGH LILY
(*VALLOTA PURPUREA*).

OF greenhouse bulbs that flower during the late summer and early autumn months this is one of the most showy, and given healthy, well-established bulbs to start with it can be kept in good health for an indefinite period. Given a good loamy soil, lightened if necessary by a little leaf-mould or peat and a liberal admixture of sand, the *Vallota* will stand for years without repotting and flower well each season. A mistake is by some made of keeping the bulbs quite dry during the winter in order, as is supposed, to give them a rest, but this is quite contrary to their nature, as they grow, though slowly, at that season, the nearest approach to absolute rest being in the early summer, and at no time do they go totally dormant as many bulbs do. Within the last few years considerable numbers of bulbs have been sent to this country from their South African home, but though on arrival they appear very promising, many of them prove to be a disappointment. They are very difficult to establish in a satisfactory manner, as, however dry they may be kept, many of them often perish from an excess of internal moisture, while a kind of mite is frequently troublesome. There is a considerable amount of variation to be found in the flowers of these imported bulbs, but as far as my experience goes the fine round flower with broad, well filled in segments is by no means plentiful. Imported bulbs, if potted on receipt, should only be kept slightly moist in order to encourage gentle root action, and they should be placed in a light, airy position in the greenhouse. These freshly imported bulbs take some time to adapt themselves to the change of seasons, hence the first year they often push up flowers in the spring, and at once attract attention by reason of their novelty. Flowers more or less of a pinkish tinge often crop up among these newcomers, but after being grown for a year or two in this country they (in many cases, at least) assume the normal tint.

NOTES AND REPLIES.

Treatment of Plumbago.—I should be grateful for advice regarding the treatment of a Plumbago in my greenhouse. It is ten or twelve years old, and has grown large and strong, covering a brick wall about 9 feet high. In former years it bloomed freely from top to bottom. It then suddenly stopped flowering for some unknown reason. Three years ago it had only four or five flowers; none at all the last two years. This year it shows three or four buds. It looks perfectly healthy, with fine foliage. It is cut back severely every year, as formerly, in the autumn. The growth is so strong and vigorous that no manure has been applied to it. I can only suppose that the pruning is at fault, but, so far as I am aware, no change has been made in this respect. Any advice as to the best way of restoring the flower production would be welcomed.—SUBSCRIBER.

[Your question is a difficult one to answer, and we are inclined to think that the roots of the Plumbago have too much run; perhaps they have found their way into a drain. This opinion is borne out by the strong growth the plant makes. A curtailment of the roots, which would tend to check the vigorous growth, would probably induce it to flower freely. Again, hard pruning tends to the production of gross shoots rather than flowers, so very probably you would have a better display if another season the plant were pruned but lightly.]

Tacsonia insignis.—One frequently meets with *Tacsonia exoniensis* and *T. Van Volxemi*, yet this species is rarely

seen. This to a great extent can be accounted for by the fact that it is more particular in its requirements than the two previously mentioned. It is a native of the Andean region of South America, and like many plants from that district is seen at its best in a fairly moist atmosphere. Being necessary to grow it under glass, these conditions cannot always be ensured it, and then the foliage is particularly liable to be attacked by red-spider, which, if unchecked, will ultimately kill the plant. A notable feature of this *Tacsonia* is that the leaves are simple, or nearly so, whereas in the other members of the genus they are lobed. The leaves of *T. insignis* are about 6 inches long, dark green above, and in common with the young shoots are clothed on the undersides with a rusty-coloured tomentum. It is this which affords such shelter to the red-spider. The flowers are large, pendulous, and of a rich violet-crimson colour. The cultural requirements of this *Tacsonia*, apart from a fairly moist atmosphere, are good head room, as it will not flower well if cramped either at the roots or tops. A liberal use of the syringe is also essential, as in this way troublesome pests are kept in check.—K. R. W.

Pandanus Veitchi.—This is useful in many ways, and I would not willingly be without it. It is useful alike for the table or for vases, being light in appearance, with its recurving foliage almost hiding the pot in which it is grown. To preserve the variegation, *P. Veitchi* must be rather restricted in respect of root-run, but sparingly plied with stimulants. If overdone in either respect, the leaves are apt to turn almost green, with the white barely showing through. Young plants are always best, and such are easily obtained by propagating the suckers which the plant freely produces. Select the smallest pieces, for it will be noticed variegation is more pronounced in these than in the larger suckers.—Kirk.

Saintpaulia ionantha.—This really requires a stove temperature, but it may be grown with a fair measure of success in a warm greenhouse. Its blue Violet-like blooms are always welcome. Being of a dwarf habit it is very useful as an edging. It can be quite easily increased from leaf cuttings, which, if put into Cocoa-fibre in a close propagating pit at any season of the year, soon root and form neat plants. Quite good pieces can be grown in 3-inch pots, and it is not advisable to allow any more root-run than can be provided by, at the outside, 4-inch pots.—Scor.

Liliums for furnishing the show or flowering-house in mid-August and early September require staking and tying. The pots being filled with roots, liquid-manure and an occasional dose of Clay's fertiliser will now be afforded. If fly becomes troublesome, the best way of coping with the attack is to take the plants into a house and vaporise them. If taken in time, these measures are usually sufficient to destroy them. When the attack is a bad one or is allowed to become so before steps are taken to deal with it, then nothing short of dipping the point growths in an insecticide will be of any avail.

Primula sinensis.—Young plants require a slightly warmer and drier atmosphere than *Cinerarias*. The earliest plants are now ready for potting into 5-inch pots, using a compost of one-third each of loam, leaf-soil, and peat, adding sufficient coarse sand and broken charcoal to render it porous. After potting, they are placed in a frame near the glass and given a shading of tiffany on all bright days. Watering needs careful attention, and must not at any time be given in excess. Ventilation also requires close attention to keep the plants sturdy and compact, for if kept too close they quickly become drawn.

Under glass.—During the week the work under glass was reduced to the barest minimum which was consistent with the well-being of the occupants of the houses. Watering was done early in the morning, and the necessary ventilation attended to

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM AUGUST 23RD.—*Yuccas*, *Kniphophias* (in variety), *Phloxes* (in variety), *Hollyhocks*, *Helichrysums*, *Romneyas*, *Lavateras*, *Acanthus*, *Anemone japonica* (in variety), *Anchusas*, *Enocheras* (in variety), *Sidalceas* (in variety), *Galeogs*, *Echinops*, *Eryngiums*, *Erigerons*, *Thalictrums*, *Helenium pumilum*, *Chrysanthemum maximum* (in variety), *Aster Amellus*, *A. cordifolius*, *Rudbeckias*, *Montbretias* (in variety), *Agopanthus*, *Achilleas* (in variety), *Geums* (in variety), *Cimicifuga racemosa*, *Heucheras* (in variety), *Delphiniums*, *Funkias*, *Verbasiums*, *Hyacinthus candicans*, *Gladiolus* (in variety), *Plumbago Larpentæ*, *Lysimachias*, *Solidagos*, *Epilobiums*, *Hemerocallis* (in variety), *Lythrum roseum*, *Senecio Clivorum*, *S. Veitchianus*, *Polygonums* (in variety), *Lobelia cardinalis*, *Aponogeton*, *Nymphæas* (in variety), *Astilbes* (in variety), *Liliums* (in variety), *Coreopsis grandiflora*, *Tradescantia virginiana*, *Mertensias*, *Polygala Chamæbuxus purpurea*, *Nierembergia rivularis*, *Campanulas* (dwarf and tall) (in variety), *Statice* (in variety), *Platystemon californicus*, *Chrysogonum virginianum*, *Scabiosa Parnassi*, *Pratia angulata*, *Dryas octopetala*, *Ethionema Warley var.*, *Æ. coridifolium*, *Androsace lanuginosa*, *Gentiana asclepiadea*, *Cerastiums*, *Arabis*, *Sedums*, *Convolvulus Cneorum*, *C. mauritanicus*, *C. althæoides*, *Santolina viridis*, *S. alpina*, *Francoa sonchifolia*, *Potentillas* (in variety), *Veronica Lyalli*, *Mimulus* (in variety), *Glossocomia clematidea*, *Linarias*, *Mesembryanthemums*, *Gypsophilas*, *Verbena venosa*, *Thymus* (in variety), *Tufted Pansies* (in variety), *Gazania splendens*, *Pentstemons* (in variety), *Antirrhinums* (in many colours), *Stocks* (in variety), *Sweet Sultan*, *Acrocliniums*, *Gilias*, *Godetias*, *Clarkias*, *Scabious* (in variety), *Dianthus Heddegi* (in many colours), *Annual Delphiniums*, *Phlox Drummondii*, *Nemesias* (in variety), *Nipellas*, *Leptosiphons*, *Petunias*, *Verbenas*, *Begonias*, *Mignonette*, *Salvias* (in variety), *Heliotrope*, *Ageratum*, *Cosmos*, *Colceolaria ampelicaulis*, *C. mexicana*, *Cannas*, *Lavender* (in variety), *Rosemary*, *Pelargoniums* (in variety), *Marguerites*, *Lobelias* (in variety), *Nepeta Mussini*, *Honeysuckles*, *Clematis* (many species), *Roses* (many species), *Hardy Fuchsias* (in variety), *Jasminum affine*, *J. humile*, *Cistus* (in variety), *Helianthemums*, *Magnolia grandiflora*, *Solanum jasminoides*, *Ceanothus* (in variety), *Olearia Haasti*, *Spiræa Aitchisoni*, *Shrubby Veronicas* (in great variety), *Hypericums* (in variety), *Spartium junceum*, *Rhus* (in variety), *Buddleias* (in variety), *Clerodendron trichotomum*, *Hydrangeas* (in variety), *Nandina domestica*, *Daphne Cneorum*, *Calycanthus floridus*, *Berberis Wilsoni*, *Raphiolepis ovata*, *Escallonias*, *Ericas* (in variety).

THE WEEK'S WORK.—During the week heavy and welcome rains have fallen, and everything will greatly benefit after such a long dry spell. Constant attention is necessary during stormy weather to see that all stakes and ties are secure. Perennial Asters (*Michaelmas Daisies*) particularly require attention in this direction. These are now growing strongly, and if the weather is favourable there will be a magnificent display of bloom in September. These are seen to the best advantage when grown in a border by themselves. They are also very suitable for planting in bold groups on the margins of shrubberies, and are indispensable in the mixed border. *Lilium tigrinum Fortunei* is now making a grand display. This is a most satisfactory variety, and is worthy of extended cultivation. It is very hardy, and thrives almost anywhere and in any ordinary soil. *Lilium auratum* and *L. speciosum* are also flowering freely, but as these varieties do not stand the winter well in this locality the bulbs are lifted as soon as the foliage dies down, potted up into pots of a suitable size, and stood in cold frames for the winter, planting them in their permanent quarters in early spring. A batch of *Rose* cuttings has been put in. The cuttings are selected from firm, well-ripened shoots that have just finished flowering, selecting pieces 6 inches to 8 inches long, and taking them off with a heel, which is carefully trimmed with a sharp

knife, the lower leaves and a little of the soft tip being removed. A piece of ground under a north wall was prepared, adding plenty of coarse sand and a little leaf-mould. The soil was trodden firmly, a frame placed over it, and the cuttings dibbled in to half their length, making them quite firm, afterwards giving a good watering. More seeds of various hardy plants have been sown during the week and others have been gathered and will be sown shortly. F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Early-flowering Chrysanthemums.—Never have these made better growth than they have done this season, and in due course there will be a fine display of bloom. As the growths are so liable to be damaged by high winds, the plants should be now looked over and staked where necessary. The roots will now demand abundant supplies of water, supplemented by liquid-manure when it can be spared. When the latter is scarce, artificial manure sprinkled on the surface and hoed in is very helpful.

Michaelmas Daisies.—In hot weather the hoe needs to be frequently plied between the plants and the roots of the latter kept well watered, otherwise mildew will speedily attack the foliage, with the result that the floral display later on will at the best be unsatisfactory. Frequent inspection of the growths is necessary, as they quickly fall about if left unsupported should a wind spring up. Staking and tying of these plants require to be done with great judgment if the beautiful effect produced by them when in bloom is not to be marred.

Pelargoniums.—The latest-flowering batch should now be stood outdoors in full sunshine so that the wood may become well ripened before it is cut back to ensure new growths with which to lay the foundation of new heads for another season. Watering at the roots must be sparingly done, and in the event of a heavy rainfall lay the pots over on their sides for the time being. The earliest lot of plants should now be shaken out and repotted, after trimming off some of the oldest roots, into pots one or two sizes less in diameter than those they previously occupied. A pit will be the best place for them for a time, and until they recover from the shaking out shade from hot sun.

Zonal Pelargoniums.—All flowers must be suppressed and the roots well fed in order that the growth now being made shall be robust and in due course produce an abundance of bloom. To prevent the roots pushing through the crock boles and becoming attached to the ashes on which they stand the pots should be moved round at least once a week.

Cyclamens.—Warmer conditions will now allow of the more free ventilation of these than was possible earlier in the season, consequently, current growth is more sturdy and robust-looking than would have been the case had the dull, cool weather continued. Treatment now necessary is to well shade, to ventilate freely, to gently dew the plants overhead three or four times during the day, to keep the ashes on the bed constantly moist, and to fume or vaporise occasionally more by way of prevention than otherwise, as thrips must not be allowed to gain a footing. The time is close at hand when seed should be sown to supply plants for blooming in the latter end of next and the spring of the following year. The necessary quantity of seed in different varieties should accordingly be purchased in readiness.

Seakale.—The plants will now need every assistance if fine crowns are desired. Good stimulants are salt, nitrate of soda, sulphate of ammonia, and guano. Whichever is preferred or found most suitable for the class of soil to be treated should be sprinkled between the rows and lightly hoed in. The old plants in permanent plantations are sending up many heads of flower this season. These should be removed as soon as detected. Surplus liquid-manure may be poured between the rows of these established plants with advantage.

Mushrooms.—The material for the making of the first bed should now be in the right condition for doing so, and the earlier this is carried out so much the sooner will Mushrooms be available. Whether the bed is to be made on the flat or ridge-shaped, the manure must, if success is looked for, be spread evenly and thoroughly consolidated both by beating and treading it as the bed is formed. When finished insert either a trial stick or bottom-heat thermometer, the latter being the more reliable, and when the heat has declined to 85 degs. the bed may be spawned and soiled over. The temperature will then recede, but so long as it does not fall below 65 degs., no covering is needed at this time of year. If covering does become necessary, this may take the form of hay, short litter, or mats.

Tripoli Onions.—The seed should, if such has not already been done, be sown at once, well soaking the drills with water before doing so, unless rain should in the meantime fall in sufficient quantity to well moisten the soil. Sowing on dry and loose ground invariably ends in failure, for which the blame is often attributed to the seed not being good.

Parsley.—The plants which are intended for the winter and spring supply should be well thinned in the lines. The thinnings, if carefully taken up, come in useful for filling boxes, pots, or pricking off into a roughly constructed cold pit for use in the winter when the ground is covered with snow or hard frost prevails.

Cauliflower seed.—That recently sown requires to be well looked after in dry weather, otherwise there is a risk of the young plants, just coming through, perishing. Water must be freely applied and the young plants occasionally dusted over with wood ashes.

New Zealand Spinach.—In hot, dry weather, particularly when the rainfall is deficient, the value of the foregoing is very apparent. The plants revel in such heat as is now being experienced, and if occasionally soaked at the roots with water yield an extraordinary quantity of leaves. Unlike other kinds of Spinach, this does not run to seed.

Late Melons.—After this date it is only in well heated structures that any degree of success may be looked for in Melon growing. Where a late crop is desired the plants should now be set out, using boxes or large pots for the purpose in preference to planting them on hillocks or narrow borders of compost made up on the fermenting material or the slates or slabs covering the chamber in which are situated the pipes for supplying bottom heat.

Ripening Melons.—Ideal conditions now prevail for the finishing of Melons which have reached the ripening stage, and with an abundance of sunshine and some small amount of bottom heat high quality may reasonably be expected. The warm outer air can now be admitted freely in the daytime and in a less degree at night. Until thoroughly ripe the roots will need a sufficient supply of plain water to prevent the foliage and plants from collapsing. Crops not in such a forward state may be hastened if necessary by closing as early as circumstances permit and maintaining a high temperature with the aid of solar heat during the day. Until the fruits commence colouring stimulative root waterings must still be applied and a humid atmosphere promoted in the usual way by damping down frequently and syringing freely morning and evening. Keep all lateral growths pinched back to one leaf. A. W.

MIDLAND COUNTIES.

Early Vines.—The laterals of early-forced Vines being now well ripened their shortening should be commenced. Remove about one-third of each shoot and all sublaterals from the remaining parts, but in doing this carefully preserve the principal leaves. This pruning will admit an increased amount of light to ripen the wood, and by concentrating the sap will assist the buds that are to produce fruit next season. Keep the borders thoroughly moist, and until the leaves wither liquid manure may be applied with benefit. If thrips or red-spider are present on the Vines wash them thoroughly with soluble paraffin insecticide, repeating the operation

at intervals. Apply it thoroughly to every part of the Vine with a syringe, working it well into the crevices about the spurs.

Late Vines.—The sunny weather of the past few weeks has been very favourable to the colouring of late Grapes and has permitted the necessary temperature being maintained without employing much fire-heat. The night temperature should be 65 degs. to 70 degs. The flavour of such varieties as Alicante, Lady Downe's, Gros Colman, and Apley Towers will be inferior unless the Grapes are ripened under the influence of a certain amount of fire-heat. In order to secure perfect colour the laterals should not be too severely thinned, and in very bright weather it is advisable to lightly shade the Vines. Keep the leaves clean and free from insect pests and promote a healthy growth by giving liberal supplies of water at the roots.

Hardy fruit.—The rainfall during the past few weeks has been quite inadequate to the requirements of all fruit-trees. The fibrous roots of well managed trees are near the surface, where they soon become dry, therefore watering must be frequent or the fruits will not develop or the trees form plump buds for next year. If proper attention is paid to the watering of the roots when the fruits are swelling no water will be necessary when they are ripening. Cordon and other wall trees that have carried heavy crops of fruit should be liberally fed with liquid-manure or some other manurial stimulant and be thoroughly washed with the garden hose. Trees making strong shoots require plenty of water, but no manure should be given. If any insect pests are present the trees should be thoroughly washed with an approved insecticide. Plums on walls have been netted to protect them from birds. Mice are often a source of trouble in these gardens when stone fruits are ripening, and traps are always in use. Wasps, up to the time of writing, are not so numerous as in some seasons. Choice dessert fruits may be protected from wasps by small muslin bags or by enclosing the whole tree in wasp-proof netting.

Chrysanthemums.—The earliest varieties have now set their buds, and should have the shoots tied out evenly, training the tallest growths in the centre. Use neat green-painted sticks, and in tying in the shoots endeavour to hide the stakes as much as possible. Attend regularly to the feeding of the plants, giving liquid-manure one week and an approved chemical manure the next. Guard against green-fly, and on the first appearance of this pest syringe the plants with Quassia extract or dust the buds with Tobacco powder in the evening and syringe it off the following morning. If mildew makes its appearance dust the foliage with flowers of sulphur, being careful to dust underneath as well as on the top of the leaves.

Gloxinias.—The earliest-flowered plants are losing their foliage, and the pots have been laid on their sides in a pit. After thoroughly drying off the tubers they will be removed to a room—where the temperature does not fall below 60 degs. and where they will be stored until the spring. Plants of a later batch are also showing signs of maturing and water is being gradually withheld.

Brussels Sprouts.—Keep the hoe at work as much as possible, especially amongst the earlier plantings, at the same time removing any yellow or decaying foliage.

Spring Cabbage.—Plants from the earliest sowing are now large enough for planting out. A warm, sheltered situation is chosen, and the heads should be ready to cut very early next year. A distance of 1 foot apart is sufficient. These will be followed in due course by plantings to form the main crop, and will be set out on ground that has been cropped with Onions. The soil will only need forking over lightly. When other work presses, these Cabbages may be planted without any preparation of the ground, loosening the intervening spaces afterwards.

Spinach.—The final sowing of Spinach will be made the first week in September. Stir the ground as frequently as possible between the rows of previous sowings and thin the plants to a few inches apart as soon as they are large enough. Later on, additional space may

be allowed them by pulling out every alternate plant.

Celery has made remarkable progress during the past three weeks, and this in spite of the Celery-fly being very prevalent when the plants were younger. It is probable that this pest will make its appearance again in the autumn, when its effects are far more serious than in the spring and early summer. As a preventive, fresh soot is freely strewn over the plants two or three times a week. Carefully remove all surplus side growths and decayed leaves, and where practicable give liberal doses of liquid manure in addition to ordinary waterings. Celery of good quality can never be produced if the plants are allowed to suffer from the want of water. From six to eight weeks at this season are required to perfect the blanching. It is a mistake to attempt to blanch too much of each stem at one time. About every fortnight a small portion of either brown paper or fine soil should be added, taking care that the whole of the leaf-stalks are drawn tightly together and the soil placed firmly. No attempt should be made to hasten the blanching of the later batches, as the longer this is deferred the more likely is it that the plants will pass through a severe winter unharmed.

Vegetable Marrows require liberal supplies of water at the roots during dry weather, and if manure-water is available it will be of great benefit. Keep the growth well thinned and cut the fruits as soon as they are large enough for use, whether they are required or not, or the plants may cease to bear before the season is over. F. W. G.

SCOTLAND.

Strawberry beds.—During the week the last of the Strawberries was picked. Immediately afterwards the mulch was taken away, runners cut off, and the beds thoroughly cleaned and hoed. It has not hitherto been the usual practice to do this work so soon. Strawberry beds, if neglected after the nets are removed, often get into a tangled and unkempt condition, and when they reach such a state much more time is consumed later in clearing them. The crop cannot be described as having been more than moderately satisfactory. The fruit was produced in large quantities, but, owing to the cold, wet, and sunless weather of June and the greater part of July, individual berries were small, although, with the improved weather at picking time, the colour was very good.

Raspberries.—A finish was made with the bottling of these, and the remainder of the crop will be used for jam-making as it becomes ready. With the out-and-in season, large pickings at any given time are not the rule, the crop ripening rather unevenly. Nevertheless, it is fully up to the average, and the quality is satisfactory.

Morello Cherries.—The nets taken from the Strawberry quarters were immediately transferred to the Morello Cherry wall, the trees on which are carrying a useful crop, which is now rapidly ripening. These trees have been remarkably free from pests during the present season; and a continuance of the fine weather at present experienced will do much to make the Cherry crop a moderate success. Close netting is needed, blackbirds being very fond of the fruit, while occasionally a squirrel will find its way into the nets. The squirrel, I think, is more partial to the kernel contained in the stone than to the pulp of the fruit, for I have frequently found hoards of Cherry-stones hidden at the foot of the wall when looking round the trees in the winter and spring.

Early Peaches and Pears.—In the case of these, and, indeed, of all fruits, the season is noticeably later than usual. At the same time there are symptoms that the time of ripening will not be much longer delayed. Therefore, nets were got into position in good time, and watering has been discontinued.

Figs are also likely to be later than usual. In the meantime no harm will follow if plenty of moisture and an occasional dose of weak liquid-manure be given from time to time.

Parsley.—Thinning was done in a long line of seedlings from a recent sowing. At the same time this was not overdone, as plants may be left a trifle more closely together at this season than may be considered advisable in spring. For the first time in these gardens—at least, to my knowledge—some damage was done to the Parsley by maggot. This had made some headway before it was noticed, but applications of somewhat strong ammoniacal water and soot water alternately soon cleared it out, and the plants have made a good recovery.

Peas.—Earlier in the season some anxiety was felt in respect of this crop, for, owing no doubt to the unfavourable weather, the pods, while very numerous, did not appear to be filling satisfactorily. With more genial weather this drawback ceased, and there is now a plentiful crop. Mildew, so far, is absent. I think that in some cases deluging the roots with water is to a great extent responsible for this fungus. Mulching or repeated stirrings of the surface are, I think, quite as effective as watering in the case of Peas. Late-sown varieties—e.g., Pilot—are looking very promising; and the following have been really good: Alderman, The Duchess, Duke of Albany, Telephone, and The Gladstone. The last has been outstanding, and bears, in proportion to its height, the heaviest crop of any Pea with which I am acquainted. I am certain, however, that the selections of some seedsmen are superior to those of others in regard to this Pea, and, if more expensive to buy, they ought to be preferred as being not only cheaper in the end, but of superior productiveness and flavour.

Late Potatoes.—In the course of the week, traces of rats were noticed, and a closer inspection showed that these had evidently been at work for some time. Without delay, both traps and poison were requisitioned, and a clearance has evidently been effected. The crop all over, so far, is highly promising, plants lifted here and there for a test turning up a good bulk of tubers, and those of a very fair size for the time of the year. As yet there are no indications of disease.

Roses.—Some time has been devoted to removing spent hlooms from the plants. The promise of a second display is encouraging. Such Roses as Hiawatha, Dorothy Perkins, Mrs. F. W. Flight—this family generally—are now at their best. The basal growths are coming along very quickly, and to prevent any risk of damage these are, meantime, being loosely secured to the supports.

Hydrangea paniculata.—Among shrubs at present in bloom some large examples of *H. paniculata* are noteworthy. These bloom exceptionally well year after year, and during the week, to assist them over the present period of dry weather, a light top-dressing was given. Some time ago cuttings were taken, and these, having rooted well, were potted off, and will be grown on for pots. During the ensuing spring, however, they will not be permitted to bloom.

Cold frames.—The various things which find accommodation at this time must not be allowed to feel any lack of moisture. English Irises have now ripened off their foliage, and will shortly be cleaned down, as will the early-flowering Gladioli, such as The Bride and G. Ackermanni. Afterwards a top-dressing of light, rich soil will be given. Ixias and Sparaxis will be similarly dealt with. If for any reason it should become necessary, no hesitation need be felt in putting out plants of Parsley in these frames above the Irises, etc. If removed before the permanent occupants begin to push in spring, no harm will follow. In the case of Cinerarias, Primulas, and such like plants careful watering is essential. During very bright days it is of benefit to these subjects if shade can be given during the hottest hours. In weather such as this, it is I think of advantage to the plants if the sashes are removed at night. The cool, night air and the dew are of service in hardening the foliage. In wet weather, however, the sashes should remain on the frames, but, of course, with the tilts in to their highest limit.

W. MCGUFFOG.

Balmie Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.

Naming plants.—All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of course the fruit should always be sent.

Naming fruit.—Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.

PLANTS AND FLOWERS.

Mildew on Roses (Norah).—Dissolve an ounce of sulphide of potassium in 2 pints of hot water, then add enough cold water to make 2½ gallons. Use a syringe with a very fine nozzle, and take care that the underside of the leaves is thoroughly wetted.

Pruning Rambler Roses (A. T. Garthlands).—Any necessary pruning should be done as soon as the flowering is over. This consists in cutting out some of the old growths that have flowered, so as to encourage the young wood that starts from the base of the plant and on which the finest blooms are developed next year. As regards your Hollyhocks, the cause of the loss of foliage is more than likely due to the fungus which has been so destructive to the Hollyhock in recent years.

Ferns losing their fronds (C.).—When the fronds decay in the manner described it is a sign that the roots are unhealthy, or that the atmosphere is too damp. We should leave the top of the case off at night, and during the greater portion of the day sometimes. We do not consider Adiantums to be the best Ferns for culture in a case—they like more light than the generality of Ferns do, and they dislike moisture on the fronds, which should never be wetted in watering. If the plants still refuse to thrive, we should next season replace them with other kinds.

Water Lilies from seed (W. M. Crowfoot).—Provided you can get the seeds, they should be sown in the usual way in pans or pots. Any good fibrous loam with a little finely-sifted manure added will do. Make the soil moderately firm and level, and use pots, say, 7 inches or 8 inches in diameter. These may be filled to nearly three parts full with the soil, and at this level the seeds may be sown thinly. It is all-important in the raising of Water Lilies from seed that the pots be sunk sufficiently deep in the water to just cover the seeds, hence the reason for not filling the pots with soil. On the appearance of the second leaves, the seedlings should be potted into pots 4 inches across, using rich loam and manure. A tank placed over the hot-water pipes would answer quite well for the seed-raising, or shallow pots or pans placed inside larger ones would do equally well, inasmuch as all would be under control. The larger pans, of course, would require to be perfectly water-tight.

TREES AND SHRUBS.

Rhododendron with variegated leaves (M. B. Newman).—The leaf of Rhododendron Brilliant that you sent is partly natural, the growth of this variety coming quite golden,

afterwards becoming mottled, and finally turning the natural green. The leaf sent appears to be slightly sunburnt in addition to its natural colouring, which gives it a sickly appearance. We do not think that the plant is in any way diseased.

FRUIT.

Melon, adventitious buds on (D. W.).—The growths on the Melon are due to numbers of adventitious buds having been produced and to these branching again and again. The cause may be traced, no doubt, to some injury suffered by the plant, which it has attempted to heal, and from the callus these buds have grown. Probably the cause of the irritation, whatever it may have been, persisted, and so the plant made persistent efforts to overcome it, and at last the mass of buds sent was produced. The same thing is frequent on trees, and the curious and beautiful Bird's-eye Maple has its origin in something of this kind.

Nectarines rotting (Mrs. Bagshawe).—The disease is evidently what is known as "brown rot," but without seeing the tree and knowing something of the soil and the drainage it is very difficult to say what is the cause. We should be glad next year, should the fungus appear, if you would kindly forward a fruit in the initial stage of attack. After the fruits have stoned next year you should spray the tree at intervals with a solution of sulphide of potassium, using 1 oz. to 3 gallons of water, dissolving 2 oz. of soft soap in it before adding the sulphide. The young shoots you refer to are evidently those of the stock, and should be removed at once by clearing away the soil and cutting them off with a very sharp knife.

VEGETABLES.

Potatoes riddled with holes (Mrs. E. M. Birch).—The soil in which your Potatoes are growing is evidently full of small grubs which cause the injury to the tubers. The only way to get rid of these grubs is to give the ground a dressing of gas-lime at the rate of 2 bushels to 3 rods early in November, allowing it to lie on the surface for some six weeks and then digging it in. You should also procure a clean stock of seed tubers and plant in fresh quarters, as the tubers you have may possibly contain eggs or comatose grubs.

Peas falling (H. S.).—It is very difficult to say what is the cause of the failure of your Peas as you send us no information as to culture or material to help us in any way. We think that dryness at the roots is partly the cause. Did you prepare a trench into which was placed some rich manure, and water and mulch freely? Unless you did this, it is useless to expect late Peas to succeed, as they fall a prey to thrips and mildew and never do any good. Your soil may be very poor and hungry. Peas, more especially late Peas, like a good larder, and without this, failure is sure to follow.

Storing Carrots (F. W.).—Where Carrots are grown merely as a garden crop, and only in sufficient quantities for the supply of the establishment—to maintain firmness, crispness, flavour, and colour, they are best stored out of doors in a cold, shady aspect in thin ridges. Cover with a little loose dry straw, then with some wood faggots, and let the whole be thatched over. Thus treated they will keep till the next summer free from growth and excellent in quality; while, if placed in sand and in a cellar, by New Year's Day, or sooner, they will be found to have begun to grow, after which they are tough and tasteless, with a heart like a stick. Young Carrots after the French fashion are, however, what we like, and it is quite possible to have them all the winter, and, indeed, the whole year round. Let them be sown in July and August, and in December mulch them lightly, previous to severe frost setting in, with straw, Pea haulm, Fern, evergreen boughs, etc. You will thus have capital young Carrots every day during winter.

MISCELLANEOUS.

Tennis-lawn in bad condition (C. T. Lawn).—Seeing your lawn is in such a bad condition, the only thing you can do is to lift the whole of the turf and when doing so pull out the coarse Grass. When this has been done you ought to have the ground forked over and

carefully levelled, raking the surface fine and making it firm. You may then relay the turf. Top-dressings will do no good in the way of levelling up the depressions that appear in the lawn. A top-dressing of fine soil in the spring would do a lot of good.

SHORT REPLIES.

Subscriber.—We know of no book dealing specially with the subject you inquire about, but any queries relating thereto we shall always be pleased to answer.—*Monica Leuer.*—Without seeing your Roses and Hydrangeas it is quite impossible to suggest any reason for the failure. We should advise you to ask some practical gardener in the neighbourhood to look at them, and then some reason for the failure may be found.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*A. S.*—1, Veronica spicata alba; 2, Erigeron speciosus; 3, Helium autumnale.—*R. Greening.*—1, Sedum album; 2, Fuchsia procumbens; 3, Sempervivum Haworthii.—*Subscriber.*—1, Spiraea arifolia; 2, Dictamnus Fraxinella albus; 3, Veronica longifolia; 4, Galega officinalis alba.—*M. S.*—1, Leycesteria formosa; 2, Salvia patens; 3, Thalictrum flavum; 4, Mimulus cardinalis.—*C. E.*—1, Tamarix gallica; 2, Godetia Whitneyi; 3, Lysimachia clethroides; 4, Tradescantia virginiana.—*M. L.*—1, Chelone barbata; 2, Catananche cœrulea; 3, Lavender Cotton (Santolina incana); 4, Bocconia cordata.—*E. S. B.*—The Wayfaring-tree (Viburnum Lantana); 2, Lonicera Ledebouri; 3, Spiraea arifolia; 4, Lantana var.—*M. B.*—1, Leycesteria formosa; 2, Nepeta Musini; 3, Galega officinalis; 4, Chrysanthemum coronarium.—*W.*—1, Statice latifolia; 2, Erigeron philadelphicus; 3, Gentiana asclepiadea; 4, Hieracium aurantiacum.—*A. J.*—1, Libonia floribunda; 2, Lythrum Salicaria; 3, Eryngium alpinum; 4, Lobelia cardinalis.—*E. R.*—1, Campanula persicifolia alba; 2, Malva moschata alba; 3, Ajuga reptans purpurea; 4, Prunella Webiana.—*C. E. F.*—1, Maiden's Wreath (Francoa ramosa); 2, Stachys lanata; 3, Inula glandulosa; 4, Hypericum calycinum.—*J. D.*—1, Veronica Andersoni; 2, Sedum album; 3, Veratrum nigrum; 4, Agathæa cœlestis.

Names of fruits.—*F. G. M.*—1, Early Margaret; 2, Keswick Codlin.—*Orchard, Sutton.*—Please send specimens when ripe.

CATALOGUES RECEIVED.

MM. VILMORIN ET CIE., Paris.—Seeds for Autumn Sowing; List of Bulbs and Strawberries.

OBITUARY.

LORD REDESDALE.

The daily papers have already given full details of the life and work of this distinguished public servant, whom I had the pleasure to know and often to see in his beautiful garden at Batsford. He was a man of many parts in diplomacy, and much travel in Russia, Japan, and China. Manly and cheerful, he was well liked everywhere. Among his activities he took kindly to the garden, and had the finest collection of Bamboos in the open air in Europe. He was the author of the "Bamboo Garden," which was reviewed in these columns years ago. He was also a successful breeder of Shires and had built a very fine house on his estate at Batsford. He was for some years at the Office of Works, and in that capacity he had much influence for good in the parks under his charge.

W. R.

Parcels sent to our office insufficiently stamped will, in future, be refused.

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TO ADVERTISERS.—Kindly note that the telephone number of "Gardening Illustrated" is Holborn 731.

BUSINESS NOTES.

Hyacinths, Tulips, Daffodils, Anemones, Sweet Peas, Carnations, Pinks, Pansies, Violas, and Roses all find a place in the catalogue just issued by Messrs. Dobbie and Co., of Edinburgh (seed merchants and nurserymen by appointment to the King). The firm also supply guaranteed Scotch-grown Potatoes, about which they have a useful footnote in their present list. We have no hesitation in saying that any one would be attracted by the choice of beautiful and practical things they offer.

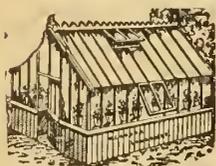
Mr. Robert A. Morris, bulb-grower and nurseryman, of 225, Bristol Street, Birmingham, is now issuing his descriptive bulb catalogue for 1916-17, and we notice that he emphasises the fact that for many seasons his principal stocks have been English grown. Gardeners may have the list on application. It contains an excellent selection, including many choice Roses. Mr. Morris is able to give good value, as he sells for cash only, and he endeavours to dispatch all orders within forty-eight hours of their receipt.

The cult of the rock garden has a very enthusiastic supporter in Miss Selina Randolph, of the Cottage, Chartham, Canterbury. She has just published her new list of 112 rock and border plants from pots, and we suggest that rock gardeners should write her for the list and make a selection of the plants, which she offers at a moderate price.

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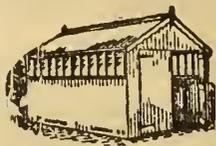
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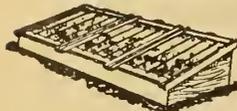
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SEPTEMBER 9, 1916.

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THE LOSS OF THE CLEMATIS IN GARDENS.

[To the Editor of GARDENING ILLUSTRATED.]

SIR,—The excellent illustration in the issue of August 26th (page 423), showing the two sets of roots of the grafted Clematis, will come as a surprise to many who desire to make a success of these beautiful climbing plants. With the article I quite agree. The Clematis is the most beautiful of climbing plants, and the display given in return for successful treatment is such as to warrant its inclusion in every garden, however small. The washing out and severing of the stock from the natural roots I can thoroughly recommend, after having seen the success of large numbers so treated. I do not say that grafting is the only enemy of the Clematis, but I consider it is the greatest, and plants layered or struck from cuttings will produce vigorous specimens in a very short time. I see no reason why some of our nurserymen should not give layering and raising from cuttings more serious thought—even if they were compelled to charge a little more for the plants. The absence of the Clematis from the majority of gardens is a great loss, but so many have been planted and lost, mainly through having been grafted, that people have grown shy in using them. The Clematis is as hardy as a Briar, and when seen garlanding large shrubs or small trees with its charming blossoms, often for many weeks in succession, is a revelation.

The advice to plant at the base of shrubs where the roots are kept cool is good, and readers will do well to follow it. I know of instances where a few years ago plants were put out at the base of Magnolias and other flowering shrubs, and these have now become objects of great beauty. With the passing out of bloom of the shrubs the Clematis begins to flower, and the shrubs in a short time are draped with delicate trails of Clematis blooms. Slugs and mice give trouble in early spring by barking the stems, but these can be prevented by trapping.

E. MARKHAM.

64th Prov. Batt., Suffolk Regmt., Norfolk.

NOTES OF THE WEEK.

Yucca Whipplei at Exeter.—I am sending a photograph of *Yucca Whipplei*. The spike is 9 feet 3 inches high and is most beautiful with its light sprays coming out from the main stem. A hedge of Yews as a background adds to its beauty.—P. C. M. VEITCH.

[It would be interesting to know how far this fine plant is hardy in our islands?—Ed.]

Campanula Steveni (not nana).—I have never seen any special cultural hints for this species, but in my experience its behaviour is peculiar. It flowers early and abundantly, and is altogether desirable. It sends out abundance of rooting side-shoots, from which new plants may be taken. The main root seems to be annual, and the old plant dies away after flowering.—L. J. ROGERS, *Weetwood, Leeds*.

Diplacus (Mimulus) glutinosus and D. g. coccineus.—These flourish the year round in this district, growing 6 feet to 7 feet high, with like spread. Their free-flowering over an extended period makes them very attractive. The scarlet form, with its dazzling flowers is highly attractive, and preferable to the type, and quite as hardy, needing no winter protection whatever.—PENNICK JONES, *Delgany, Co. Wicklow*.

Verbena chamaedrifolia.—With me this now is, and has been for some time, a mass of dazzling scarlet. It requires a warm, well-drained position. I think this *Verbena* will prove hardier than some people imagine, but excessive wet would be fatal, therefore a sheet of glass should be fixed over the crown of the plant during the rainy season. Just now (the end of August) it is by far the most effective plant in the rock garden.—C. TURNER.

Spiraea Aitchisoni.—*Spiraea Aitchisoni* has flowered freely here this year, and is still very beautiful in the second week of August. It has now reached a height of upwards of 12 feet. For years it failed to flower with me, but after it did begin to bloom it improved annually and is this year finer than ever. It is evidently one of the plants which needs to be established to flower well, and even when a small specimen does bloom it does not give any idea of the true worth of *S. Aitchisoni* when it has attained a good size.—S. ARNOTT.

The Willow Gentian (*Gentiana asclepiadea*) as a cut flower.—This fine plant is not made enough of in gardens. Its graceful and flower-laden shoots have been before me in a London room for a week, and the flowers keep and open well. In the garden, though free in most soils, it is finest in that which is peaty or sandy and moist. Then the growth is handsome. It is one of the best plants for the choice mixed border, and excellent also for naturalising in a copse or Pine wood—its natural position.—W.

Cutting down the stems of hardy plants.—The other day I was much surprised to notice, in a neighbouring garden, that the stems of *Pyrethrums*, *Pæonies*, *Delphiniums*, and one or two other hardy plants had already been cut over to the ground-line. This is all too common, and it cannot be too strongly condemned. While it is bad for all plants it is especially so in the case of such as *Delphiniums* and *Pæonies*, which have little foliage round the stems. In all cases the stems of hardy plants ought to be left uncut until they have thoroughly matured. The premature cutting weakens the plants and will, if persisted in, do much harm.—KIRK.

Campanula isophylla Mayi.—In No. 4 greenhouse at Kew this distinct and good form has been for some time past demonstrating its fitness as a basket plant for conservatory decoration. Deeper in colour than the original *C. isophylla*, and distinct from it by reason of its soft downy foliage, it may be ranked as first-class among such things by reason of its free and profuse flowering and simple cultural needs. A few freshly-rooted young plants inserted in a basket of soil in spring will give, with good cultivation, a good account of themselves during summer and autumn, older plants well pruned back in early spring preceding them in their floral display.—E. H. J.

Iris reticulata.—To flower this well and keep the bulbs sound year after year two cultural points should be observed. (1) Plant in very light and deeply-drained soil; (2) see that the position is open and exposed to the sun throughout the season, so as to ensure the bulbs becoming thoroughly ripened. The second point I believe to be as important as the first, if not more so, for it not only secures free flowering but renders the bulbs practically immune from decay. During the heavy rains of autumn and winter, and even excessive summer rains, it will be best to protect the bulbs with small frames,

sheets of glass, or a deep-covering of sand. Grown thus I find the bulbs soon increase.—C. TURNER, 3, Kenwood-road, Highgate.

Eriophyllum cæspitosum (syn. *Bahia lanata*).—This, in the colder districts, may be lost in trying winters. It is a good border plant, but it is still better in the rock garden or wall, where its trailing growth, whitish leaves, and clouds of golden flowers are so effective. Sir Herbert Maxwell grows it well at Monreith, where the climate is milder than in many parts of the south-west of Scotland.—S. ARNOTT.

A brilliant autumn flower — Lobelia Cavanillesii.—I have known this both in France and England, and took a mild interest in it, but I never saw it so well grown as I have it this morning from Messrs. Robert Veitch and Son, of Exeter Nurseries, who say that it is wonderfully bright at the moment. It has the merit of distinction of colour as well as grace, and is one of the finest plants one could put on the rock border. Coming from Chili, it may want free soil and moisture—such things often do—but in any case it is a matter of trial, and rock gardeners cannot afford to neglect such a treasure.—W.

Lysimachia Henryi.—The genus gives us nothing more beautiful or choice than this free-growing Chinese kind, whose procumbent stems are now full of bloom in the rock garden at Kew. Rich golden in colour and distinct of leaf, there is about the plant an air of superiority quite unusual to members of the race which renders it desirable. Though easy of culture and usually free of growth, it is apt to disappear in winter in some localities, and should be propagated from cuttings to ensure retention of the stock. Blooming in August and later, when good flowering rock garden plants are scarce, it is worth a little trouble to perpetuate it.—E. H. J.

Shouldering Grapes.—Is this practice not carried out to an absurd extent? Some time ago I was in a vineyard where there was a perfect network of raffia between bunches and wires, which was, if the term may be used, highly artificial-looking. The only advantage which accrues from shouldering is that the bunches appear to be larger when growing, but such bunches, when ripened and cut, look very inelegant on a dish. Certainly such varieties as Trebbiano, or even, occasionally, Muscat of Alexandria or Gros Guillaume, may need a little support, but in a general way I would never hesitate to remove these ugly shoulders and concentrate all the vigour into the main bunch. A compact bunch is much more handsome when cut than a larger but loose-looking one, and certainly shows to better advantage on a dish.—KIRK.

Cornus macrophylla.—This very distinct *Cornus* forms a large tree in its native habitat, and in this country it is more tree-like in habit than any other species. Found wild in the Himalaya, China, and Japan, it has been known in this country about ninety years, though large specimens are rare. Trees up to 50 feet high have been reported from the East, and it is probable that plants growing under favourable conditions may eventually attain that size here. At all events it is wise when selecting a site for a young specimen to remember that it may ultimately form a tall, wide-spreading tree. The leaves are distinct by reason of their long, slender points. The creamy-white flowers, borne in large flattened heads during July and August, are succeeded by small blue fruits. When planting, a position sheltered from rough winds should be chosen, and care taken to provide rich loamy soil, for it is a gross feeder.—D.

Bidens dahlioides.—It is now five years since seedlings of this reputedly half-hardy plant were put out in a south border with a rather sheltered exposure. They have annually increased in size until they have made one good colony. At present (August 15th) there is a fine mass of flower, and to all appearance the clump will remain effective for some time. The deep green cut foliage contrasts well with the bright pink flowers, which are solitary and borne on long, semi-rigid stems, this making them useful for cutting. *B. dahlioides* is sometimes now known as *Cosmos dahlioides*, the latter name appearing to be the more suitable, as the flowers, in size, shape, and colour, are exactly similar to those of the half-hardy annual *Cosmos bipinnatus*. Close to *Bidens dahlioides* some plants of the fine blue *Salvia patens* have done equally well, having been planted, also as seedlings, at the same time.—W. McG., *Balmac*.

Campanula primulæfolia.—This very distinct and attractive species was noted in some quantity in a collection of herbaceous plants shown by Mr. J. Box on August 15th. As the "Primrose-leaved Bellflower," the specific name would appear somewhat far-fetched, despite which it agrees almost entirely with the description given by "Don" in his "Gardeners' Dictionary." So far as I remember it has not been exhibited before, though it is certainly one of the more desirable of August-flowering kinds. Two feet or so high, the stems bristling with roughish hairs, the flowers, in axillary clusters, are disposed in a spicate raceme. They are erect, of violet-blue colour with intense purple base, in which respect they differ from "Don's" description, that writer referring to the flowers as having a "whitish downy bottom." That shown had the conspicuous purplish bottom characteristic of *C. versicolor*, and is certainly worth cultivating for its distinctness as well as late flowering.—E. H. JENKINS.

Madonna Lily from leaf.—It would appear from the note by Mrs. E. Towgood (page 408) that she is impressed with the view that the Madonna Lily she has just flowered has sprung from the leaf, though I doubt not it occurred as an axillary bud on a buried portion of the leafy stem. Your correspondent leaves readers in some doubt as to whether the leaf from which she took the tiny bulb was a partially buried stem-leaf or one of the much larger radical—i.e., basal—leaves common to this species, and which come into being soon after the flowering is over for the year. Bulbils on the stems of certain species of Lilies are common enough. Occasionally, too, they occur on the buried portion of the stem in kinds not prone to produce them in the upper parts of the plant, their occurrence in such places in the Madonna Lily being unusual, though not unknown. On the bulb scales of this kind, however, they are much more frequent; indeed, it may be—is—increased in this way commercially. I have never seen a bulblet occur on a true leaf, however.—E. H. JENKINS.

—In the issue of your paper of August 19th (p. 408), at the foot of a paragraph relating to the growing of a Lily from the leaf, there is a note to the effect that the Editor has never heard of the Lily being increased in this way. In connection with this Mrs. Towgood may perhaps like to know that the propagation of many species of Lily by leaf-bulbs is quite an old and very effective method, and one that I have myself practised for many years past. It is an excellent plan to cut the edges of the leaves saw-tooth fashion.—A. GROVE.

PLANTS AND FLOWERS.

ROSES.

ROSES ON TREES.

In most gardens there are ugly trees and useless shrubs, some living and some dead. Instead of removing such, they might easily be converted into beautiful objects by covering them with some of the many fine climbing Roses now to be had. In the case of dead trees, all that one need do is to dig out a large hole, incorporating a quantity of old turf and manure when refilling, or, if the soil is poor, filling the hole up again with some good loam. The soil is allowed to settle for a week or two, after which the Rose may be planted and tied up to the trunk of the tree, or the main branches in the case of a shrub. If the soil is good and the Rose strong it will not take long to clothe the dead, unsightly tree with foliage and flowers. When it is desired to use a living tree in this way it is necessary to sink a bottomless barrel or box in the newly-dug soil, planting the Rose in it. This will prevent the roots of the tree from running into the newly-moved ground and so hindering the growth of the Rose.

There are many varieties of Rose that would do admirably for such work, the quick-growing, slender-wooded species, such as the Ayrshires, sempervirens, Hybrid Briars, and Wichuraianas being particularly suitable. Bennet's Seedling is of quick growth and produces masses of double white blossoms. *Félicité Perpétue* (white) and *Flora* (bright rose) have a very graceful habit and are very free-flowering. In a warm, sheltered situation nothing could surpass *Sinica Anemone* for gracefulness and delicacy of colouring. *Una* is a hybrid of the common Dog Rose, and bears freely its long, pointed, buff-yellow buds and large semi-double cream blossoms. Among the *Wichuraianas* there are many excellent varieties, including the type *Wichuraiana alba*, with its innumerable sprays of single white blossoms and beautiful habit of growth. Other effective white varieties are *White Dorothy*, *Mrs. Lytton Dewhurst* (a white sport from *Lady Gay*), *Lady Blanche*, *Mrs. M. H. Walsh*, *Sander's White*, and *Silver Moon*. The yellow varieties are not so free-flowering, *Alberic Barbier*, with perfectly-shaped pointed buds of rich yellow and pale cream flowers, and *Jersey Beauty*, with large single blossoms, being the two best for the purpose. *Rene André*, *Leontine Gervaise*, and *Desire Bergera* are the finest of the bronzy-tinted varieties. Of the many pink sorts *Dorothy Perkins*, *Lady Gay*, *Minnehaha*, and the delicate pale salmon-pink *Lady Godiva* are the most effective, the single-flowered *Joseph Lamy* being also very pretty. In bright reds we have *Excelsa*, *Coronation*, *Sodenia*, *Troubadour*, and *Edgar Andrieu*, all producing large trusses of double blossoms, *Miwatha*, *Delight*, and *Ersinach*, giving equally large bunches of single, golden-eyed flowers. *American Pillar* we must not forget, for this is, perhaps, the most effective of all rambling Roses and certainly one of the most vigorous and healthy. It has handsome leathery foliage, this forming a fine background for the enormous pyramidal bunches of single carmine-pink flowers.

In order to give the plants a good start it is advisable to cut them down to a foot from the ground in the March following planting, after which they will need no attention save merely an occasional tie to secure the stronger growths.

NOTES AND REPLIES.

Sweet Briars.—These, perhaps, are not now so generally grown as was at one time the case, yet where space can be afforded a hedge of Sweet Brier adds much to the attractiveness of the garden. The old Sweet Brier has to a great extent been supplanted by the varieties raised by Lord Penzance. I have, at one time or another, grown the whole set, sixteen in number, my favourite being Anne of Geierstein, a very vigorous Brier, and quite distinct from all the others in respect of the colour of its blooms, which are freely produced in July, and though the display only lasts three weeks or so, yet the perfume of the plant remains throughout the season. The blooms remind me of those of Gloire de Margottin Rose, in point of colour.—W. McG.

"Austrian" Briars.—The other day, while looking at a well-flowered piece of the yellow variety, Harrisoni, I was asked why the name

very bare below unless well attended to. The beautiful soft copper colouring of the petals, with their bases of yellow, is always appreciated against the pretty foliage.—SUB ROSA.

Rosa altaica.—Classed with *R. spinosissima* as variety *altaica*, this is a much bolder and more vigorous plant than the type. It is in bloom, as is its wont, for the second time. It is one of the earliest of Roses, also, and is either in early summer or now distinctly ornamental with its pretty foliage and large single flowers of a beautiful shade of creamy-white. One of my plants, which is against a 6-foot wall, has long over-topped the wall by some 3 feet or so.—S. ARNOTT.

Rose Florence Forrester.—This H.T., sent out by Messrs. M'Gredy in 1914, is proving a worthy rival to other whites of the same class. It is claimed for it that it is an improvement on Frau Karl Druschki, and it is apparently a better doer and gives better flowers than Mrs. Andrew Carnegie. I have seen it in good condition this year, the high-pointed blooms, opening lemon and becoming

INDOOR PLANTS.

THE FAN PALM (*CHAMÆROPS EXCELSA*) IN A WILTSHIRE GARDEN.

THE plants shown in the illustration are growing in the open at Stowell Park, Pewsey, Wilts, the seat of Mr. J. H. Smith-Barry. They were planted by the present owner eighteen years ago, and for the first few winters were protected by wattle hurdles to keep off snow, but for many years past they have been exposed to all weathers. They flower annually, and in some seasons seeds ripen. At the present time there are seeds from last year on the plants. The seeds are sound, and, to all appearance, good. The height is about 9 feet 6 inches. The group contains plants of both sexes (two of each). Encouraged by the growth of these, two young plants of the same species have been planted near.



The Fan Palm (*Chamærops excelsa*) in the open air at Stowell Park, Pewsey, Wilts.

"Austrian" was used in connection with this family. I had to confess my inability to answer the query, and now, after some research, I am no nearer to a solution. The family, of course, is correctly *Rosa lutea*, but when, or why, the epithet "Austrian" was applied to these Roses I have not, in any of the books at my disposal, been able to ascertain. Perhaps some specialist in Roses may be able to enlighten me.—W. McG., *Balmac*.

Rosa Willmottæ is one of the most delightful of the newer Rose species, and when seen as a large plant is an object of much beauty. At Orchardton, Kirkcudbrightshire, there is a fine plant, some 9 feet or 10 feet high, and when in bloom the other day it was very handsome. The delicate pink flowers are borne in long, arching sprays. The colour certainly looks pale when growing beside the deep-coloured *R. Moyesi*, but by itself it is very attractive.—S. A.

Penzance Brier Lady Penzance.—This, one of the most distinct of the Penzance Briars, is flowering unusually well this season, and a large plant against a wall, but not too closely trained, is specially fine. In some soils Lady Penzance does not look happy, and becomes

pure white, being of exceptional quality.—SUB ROSA.

Wichuraiana Rose White Dorothy Perkins.—A great defect of White Dorothy in many gardens is the pink tint it appears to show; while in other gardens it is not such a good doer as Dorothy Perkins. I saw a fine weeping standard of it in the Rose garden of Mr. Brown, of Knockbrex, Kirkcudbright, the other day, and it was there exceedingly fine in every way. The colour was pure white.—S. A.

Rose Lady Swaythling.—This is a beautiful new *Wichuraiana*. The flowers are single, borne in trusses, but not so dense as those of *Hia-watha*, consequently, the habit and general appearance are very graceful. The colour is rose-pink with an almost pure white centre. It was raised by Messrs. W. H. Rogers, Ltd., Southampton.—G. G. B.

Rosa alpina Malvi.—The alpine Roses come in early, and are generally enjoyed by those who like single flowers. *R. Malvi* is perhaps the deepest coloured of all, being of an intense crimson. On its own roots it soon spreads into a good bush.—SUB ROSA.

These are looking very healthy. The garden is nearly 500 feet above sea-level.

W. FREWIN.

Littonia modesta.—This is a near ally of the well-known *Gloriosa superba*, which, however, requires the temperature of a stove for its successful culture. On the other hand the *Littonia* may be grown in a greenhouse. It passes the winter in a dormant state, at which time the curious tubers, like those of a small *Gloriosa*, must be kept dry. The better way is to allow it to remain in the pot in which it has flowered, and then, in early spring, turn the soil out of the pot and pick out the tubers therefrom. Then repot them in a mixture of loam, leaf-mould, and sand, and place in the warmest part of the greenhouse. Given just enough water to keep the soil slightly moist the young shoots will quickly make their appearance. These soon mount upward, supporting themselves by slender tendrils. The drooping flowers are bell-shaped, each a

couple of inches or so across, and of a bright orange colour. This *Littonia* is a native of Natal, whence it was introduced about 60 years ago. A near ally also from Natal is *Sandersonia aurantiaca*, between which and the *Littonia* there is at times a certain amount of confusion. The *Sandersonia*, however, is a less pronounced climber than the *Littonia*, while the flowers are broadly urn-shaped.—W. T.

CAMELIAS.

THE oft-repeated query to the Editor as to the cause of bud-dropping in *Camellias* would lead to the inference that this is rather a common trouble. It is a pity enquirers do not always specify if their trees are in pots or planted out, as this would render it considerably easier to give the necessary information. In either case, however, the trouble is attributable to several causes, although mainly arising from too much or a lack of water and imperfect ripening of wood. Given old-established plants, either in pots or beds, with suitable soil and the necessary amount of drainage, water may be given freely. Another mistake is to give stimulants too early; healthy plants will make

and if a little natural shade is not available it is well to give them the benefit of an improvised skeleton structure over which a bit of tiffany can be stretched during the hottest part of the day. Too much exposure to sun, necessitating constant watering, has a tendency to quickly impoverish the soil.

Camellias have gone through varying vicissitudes of fortune so far as public favour is concerned. At one time very popular and commanding quite high prices in the cut flower market, they gradually declined until hardly so much in request as many of the annuals. Now they are once again coming into favour, but never, I fancy, will they be grown so largely as in bygone years. E. B. S.

NOTES AND REPLIES.

Aotus gracillima.—This is one of the most graceful of hard-wooded plants, the long, slender branches arching over in a graceful manner. During the flowering season (May and June) the plants are clothed with closely-packed small Pea-shaped blossoms of a pleasing yellow colour marked with bright crimson, and remaining fresh for a considerable time. Introduced from New Holland in 1844,



Pinks in the rock garden at Friar Park.

quite enough growth as soon as the flowering season is over with pure liquid, and anything in the way of stimulant causes soft, luxuriant foliage which it is difficult to ripen satisfactorily for another season's flowering. The stimulant may come in as soon as the buds are formed and thinned, and there is nothing better for the purpose than cow-manure. I noted above the non-ripening of wood as one of the causes of bud-dropping, and this, in its turn, is the outcome of sappy growth or injury to foliage from insect attacks or imperfect ventilation.

One comes into contact with old glass structures in different parts of the country occupied wholly or in part by *Camellias* where the ventilation is very imperfect, and, if this is so, care must be taken to utilise it to the best advantage, and also in the early stages of growth to put on a light shading if the sun happens to be powerful. A very light material will suffice, and if this is not available or it is difficult to fix, a substitute may be found in the shape of a slight sprinkling of Summer Cloud. It is not often that one finds injured foliage on plants in the open, whether planted out or standing out in pots for the summer months, but so far as the latter are concerned it is not advisable to stand them in a very exposed situation,

this *Aotus* needs the same treatment as the general run of hard-wooded plants. A compost made up of peat, with the addition of a little loam and a fair proportion of silver sand, will suit it well. Effective drainage is also very essential. In repotting, the soil should be pressed down very firmly, and the old ball of earth must not be buried deeper than it was before. Watering should be carefully done. As soon as the flowers are over, the long shoots should be cut back, and when the young shoots make their appearance is the time to repot.—K. R. W.

Achimenes coccinea.—This, which is I believe the oldest member of the genus, cannot in size of flower compare with many of the garden varieties. It is, however, very free-flowering, the bright-scarlet blossoms being borne in great profusion, and that, too, over a lengthened period. The dark green of the leaves serves as an admirable setting to the flowers. It may be grown in pots, deep pans, or baskets. In the last it is seen to great advantage.—W. T.

Browallia speciosa.—This can be grown to flowering size from seeds in a few months, the plants being most useful in a cool and light house. The foliage is a pretty shade of green, with which the numerous pale-blue flowers, each with a white eye, contrast well. Good useful plants may be had in pots 5 inches or 6 inches in diameter.—KIRK.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

PINKS FOR THE ROCK GARDEN.

ROCK GARDENS are so numerous in our country now that the plants which adorn them the best may well deserve thought. We would say that the first place should be given to the Pinks for several reasons. First of all, some are native and hardy plants. Secondly, the wild kinds are parents of some very good garden plants, the beautiful race of Carnations, for instance, which comes to us from a wild Pink (*D. caryophyllus*). The Pinks, another beautiful race, come to us from another wild Pink (*D. plumarius*). That in itself is a good credential, as it gives us constitution and hardiness. Apart from the numerous kinds raised in this way, there is a number of wild kinds which also deserve attention. Naturally, these plants are natives of the rocks and stony places, and, therefore, they do not thrive in what we call heavy land. Heavy clay land, or cold, low-lying land, in winter sickens the plants or produces a sickly growth. The best place for them is the rock garden, of which we give a fine example here. In a recent visit to Sir Frank Crisp's garden we were delighted with the effect of the Pinks in many aspects. Sometimes they are hybrids raised from the Cheddar Pink and its allied kinds, and often very difficult to name, but that does not make them any the less valuable for the work.

Distinct wild kinds one must have, but a number of garden kinds are easily raised and increased by seed as well as in other ways. The Sweet William, which comes to us from the wild Pink, is one of the very best of garden plants known. I have got in an Oak plantation some plants, mostly from scattered seed many years ago, and they are still vigorous. In gardens one sees it occasionally treated as a biennial—believing in its short life—but in certain soils it becomes quite perennial. The Maiden Pink is a pretty native plant, excellent for the rock garden, too.

It will be understood that the great group of hybrids like Pinks, Carnations, and Sweet Williams, which are usually grown in the flower garden, have no place on the rock garden. For that we have a large choice in wild species, and also the numerous hybrids that arise from them.

W.

NOTES AND REPLIES.

Dianthus graniticus.—The flower of the Granite Pink resembles that of the Maiden Pink (*Dianthus deltoides*), but is larger in all its parts. It is an excellent Pink for the front of the border, the rock or wall garden, or the moraine. The flowers are of a bright crimson, with, towards the base, a deeper shade. The white variety is not often recorded, but it comes occasionally from seeds, and seems to come fairly true if the seeds are gathered from white-flowered plants.—S. ARNOTT.

Veronica incana.—The number of species of *Veronica* is legion, and some are not particularly interesting, but this is quite one of the best, with neat grey foliage, and bearing spikes, each 8 inches to 10 inches high, of dark-blue flowers. I do not find it so easily managed as some, as it seems susceptible to excessive damp in the winter, but it is well worth taking some trouble with, for it is beautiful alike either in or out of bloom.—N. L.

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OUTDOOR PLANTS.

MECONOPSIS PRATTII

SOME doubt having arisen as to the correct name of the *Meconopsis* here figured and which we received as *M. sinuata latifolia*, we sent flowers to Sir David Prain, who has made a special study of the genus embodying this in the *Kew Bulletin* No. 4, 1915. He kindly sends us the following notes:—

This is a form of one of the two very distinct plants for which the name *Meconopsis racemosa* has been used, and of the two it is the one which does not agree with the picture published by the late Mr. Maximowicz. In the *Gardeners' Chronicle* it has been figured as *M. racemosa*, and more



Meconopsis Prattii.

recently has been alluded to by Mr. Farrer in the same journal as *M. Wardii*. I agree with Mr. Farrer in keeping out of *M. horridula*, of which the *M. racemosa* pictured by Mr. Maximowicz is a variety, but have thought it better to use the name *M. Prattii*, which was given to this plant twenty years ago, rather than use the one more recently proposed by Mr. Farrer. I know that Professor Balfour thinks this right, and I understand that Mr. Farrer also thinks the same. There is one doubtful point still connected with this plant. It may be the real *M. racemosa* which Mr. Maximowicz described in 1876, though we know that it is not the *M. racemosa* figured by that gentleman in 1889. This point we cannot settle till

this war is over and some competent botanist is able to examine Maximowicz' original dried specimens. Till that is done we shall be safer to use the name *M. Prattii*.

INCREASING TUFTED PANSIES.

Will you kindly tell me the best time for taking *Viola* cuttings, and how the soil should be prepared, and what attention is necessary in the early days?—IGNORANT.

[The best way of securing stock of these plants is to plant a few reserve clumps in the border somewhere and treat as follows:—When the first flush of bloom is past, cut the plants closely over to within 1 inch of the soil or thereabouts. At this time the base of the plant is crowded with fresh young shoots that cannot grow by reason of the crowded tuft above, but

cuttings, or, by leaving a fortnight longer, make up a border of good soil in a shady spot, and transplant them there. This method produces the finest plants with a minimum of labour, and where large numbers are required from a plant or two it is best to first pull out the more prominent growths, and repeat this operation as the cuttings are fit for removal.

PREPARING GROUND FOR PLANTING.—To grow the Tufted Pansies well the soil should be deeply dug and heavily manured. Much depends on the character of your soil, however. Should it be light and sandy, well-rotted cow-manure should be incorporated freely, as this is very retentive of moisture, and cool also. In the hot weather the roots revel in quarters that have been trenched, the results in the flowering period amply repaying one for the extra trouble and expense incurred. Should your garden soil be heavy, with a clayey sub-soil, incorporate freely well-rotted horse-manure. The quarters for the Tufted Pansies should be taken in hand as early as convenient. The ground should be treated in the way suggested sufficiently early to leave the surface in the rough for a week or two to sweeten, and for the weather to render it friable before the planting. You may safely plant out the Tufted Pansies during the first or second week in October. Little pieces planted at that time will make beautiful plants by the early summer, and they should be studded with blossoms from April (possibly earlier) onwards. This is the advantage of autumn planting. Should you prefer to plant in the spring see that the quarters are dug in the winter and the surface left rough for the frosts to pulverise and sweeten it.]

NOTES AND REPLIES.

Mimulus outside about 1 foot high.—Will these stand the winter outside? How are they propagated, and when should this be done?—MOORCROFTS.

[We are not in a position to render you much assistance, not knowing to what kind you refer. Had you sent us the name of the plant, or a specimen of it, or even given us the colour, we should have had something to guide us in the matter. All we can say is that if it is some form of *M. luteus* it is approximately hardy, and may be increased by division quite easily. If reference is made to any of the large-flowered hybrids, these are less hardy and best increased by means of seeds or cuttings. Hardiness, however, varies with localities, and your note does not even give the district from which you write.]

Lactuca Plumieri.—This is now in bloom, a large clump of it at the back of the herbaceous border attracting attention. With good cultivation it attains a height of 7 feet or 8 feet, with flower-spikes of a foot or 18 inches long. It is easy to grow in any good loam, and seems indifferent as regards position, though it is perhaps more effective in partial shade, as the blossoms then last longer. Self-sown seedlings often spring up round the plant so that there is no difficulty in getting a good stock. At the same time, it need never become a nuisance, as it is quite easy to keep the clumps within bounds.—N. L.

Convolvulus althæoides.—Despite its reputation as a weed in some gardens, and one that cannot be tempted to grow in others, this delightful species, from the Mediterranean region, is one of the most admired of its genus when seen in a thriving condition. On chalky soils, and not infrequently those of a stony nature, in southern counties it usually grows apace, and a patch of it with a few dozen

which, with light and freedom, quickly take on a fresh lease. After cutting down, lightly fork the surface soil round about the tuft, and give a thorough soaking of water. Procure some fine soil, well mixed with sand, and surround the plant with this to a diameter, say, of 6 inches beyond the tuft; also sprinkle some of the same soil in the centre of the plant, and presently wash it down with water from a fine-rose can. For a time, if the weather be dry, continue to sprinkle the plants daily each evening with water. By following this carefully the fresh growths in the centre will root into the new soil, and may, a month after the cutting down, be detached and treated as cuttings, though, in this instance, these will be mostly "ready-rooted ones." These young, unflowered pieces you may either insert in a frame as

of its handsome pink flowers expanding to the sun is a great attraction. In localities where it shows an inclination to spread freely its roots should be restricted. At Friar Park, where it was in good flower recently, it does not require any coaxing. In former years, at a somewhat earlier date, it had almost sheeted its allotted space with a colour all too rare in the garden at any season. At Kew recently other two species of the genus were doing well in the rock garden, *C. mauritanicus*, with bluish flowers, and *C. cantabricus*, which has pink flowers not so large as in the above-named. All are free-flowering and suited to sunny positions.—E. H. JENKINS.

Naturally-grown Clematises.—It is a pity that more people do not plant the large-flowered Clematises at the base of small, thinly-branched trees rather than against walls. It is probable that the plants would be generally more satisfactory with their roots on the shady side of a tree and the shoots exposed to full sun, than when the roots are exposed to considerable sun-heat, as is often the case when plants are grown against walls. As a rule it is unwise to put the plants close to the trunk of the tree. Rather allow them to stand near the outskirts of the branches and guide the young Clematis shoots to the first branches by the aid of strings or a stake, after which they will look after themselves. It is wise to dig a hole for each plant and provide good soil to give it a start. Laburnums, Almonds, Apples, Pears, Cherries, etc., may all be used as hosts for Clematis, whilst vigorous kinds can also be planted to grow over evergreen bushes, such as Laurels, Hollies, Magnolias, and Yews. Not only are Clematises seen to advantage from this natural manner of growth, but other kinds of climbers also can be grown in the same way. Vines reaching the tops of tall trees, Roses covering large Yews and Hollies, and Wistarias rambling over trees and bushes are a few subjects that are never seen to better advantage than when allowed absolute freedom.—K.

Propagating bedding plants.—This, in connection with bedding plants should be persevered with and—Calceolarias excepted—brought to a close as soon as circumstances permit. Pentstemons have made a good deal of growth of late, consequently plenty of cuttings which can be taken off with a heel is now available. These can be propagated in the same manner as Calceolarias or in pans or boxes, the first-named being the best way if a good number of plants is required. Pentstemons have been so much improved, and can now be had in such a variety of shades, and are moreover so free-flowering, that they are doubtless destined to play a still more important part in bedding arrangements in future than they have done in the past. Another great recommendation in their favour is that they are hardy, the plants or cuttings needing the protection of a cold-frame or pit only in the winter months.

Begonias in the open air.—Looking round some cottage gardens the other day I was struck by the difference in the behaviour of Begonias. In one or two instances the plants were fine, in others they were of but moderate growth, and in some an absolute failure in every way. Begonias are at best miffy subjects, and, especially in cottage gardens, might well be discarded.—KIRK.

Oreocome Candollei.—This is a very handsome, fine-foliaged plant belonging to the Fennel order, the large, finely-cut leaves being always admired. It grows well in any ordinary light garden soil, and if allowed to flower will ripen plenty of seeds, from which it can be readily increased.—N. L.

GARDEN FOOD.

COOKING LETTUCE.

DURING a spell of hot, dry weather many Lettuces will run to seed. It is difficult to use all of these before they become too bitter to make pleasant eating, but I have found that if the Lettuces are cut as soon as they show signs of running to seed they make a nice stew.

STEWED LETTUCCES.—Like all Greens, it requires a good many Lettuces to make a fair-sized dish of the stew. Cut the Lettuces early in the morning and place them in water. Do not immerse the whole plant in water, simply allow the stalks to stand in a shallow pan of water. Melt a little butter in a clean pan, and then wash the Lettuces in fresh water, break lightly into pieces, and drop into the pan. Simmer gently in their own juice and the melted butter until tender, chop finely, flavour with a little salt and pepper, and pile on squares of hot buttered toast, and serve very hot.

BOILED LETTUCCES.—The continental way of serving Lettuce as a cooked vegetable is to boil it in sufficient water to cover. Nutmeg or Cinnamon is always added in Belgium, but this quite spoils the flavour. When tender, add a little pepper, and stir in a dessert-spoonful of flour rubbed into the same quantity of butter. Simmer until the whole has thickened slightly, and send to table at once. Green Peas or sliced French Beans are generally added to the boiled Lettuce, and the two cooked together, but I prefer the flavour of the Lettuce when boiled by itself. It is much more delicate than when mixed with other vegetables.

PRESERVED LETTUCCES.—People who are fond of eastern preserves will like the stalks of Lettuces made into a preserve. Take as many stalks as you can procure. They must be very fresh and newly gathered. Remove all the peel, and cut the stalks into short lengths. Have ready some boiling water in which a little salt has been dissolved and boil the stalks for fifteen minutes. Dissolve $\frac{1}{4}$ lb. of sugar in a quart of water, add a small piece of crushed ginger, and simmer for ten minutes, removing all the scum as it rises. Place the stalks in this and simmer until they look clear, then turn the whole into a basin and leave for two days. Drain off the syrup add 4 ounces of sugar, simmer for ten minutes, and pour over the stalks. Leave for two more days, and then repeat the process, but instead of adding sugar use honey instead. After two more days simmer the whole for fifteen minutes and pour the preserve into jars, and cover with parchment paper or bladder. Keep for three months before eating, for the longer this preserve is kept the better it becomes. Cucumbers cut into cubes and preserved in this way also make a delicious sweet, but they must be kept for at least six months before eating, as otherwise the flavour has not mellowed, and is far from nice. H. T. C.

FRESH LIME FRUITS.

The following is from a handbook on "Lime Cultivation in the West Indies," published by the Imperial Department of Agriculture for the West Indies in 1913:—

The Lime is finding its way into favour, in America especially, and is more and more coming to be used instead of the Lemon. It is generally conceded by all who have become accustomed to the flavour of the Lime that this fruit far surpasses the Lemon in the delicacy of its flavour, and it is well known that when these fruits are grown together for household purposes, as often happens in the West Indies, the Lemon is only used when there are no Limes on the trees. A lime squash or limeade is much more refreshing than lemon squash or lemonade, and for use in cooking the Lime is generally preferred to the Lemon.

Limes which are to be shipped in the fresh state are picked from the tree while still green, but they must be full grown. They are allowed to quail for several days in the packing sheds. This process consists of a slight drying-out of the excess of moisture in the skins, rendering the Limes tougher and improving their shipping qualities, since a smaller amount of water is given off and shrinkage of the Limes in the package is less. Thus there is a smaller amount of slack, and consequently less damage from shaking. Each fruit is wrapped in soft brown paper and placed in the barrel, which is filled by being carefully packed with layer after layer of wrapped fruits. These should be firmly pressed down after every sixth or seventh layer has been packed.

The fruits are to be obtained from the principal London stores and from the West Indies Produce Association, Ltd., 4, Fenchurch-buildings, E.C.

NOTES AND REPLIES.

A cold dish for summer.—I should like to add my testimony to the excellence of Potatoes and Haricot Beans, dressed while hot, and eaten cold as salads. Floury Potatoes dressed with salt, pepper, plenty of good oil, and a little vinegar, with a little chopped Chives or Onions, thoroughly absorb the dressing and are like delicately-flavoured mashed Haricots when cold. Haricots should be carefully and gently boiled in such a way that when quite tender they have absorbed most of the water. Add a good lump of butter, pepper, salt, and Lemon-juice to taste, and when cold mask with a mayonnaise sauce and garnish with sprigs of boiled Cauliflower and sliced Beetroot. This is a nutritious dish which can well take the place of meat, the added fats greatly increasing the food value of the Beans.—MRS. CAROLINE ADAMS.

[A good dish for those who like Haricot Beans where there are no fresh Kidney Beans in the garden, but not, surely, a salad.—ED.]

Rhubarb leaves as food.—I never saw Rhubarb grown for food in France, and had the idea that the leaves were poisonous. I was therefore surprised to read this note in *Country Life*:—

RHUBARB LEAVES AS VEGETABLES.—Is it generally known in England that the large green leaves of the Rhubarb plant make an excellent vegetable if cooked in the French way? In war-time, where economy is studied, it may be useful to know exactly how these leaves are prepared, and it may prevent waste if you will publish the following recipe:—It requires about 3 lb. of Rhubarb leaves to make a dish sufficient for a family of six or seven people. The thick central vein is removed and the leaves thrown into a bucket and washed like Spinach. They are then placed in a saucepan of boiling water and boiled for about ten minutes to a quarter of an hour, passed through a colander to make a purée, and then turned into hot melted butter. Before serving, salt and pepper are added and a teaspoonful of flour in a small cup of milk is well mixed with the purée.

I have even read of a death from eating Rhubarb leaves.—W.

Stuffed Lettuces.—Take some large Cabbage Lettuces. Boil for a quarter of an hour, and dip into cold water and drain. Open the leaves without breaking them and fill the centre part with a good forcemeat and tie them up. Stew them a short time, then drain on a cloth. Dip them in batter and fry to a good colour. Cover with breadcrumb, and serve with white sauce.—*May Byron's Vegetable Book.*

TREES AND SHRUBS.

EUCRYPHIA.

LOVELY tall shrubs from Chile, and among the most precious grown in our islands in the southern counties and on high ground in the midlands. They are fine for association with the choicer American flowering shrubs and low trees like Magnolia and Stuartia in peaty or free soils, though they are, perhaps, not so much influenced by soil as by situation. So far as tried they thrive fully exposed to the sun.

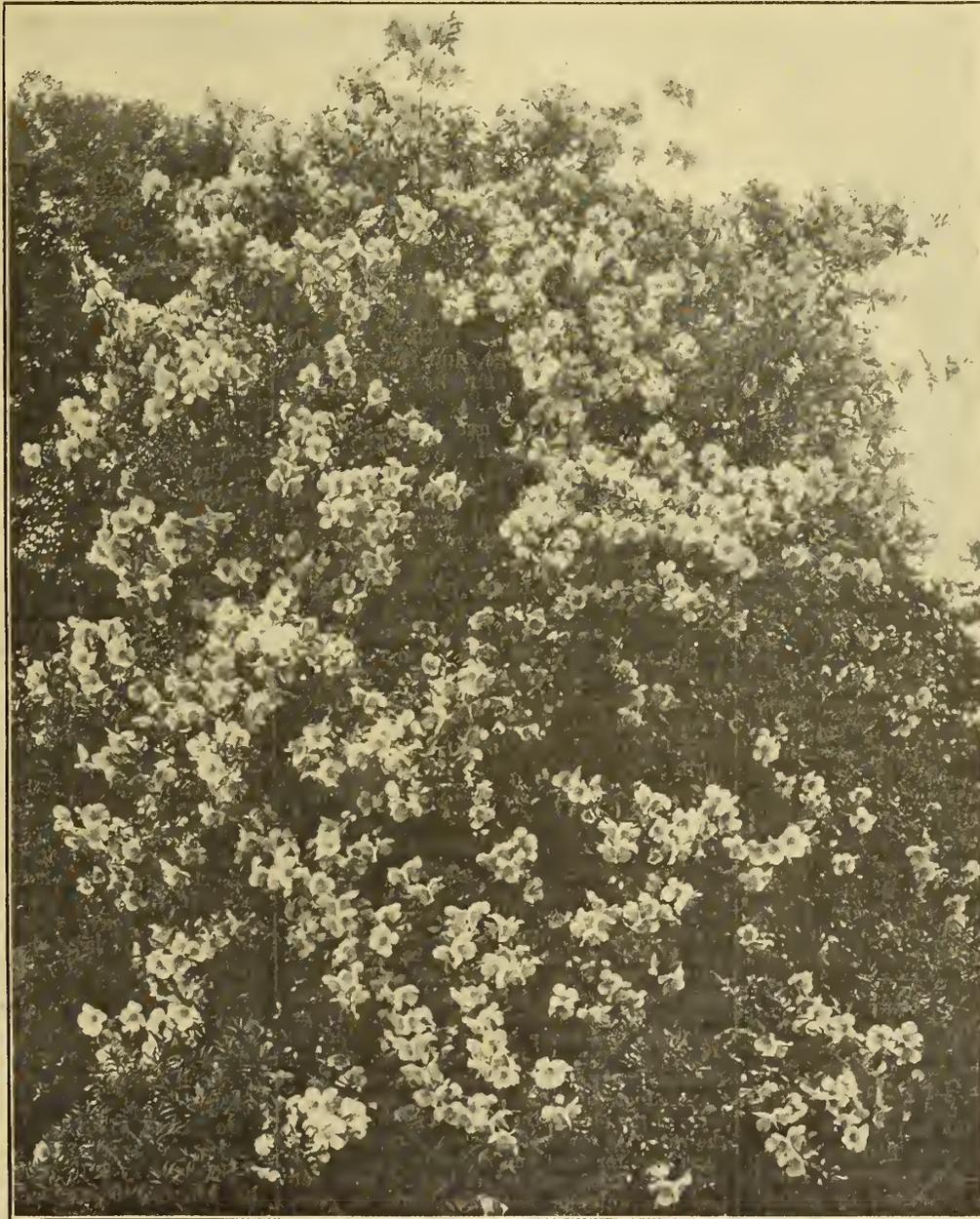
E. CORDIFOLIA, from Valdivia and the Island of Chiloe, is distinguished from *E. pinnatifolia* by its simple leaves, which are strictly evergreen, and, with the young wood, densely covered with down. The white flowers are each about 2 inches across. It is hardy at Nymans.

TWO INTERESTING WILLOWS.

SEVERAL new species of Willow have been introduced within recent years, and although many of the known Willows can hardly be looked upon as garden plants, the two new species to which attention is

but about the time when growth is completed for the year (August to October). Neither male nor female catkins have any special attraction, the charm of the plant being its graceful habit and pretty leafage. It was introduced to this country about 1910. The second species,

S. MAGNIFICA, introduced about the same time as *S. Boeckii*, is one of the most remarkable species of the many that are known. In China it is said to form a loose bush from a few feet to 20 feet high. Here it is known as an erect-habited bush with purplish young wood and prominent purple



Eucryphia pinnatifolia at Emmets, Ide Hill, Kent.

E. PINNATIFOLIA.—A native of Chile and fairly hardy, though there are many places in the southern midlands where it grows well. Each flower is from 2 inches to 2½ inches across and made up of four large white petals with a central mass of yellowish stamens. It thrives in light loam containing leaf-mould or peat. It was at one time increased by layers, but many of the young plants raised in that way were short-lived, and better plants are got from seeds. Stems are best not exposed but protected by dwarfier shrubs growing around. A second species,

directed are certainly worth consideration. They are named respectively *Salix Boeckii* and *S. magnifica*, both natives of China, differing, however, from each other in general appearance as widely almost as it is possible for Willows to do.

S. Boeckii is a graceful-habited shrub about 4 feet high, with slender, arching branches covered with small, oblong leaves, which are dark green above and glaucous beneath, both stems and leaves being very downy. The catkins are not produced in spring as is the case with most Willows,

buds. The leaves are, however, the interesting feature of the plant, for they are thick, oval, and up to 6 inches or 8 inches long and 5 inches or more wide, rather pale green above and glaucous beneath. The male catkins are said to be up to 7 inches long, and the female catkins sometimes 10 inches or more in length. Unfortunately, it appears to be rather tender, the early leaves being sometimes injured by cold. Both species should be planted in soil that is permanently moist, on the margin of a lake or stream for preference, where the roots can enter the water. D.

VEGETABLES.

VEGETABLE MARROWS.

THE Vegetable Marrow classes at exhibitions show that no one kind is favoured more than another, as is the case with most other vegetables. If we turn to the exhibitions of garden produce from the best private gardens, long, short, round, or Custard Marrows are invariably presented, but with this difference—that only white kinds are shown, whilst cottagers have just as much regard for green or mottled kinds as for white ones. Very probably, all other things being equal, it will be found that white kinds get the preference, but that is purely a matter of fancy, as when cooked it would be difficult to discover in what respect green-skinned kinds differed from white ones. Some kinds are more prolific than others; the smaller-fruited kinds produce more than large-fruited ones, but in the end the balance of actual bulk is about the same. Of course, if the fruits of the longer or larger kinds be cut whilst small, the relief given to the plants favours more abundant fertility. In the market gardens the Long White is preferred, and if somewhat ribbed, all the better. Still, a nice green specimen or two is not objected to, as these produce variety, and give some acceptable colour to the greengrocer's window. Cut while the skins are tender, Marrows soon become battered and disfigured. There are few directions in which reform is more needful in connection with market garden produce than our method of packing and getting it fresh and uninjured to the consumer.

Some little divergence of opinion exists amongst good vegetable judges as to the proper size or age for prize Marrows. They may be too big in some cases, but, if the skin is quite tender and the fruits even and handsome, it seems unfair that small fruits should be put before larger ones. It is a common rule to allow something for size in the case of cottagers' products, for these show by their exhibits that they think quantity to be of considerable merit. When, however, such kinds as Moore's Cream or the round Pen-y-byd are presented, of course size is out of the question, and here it is really one of quality and flavour. Marrows have become very popular; they are widely grown, and they prove valuable aids to the gardener during the summer months.

DEFOLIATING TOMATOES.

Is it right to take half the lower leaves of Tomatoes off when they have set three bunches of fruit? My employer says it is the worst thing that can be done. My object in doing so was to let the sun in, and also that all the strength should go to the fruit.—W. F.

[Cutting the leaves from Tomato plants, although necessary under certain conditions, should not be practised by rule-of-thumb. The foliage acts as a channel for conducting the sap to the fruit, although in cases of extra luxuriance the leaves assimilate the whole of the nourishment, and the fruit, even though it may set, usually fails to swell. On rampant plants partial defoliation is beneficial, cutting every alternate leaf half away three parts of the way up the plants, serving those that are left entire in the same manner in ten days' time; this will check growth generally, rendering the formation of fruitful trusses of flower more probable. When, however, the plants make only a normal growth and fruit freely, the less the knife is used amongst the foliage the better, as it should be borne in mind that, in addition to supplying the fruit with food, it acts as a protection against hot sun, the

latter sometimes burning or blistering the fruit, some sorts taking harm sooner than others. As autumn approaches and the fruit has swelled to its fullest, relieving the plants of leaves which hang immediately over the fruit is often imperative in order to give it a chance of ripening before frost sets in; indeed, some good growers then use the knife somewhat freely, their contention being that as the laying on of pulp has ceased, maturation by leaf defoliation is warrantable. This, of course, refers to open-air plants. The best way of guarding against excessive leafage and of reducing the need of defoliation to a minimum is to grow the plants in a manure-free soil from the first, and to assist with stimulants after the fruit is set.]

LETTUCE, SOWING FOR WINTER.

THE month of August is the best time to sow this important crop. Soil and situation have so much to do with results that I should hesitate to give any fixed date. Speaking generally, the latter half I should prefer. In one place I had to provide Lettuces daily through the year. This taught me not to depend on one sowing for winter. I always made three sowings from mid-August till the first week in September. Should the autumn be mild the first was too large, and if severe the last was not large enough to stand the winter.

Other things to avoid are sowing thickly and on rich soil. When the stems are soft they are full of water and the frost hurts them. Lettuces often stand the winter in exposed places and are killed in gardens with shelter and rich soil. Regarding sorts, Mr. Strugnell (page 372) speaks highly of Hick's Hardy White Cos. After trying many kinds I consider this the best Cos Lettuce. When looking over a large seed farm near London at the close of July I was told more of this was sold than all others for winter. From a flavour point of view and hardiness I have found nothing to equal the old Bath Cos. In Cabbage kinds the best is Stanstead Park. WEST SURREY.

NOTES AND REPLIES.

Runner Beans.—Many amateurs complain of the flowers failing to set, and there being only a sparse crop; but in nine cases out of ten the fault is want of food and moisture. The plants, having much top, have absorbed all the food from the soil, and just at the time the plants are called upon for increased exertion they cannot respond, the bloom drops, and only one flower in ten sets or comes to maturity. Runner Beans are gross feeders. In many parts of the country heavy rains have occurred of late, but little has reached the roots of the plants, the heavy tops throwing off the rain. As the roots are very dry, here is a clear case for food and moisture, and if both are given there will be no lack of pods well into late autumn. Moisture should be given liberally at the roots, giving food at the same time, and washing it down to the roots.

Celery.—While the present spell of warm weather lasts water must be applied to Celery trenches, or, if liquid-manure is plentiful, this should be given instead. The soil must, however, be in a moist condition first, otherwise the virtues of the liquid will be lost. The moulding of the plants in the earliest-planted trenches must as necessity arises be proceeded with after giving the roots a thorough drenching of water. Keep the leaf-miner under as far as possible by picking off the affected leaves and burning them.

Chervil.—A final sowing of this herb was made in a spare corner, well exposed to the sun, and in which it can be readily protected if necessary. The sowing was done broadcast, and the seedlings will be well thinned out when they are large enough.

FRUIT.

YOUNG VERSUS OLD STRAWBERRY PLANTS.

UNDER good cultivation, and on soils suitable for Strawberry culture, the plants are seldom purposely destroyed before they have produced three crops, and I have known them remain in a profitable state very much longer, this being principally due to a free use of liquid manure both during the winter and spring months. There are also soils so unsuited to Strawberry culture that it does not pay to attempt taking a second crop from the plants. Not that a second crop could not be had, but the quality is so inferior that the fruit is comparatively worthless. The question is: Do we attach sufficient importance to the value of young Strawberry plants? In other words, are not the older rows still left on the ground longer than they ought to be in very many cases? Old plants can be and very often are made to produce heavy crops of fruit, but what about the quality? How does this compare with that of the fruit of young plants on fresh ground? In the majority of instances the finest and also the best flavoured Strawberries are obtained from plants fruiting for the first time. It is also a fact that the first gatherings are obtained from young plants. In addition to young Strawberry plants being the first to produce ripe fruit of superior quality, they are also harder than the majority of those that have lost much of their pristine vigour, or any, say, that have given three good crops. The hardness of old plants being doubtful is another reason why fewer of them should be saved. It is sometimes urged in favour of their being retained longer than I advocate that the third and in some cases the fourth crops are much the heaviest, and if only a few of the fruits are fine enough for dessert, the rest are very acceptable for making into jam. That large quantities are required for the latter purpose there is no disputing, but why not grow one or two varieties especially for supplying this class of fruit? Instead of keeping the finer or high-class varieties on the ground longer than they continue to give the best dessert fruit, would it not be a better plan to clear them off the ground after producing two heavy crops and grow either Vicomtesse Héricart de Thury, or the old Grove End Scarlet solely for giving preserving fruit in great abundance? The fruit of either of these varieties can be made into much better jam than any obtained from choice sorts, and which may be much mixed both as regards size and quality.

Doubtless where extra pains are taken in the preparation of ground well suited to Strawberry culture, good room also being allowed between the rows and the plants in the rows, the third and even fourth crops are remunerative enough, but in how many cases are all the conditions favourable to this end? Too often deep culture and a free use of solid manure are followed by a rank growth of the plants, a plentiful crop of leaves and not very much fruit being the outcome. In other instances the fruit is produced freely enough, but owing to the plants running into each other it fails to ripen properly, especially in a wet season.

If ground is trenched for Strawberries this ought always to be done in time for a crop of early Potatoes to be taken off, and it will have settled down considerably accordingly. Trenching is not, however, possible in all cases, and, fortunately, it is by no means indispensable. Young

plants will produce good crops on un-trenched ground, and fruit equal to what is obtained by the more expensive and laborious preparation, and there is less likelihood of failure from the looseness and richness of the root-run. Most soils that have been well manured, dug a spit deep, and got into a free working condition will answer well for Strawberries, while if well-rooted plants are got out by the end of July or during the first week in August and well attended to, they will become sufficiently strong to produce a valuable first crop. G.

PLANTING VINES.

PLEASE give best method of planting Vines to come quickly into bearing. The site is a lean-to house on south of dwelling-house, outside border 20 feet 9 inches, inside run for Vines 20 feet by 16 feet. The old Vine border is on clay. I propose to concrete border at depth of 3 feet, as roots have always tended downwards

intended border at some 6 inches below the general level. This should have an outlet of a safe and reliable character, and should receive a good covering of stones or bricks. Nine inches of brickbats should also be laid upon the surface of the concrete, which should be 3 inches thick, and have a good fall from the wall of the vinery to the main drain already referred to. Should there be any probability of the roots finding their way into any uncongenial quarters, walls 4½ inches thick should be erected as a preventive. Where the subsoil is sand or gravel the necessity for artificial drainage is reduced to a minimum. For early forcing an inside border is the best, as then the roots are more on an equality with the foliage as regards temperature. The best compost is holding loam, adding mortar rubble and bones or bone-meal. Turves, Grass-side downwards, should be placed over the

been attacked, is one of the worst pests of the Apple. As soon as the leaves are down remove all loose bark from stems and branches, and apply a mixture known and sold as Woburn wash, taking the greatest care to work it into every part. The soil, too, beneath the trees should be removed down to the roots, and then spray the trees thoroughly. This wash contains caustic soda in addition to paraffin emulsion, and it can be purchased ready for dilution from any dealer in horticultural insecticides, etc. Next season be on the alert, and should stray insects appear, which is not unlikely, destroy them by brushing them either with methylated spirit or undiluted paraffin. It is only by the exercise of perseverance and the application of the remedies mentioned that you can hope to clean the trees. A friend of ours has found neat's foot oil a good remedy. This, being thick, should be warmed and applied with a brush, and will smother the insects.]

Peaches and Nectarines.—Early varieties are later than usual, but as the trees are relieved of their fruit they will be cleared of all useless wood that has carried the crop, and superfluous side growths shortened to their basal buds, afterwards giving the trees a thorough washing with an insecticide. Mid-season and late varieties are carrying good crops of fruit, and need all the sunshine possible to ripen the fruits satisfactorily.

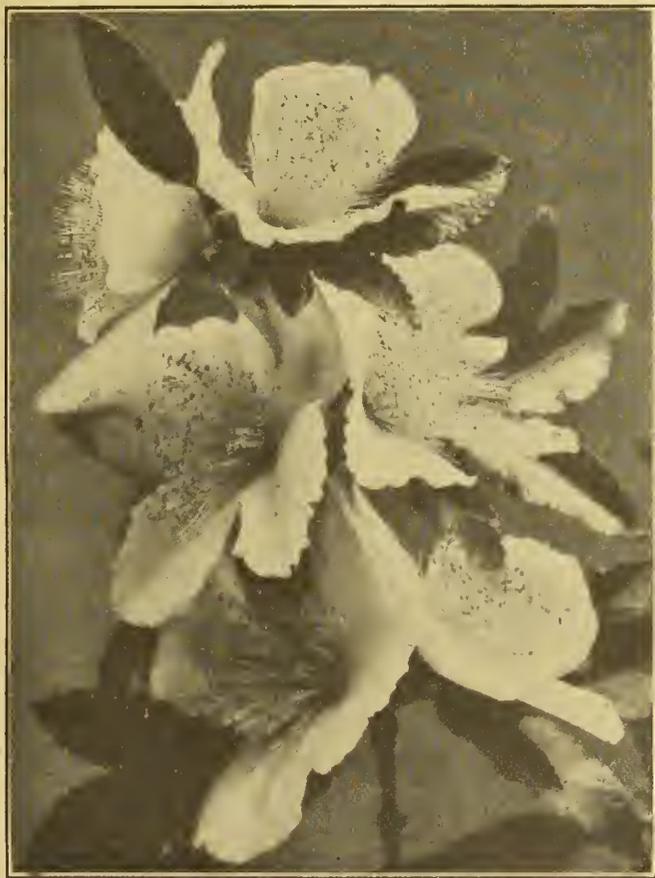
ROYAL HORTICULTURAL SOCIETY.

AUGUST 29th, 1916.

THE meeting held on the above date, though small, was interesting and representative. Hardy flowers, as might be expected, were well shown, comprehensive exhibits from Lindfield and Wisbech doing much in this direction. In both, the finer hardy flowers were seen to advantage, Montbretias and Phloxes playing a notable part. Exhibits of fruit, too, were of more than ordinary interest. Upwards of 100 dishes of Tomatoes representative of the 1916 Wisley trial of these fruits were sent from the Society's gardens there, cropping qualities and other things being demonstrated by showing a complete bunch and ripe, gathered fruits of each on the same dish. Several groups of Orchids were on view, among them many choice things.

HARDY FLOWERS.

These, while on the one hand materially assisting from the spectacular point of view, also demonstrated to some extent the wealth and procession of these that now obtain. In this connection the Montbretias were well to the fore for the first time this season, some excellent novelties being seen. The best of these were Queen of Spain and Citronella, shown by Mr. Sydney Morris, Earham Hall, Norfolk. The former of these, which gained an Award of Merit, is of large size, refined appearance, and rich orange colour, the other a smaller flower of canary shadings, is the most shapely we have seen, and would doubtless have secured honours had its flowering been less advanced. These Montbretias also stood out prominently and in considerable variety in a group staged by Mr. G. W. Miller, whose fine exhibit of Star of the East, much the largest variety yet raised, was a considerable attraction. It is of a deep tawny-orange tone. Prometheus is of intenser orange colour, to which its dark stems are a good accompaniment. Hereward is of refined yellow tone. King Edmund is also of this shade. White King Phlox in this exhibit had the merit of purity, handsome truss, and vigorous habit. The single pips, too, were very large; we thought them a little thin, though the exceeding wet of the moment was not favourable to such



Flowering shoot of *Eucryphia pinnatifolia*. (See p. 453.)

to clay in spite of regular manuring of border. I propose to take out old soil and fill with freshly-cut turves, Grass down, and loam from good pasture. What should cost of concreting be? I intend planting two Black Hamburgs, one Foster's Seedling, and one early black variety—which? The pipes for heating are part of house-heating apparatus. — S. L. HARTLEY, Yorkshire.

[The drainage of Vine borders is of paramount importance, but as regards this no rule can be laid down. Where the site is clay or approaching to it, concrete is needed to ensure an escape from the evils of water rising into the border, and to prevent the roots penetrating into the bad subsoil. In cold, low-lying districts the depth of outside border should not exceed 2½ feet at back, and, gradually diminishing towards the front, should not be deeper than 2 feet at that point. After the natural soil has been removed, and previous to laying on the concrete, a drain should be carried along the front of the

drainage to prevent the soil choking it. Firm borders, made piecemeal, keep the roots at home, and each new addition being sweet and fresh increases the vigour and fruitfulness of the Vines just at the time when they stand most in need of it. In addition to the two varieties you mention you should include Madresfield Court. Any local builder would give you an estimate of the probable cost of concreting. You should get a copy of "Vines and Vine Culture," Barron, price 5s. 6d., post free, from this office.]

NOTES AND REPLIES.

American blight on Apple-tree.—Would you kindly tell me what has attacked this Apple tree (Cox's Orange Pippin)? It is not all over the tree, which is young, and bears a fair crop this year. I have not noticed it on any other trees in the garden.—T. H. MORRICE.

[American blight or woolly aphid, with which the piece of branch you send has

things. *Lilium sulphureum*, a noble trumpet Lily, was very good, its powerful fragrance quickly attracting attention. The finest hardy plant shown by Mr. J. C. Allgrove was *Thalictrum dipterocarpum*. No other species can compare with this in gracefulness or the pretty effect of its violet-coloured sprays. As shown, it sprang from a mass of double white *Gypsophila*. The most comprehensive exhibit of these flowers was that arranged by Mr. J. Box in whose lot *Rudbeckia Herbstone* appeared as a novelty; indeed, in the yellow "Cone-flowers" it is the most refined and beautiful that we know. Four feet or 5 feet high, the clear, soft golden or butter-yellow of the informally-arranged florets is very telling, and a group in the garden would be effective at a distance. Next to this the value of *Antholyza paniculata* appeared, the crimson-scarlet tubular flowers sheathing out from sword-like blades of healthiest green being most effective. It is not a novelty, of course, rather a neglected plant of more than ordinary merit. *Polygonum amplexicaule*, because of its distinctive Indian-red tone, should be freely grown; *Aconitum Fischeri* likewise, as representative of the most intense violet-blue member of this genus at this season. In addition to the above there were *Phloxes galore*, also Lilies and Gladioli. In a group from Mr. G. Reuthe the most striking item was *Polygonum amplexicaule atropurpureum*, a richly-coloured variety of a good plant. *Ardisia japonica*, whose pendent white flowers are succeeded by orange-coloured fruits, is among the gems for woodland work. *Gaultheria nummularifolia* aptly describes a rock-loving species of trailing habit, and distinct withal. *Dianantha cœrulea* is a novelty from Japan, having drooping violet-blue flowers with white anthers on a foot-high plant. *Bockia affinis*, seen by many for the first time, bears elegant sprays of white flowers not unlike *Spiraea arguta* in effect. Hardy Heaths were very beautiful. *Aster Amellus* King George is the finest addition to the Italian Starworts we know. Twice the size of the original, and rich violet-blue in colour, an outsider can readily estimate the value of the newcomer. It was well shown by Mr. W. Wells, jun., who also had the sky-blue *Delphinium Belladonna plenum*, the pale blue *D. Merstham Glory*, and *D. La France* (bluish-mauve), which, if not new, is too good to be out of any collection. In a group of hardy *Fuchsias* from Messrs. G. Bnyard and Co. the miniature-growing *Tom Thumb*—presumably a variety of *F. pumila*—forming a little hush of 8 inches high was loaded with flowers, and *F. Thompsoni*, of taller growth and very graceful habit, at once caught the eye.

ROSES.

Only one exhibit of these was on view, viz., that from Rev. J. H. Pemberton, who for some time has been raising new varieties of the cluster—*Polyantha*—or allied types, particularly in the yellow shades or approaches thereto. In addition to other good qualities they have the merit of perpetual flowering. *Dana* (H.T.) is one of the best yellows, good for autumn flowering. Even more distinct and far more popular is *Clytemnestra* (H.T.), which gained a Gold medal in 1914. It has coppery tints, the flowers opening salmon-chamois. The plant assumes a hushy habit of 3 feet to 4 feet high. The novelty of the moment, however, was *Callisto*, of pale and deep canary-yellow, against which its dark-coloured wood is in good contrast. It gained an Award of Merit.

FERNS.

The freely-tasselled, much-branched *Pteris tremula Smithi* stood out as one of the most distinct Ferns in a comprehensive exhibit of these from Messrs. H. B. May and Sons. With many of the good attributes of the type, it is of dwarfer habit and very ornamental. *Asplenium marginatum* is a rare and handsome species with broad, deeply-lobed fronds of yellow-green colour, which it is said no treatment will alter. *Polypodium glaucum crispum* is almost alone in its class, and a plant of fine ornament. The newest of the *Nephrolepis* is *N. gracillima*, densely plumose and quite dwarf.

DAHLIAS.

The principal novelties came from Messrs. Stredwick and Sons, who showed *Bizarre* (Cactus), crimson, white tipped; *Alabaster*, large white (Cactus); *Mascot* (Collarette), purplish-magenta; *Saffron* (Cactus), of greenish-yellow tone; *Private E. Drury* (Collarette), terra-cotta and Salmon; and the *Pompon Cactus*, *Amethyst*, which is of magenta shade. Each received an Award of Merit. Messrs. J. Cheal and Sons showed a general collection of these flowers, the novelties including the pure white *Paony-flowered Aphrodite*, and *Leon* (single), of rich scarlet tone. *Northern Star*, *White Star*, and *Crawley Star* are a trio of a new and decorative class valuable for the garden for cutting.

ORCHIDS.

Lælio Cattleya Thyone, var. *Bryndir*, is a handsome hybrid, having a lip of rich orange-yellow with crimson border and yellow sepals. It came from Dr. Lacroze, Rochampton. Another novelty was *Lælio-Cattleya Golden Wren*. This has greenish-yellow sepals, canary-coloured petals, and golden-yellow lip richly bordered with ruby-crimson. Both gained Awards of Merit, the latter being shown by Messrs. Armstrong and Brown, whose lot included *Sophr-Cattleya Blacki* and *Cattleya Iris Majestic*, novelties of first importance. In a choice assortment from Messrs. Sander and Sons the pure white *Cattleya Lady Veitch*, var. *superba*, stood out from all. *Lælio-Cattleya Purple Emperor*, *L.-C. Queen Marie*, and *Brasso-Cattleya Mme. Charles Maron* (palest mauve with yellow throat) were other good things. *Lælio-Cattleya Appam* (reddish petals and ruby-crimson lip), from Messrs. Charlesworth, appeared at once, and among others, *L.-C. Thyone* and *Cattleya Lord Rothschild*. *Cattleya Sybil* and *C. Adula*, from Messrs. Hassall, displayed a remarkable colour range in golden, buff, and fawn.

FRUIT.

Mr. C. A. Cain, J.P., Welwyn, Herts (gardener, Mr. T. Pateman), sent a meritorious exhibit, for which a Gold medal was deservedly awarded. Of a comprehensive character, comprising upwards of sixty dishes, the collection contained many bunches of superbly-grown Grapes, as *Muscat of Alexandria*, *Appley Towers*, *Black Hamburg* (very fine), *Gros Maroc* (of superb quality), *Lady Downe's Seedling*, and *Lady Hutt*, among others. Peaches, Plums, Apricots, and other fruits were alike well shown. Mr. J. C. Allgrove showed two year old and three year old fruiting trees of the new Apple *Rev. W. Wilks*, the older examples carrying from nine to a dozen handsome fruits. The variety is obviously a great cropper. Of Plums, *Diamond*, *Gisborne's*, *Belle de Louvain* (handsome dark variety), and *Tbe Czar*, gathered fruits, were shown.

A complete list of the new plants certificated and medals for groups will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM AUGUST 30TH.—*Desfontainca spinosa*, *Solanum jasminoides*, *Ceanothus* (in variety), *Wistarias*, *Buddleias* (in variety), *Polygonum baldschuanicum*, *Clematis* (species and varieties), *Honeysuckles* (late-flowering varieties), *Jasmines*, *Hydrangeas*, *Spiræa Aitchisoni*, *Spartium junceum*, *Hypericum*, *Hardy Fuchsias* (in variety), *Rhus* (in variety), *Aloysia citriodora* (Sweet-scented *Verbena*), *Myrtus Luma*, *Andromeda polifolia*, *Clerodendron trichotomum*, *Indigofera Gerardiana*, *Sambucus canadensis*, *Daphnæ Cneorum*, *Romneya Coulteri*, *Desmodium penduliflorum*, *Cistus* (in variety), *Veronicas* (in great variety), *Nandina domestica*, *Yuccas*, *Olearia Haasti*, *Mertensias*, *Geums*, *Anchusas*, *Morina longifolia*, *Tritomas* (in variety), *Echinops*, *Eryngiums*, *Erigerons*, *Michaelmas Daisies*, *Delphiniums*, *Phloxes* (in variety), *Galgas*, *Anemone japonica* (in variety), *Chrysanthemum maximum* (in variety), *Statice* (in variety), *Helenium pumilum*, *Helianthus* (in variety), *Achilleas*, *Linums*, *Centaureas*, *Agrostemmas*, *Lobelia cardinalis* (in variety), *Cimicifuga racemosa*, *Campaulas* (in variety), *Bergamots*, *Platystemon*, *Montbretias* (in variety), *Gladiolus* (in variety), *Hyacinthus candicans*, *Liliums* (in variety), *Hollyhocks*, *Verbascums*, *Lavateras*, *Sidalceas*, *Pentstemons* (in great variety), *Astilbes* (in variety), *Epilobiums*, *Lythrum roseum*, *Lysimachias*, *Polygonums*, *Aponogeton*, *Nuphar*, *Flowering Rush*, *Water Lilies* (in variety), *Spiræas* (in variety), *Mimulus* (in variety), *Acrocliniums*, *Collinsias*, *Nemesias*, *Salpiglossis*, *Stocks* (in variety), *Clarkias*, *Godetias*, *Phlox Drummondii*, *Leptosiphons*, *Annual Delphiniums*, *Sweet Sultans*, *Antirrhinums* (in variety), *Cosmos*, *Calceolaria amplexicaulis*, *Cannas*, *Salvias*, *Scubious* (in variety), *Marguerites*, *Summer-flowering Chrysanthemums*, *Nigellas*, *Carnations* (in variety), *Audrosace lanuginosa*, *Veronica Lyalli*, *Pratia angulata*, *Plumbago Larpentæ*, *Gysophilas*, *Tunica Sari-frogo*, *Polygala Chamæbuxus purpurea*, *Dryas octopetala*, *Nicrembergia rivularis*, *Silene Schafta*, *Agopanthus umbellatus*, *Roses* (in variety), *Sweet Peas*.

WORK OF THE WEEK.—The chief work during the past week has been the propagation of such plants as *Calceolarias*, *Pentstemons*, *Phloxes*, *Mesembryanthemums*, etc. Frames were prepared by placing in them a bed of sandy soil about 6 inches deep. This is made moderately firm and the cuttings dibbled in 3 inches to 4 inches apart. The cuttings root readily and will remain in the frames throughout the winter. The frames are kept close until the cuttings are rooted, after which an abundance of air is given on all favourable occasions. *Lavender* flowers being over, the bushes have been trimmed with the hedge shears. A good batch of cuttings has been put in. Side shoots root readily at this season if put in on a warm and fairly dry border. Young stock should always be kept up, as I find *Lavender* is best when replanted every third or fourth year, even good-sized branches cut off and planted deeply in the soil will root freely and soon form good flowering plants. Early batches of *Sweet Peas* have been cleared. The later batches are blooming freely, and in order to assist them the old flowers are picked off and the plants kept moist at the roots. The layering of *Carnations* was carried out during the week. As soon as they are well rooted they will be potted up, placed in a cold frame for the winter, and planted out in early spring. Owing to the damp atmosphere in this locality, *Carnations* will not stand the winter planted out. In more favoured districts I strongly recommend autumn planting, in which case they should be layered early in August and planted in their permanent quarters in September. There is always a certain amount of work on the herbaceous border, and just now when many of the summer-flowering plants are going over, there is much to do in the way of cutting down and making tidy.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Black Hamburgh Grapes.—Those intended for late supply must receive every encouragement to swell to their fullest size, and as soon as colouring is general, make the most of the warm weather to bring about a good finish. Attend to the frequent stopping of laterals, but at the same time take advantage of such growths being present to cover any bare spaces there may be on the trellis, as the Black Hamburgh quickly loses colour if exposed to much sunlight. In regard to this matter it is often necessary to shade the roof after the Grapes have finished when the weather is bright and sunny, as is often the case in the latter part of September and during October. If the roots are in an outside border the latter should be protected with shutters or corrugated sheet iron as soon as the finishing stage is reached to prevent the soil becoming saturated should rainy weather set in. The inside of theinery must be kept cool and as dry as possible, and if it contains any plants, these for the time being should be taken elsewhere. This will avert all risk of losing berries from damp. In foggy and wet weather the ventilators are best kept closed, and when it clears up open them to their fullest extent, and if the outside air is chilly turn on enough fire heat to warm the pipes.

Strawberries.—If it was found impossible to layer into pots the requisite number of runners with which to form new beds, or where this has been done to prepare the sites intended for them in a proper manner, steps should be taken in the first instance to lift the required number of runners which will now be found firmly rooted between the rows of old plants, and to plant them in rows 9 inches apart and 1 foot asunder, on a border or any spare piece of ground. If lifted with balls of soil and well watered as soon as planted they can be lifted in splendid condition next February or March, and will give an excellent account of themselves the following season. Between now and then an opportunity will present itself to well manure and deeply dig the sites intended for them. Although a crop of fruit must not be expected till the following season the ground need not lie idle, as if the rows of plants stand from 2 feet to 2½ feet apart, Lettuces, Spinach, Horn Carrots, Radishes, or anything that will turn in quickly may be grown between them. Where the plants are already in pots they should be planted out in nursery rows as above as quickly as possible to prevent them getting further pot-bound. If got out early after the turn of the year these will yield a crop of fruit next season, but not sufficient in quantity to warrant the leaving of the ground between the rows uncropped unless there is plenty of space at command.

Hardy fruits.—Morello Cherries are now in the right condition either for bottling in the usual way or for preserving. Plums and Gages for bottling must be gathered before they become too ripe, otherwise the fruits will not remain in a whole condition after being subjected to heat. Peaches and Nectarines, particularly early varieties on walls facing south, will now require a look over every other day, if not daily. It is a mistake to allow them to become too ripe. If caught in the right condition and placed in the fruit-room they finish up there to perfection.

Fruit-room.—Before this is likely to be required for the general storage of fruit any necessary repairs or alterations should be carried out and the structure carefully cleansed, finishing by giving the ceiling and walls a good lime-washing. This is a matter that cannot be over-estimated where brown-rot fungus was rife last year.

Vegetable Marrows.—That the plants may continue bearing as long as possible every fruit should be cut directly it is large enough for use. Allowing them to become over-large or to go to seed has an exhausting effect on the plants and quickly leads to their becoming non-productive. In dry weather water should be given regularly at the roots.

Scarlet Runners.—These have had a trying time of late where deep digging, mulching, watering, etc., have not been attended to, and tough, stringy pods, such as have been much in evidence in shop-windows lately, are

the result. It is not yet too late to remedy matters in this direction, and, in addition to keeping the roots well supplied with water, a mulch laid on on either side of the rows, if only of rough Grass cut from the hedgerows will keep them cool and prevent the soil drying out so quickly. Gathering should have regular attention so that there may never be any likelihood of any pods going to seed.

Lettuces and Endive.—A final sowing of both should now be made, and in the former case the drills should be drawn on a piece of fairly dry ground, as most of the plants will remain in them during the winter. The seed may also be sown broadcast on a border, but, all things considered, the former method is the more convenient.

Onions.—Every attention should be paid the spring-sown plants in the way of keeping the tops bent over to favour bulb development, and the ground clear of weeds so that they may become fully matured ere cold weather sets in.

Mignonette.—A sowing in 3-inch and 4-inch pots should take place now to furnish plants to bloom in winter and spring next. A compost of two-thirds loam, one-third leaf-mould or well-decayed manure, and a liberal quantity of sand with a little fine lime rubble suit Mignonette. Fill the pots to within three quarters of an inch of the rims, sow the seed thinly, and cover lightly with fine soil. Place in a cold-frame, and when the plants are large enough thin out to five of the best in each pot. A shift into 6-inch and 7-inch pots should be given as soon as the plants have four or five fully developed leaves and are well rooted.

A. W.

MIDLAND COUNTIES.

Peaches and Nectarines.—Many complaints are annually heard of Peach and Nectarine trees under glass dropping the greater portion of their blossoms in the spring. In most cases this is due to extreme poverty or dryness at the roots during the autumn and early winter, or else very loose borders. After all the fruit has been gathered the borders should be cleared of the mulching, the surface lightly broken up with a fork and given a good soaking of diluted farmyard liquid-manure. Failing this, clear water may be given. Grape Vines and Fig-trees, also, should never be allowed to become dry at the roots, as a few days' neglect in this respect may endanger the next year's crop. Not only should they be kept regularly supplied with water, in order to secure a perfect formation of buds, but they should also be given, if possible, liberal supplies of liquid-manure, thus assisting the Vines or trees to recoup their strength after the exhaustive maturation of their crops.

Raspberries.—All the old bearing canes have been cut out, and the young ones sufficiently thinned, care being taken not to damage the foliage of those retained for next year's fruiting. This operation will admit of more air and sunlight amongst the selected canes, with the result that they will be better ripened. For this reason they should not be tied closely to the trellis until the foliage has fallen, but merely loosely secured to prevent injury by wind. If liquid-manure is available, a good soaking of this will at this season be beneficial, particularly to old plantations that are declining in vigour. Autumn-fruiting kinds should have their fruiting canes exposed as much as possible to the sun and kept well thinned, otherwise the fruit will not ripen satisfactorily.

Strawberry runners may still be planted, but unless they are extra strong they must not be expected to produce much fruit next season. Strawberries planted early have a better chance of becoming established and of ripening their crowns before frost arrives.

Cinerarias.—The early batch is now ready for transferring to their final pots—6-inch or 7-inch, according to the strength of the plants. A suitable compost consists of three parts good fibrous loam and one part leaf-mould, adding coarse sand, decayed cow-manure, and a sprinkling of fine bones and soot. The potting should be firmly done and the plants replaced in the cold-frame in a cool, shady position. A

little soot should be sprinkled over the ashes in the frame under the pots to destroy any slugs which may be present. Examine the foliage of the plants, and if any signs of maggot are found the insects should be searched for and destroyed, removing and burning any badly infested leaves. As a preventive of this pest I spray the plants occasionally with Quassia extract, taking care that the under part of the foliage is also wetted. Ventilation should be gradually increased as the plants develop, and, finally, if the weather is warm enough, the lights may be left off throughout the night.

Carrots.—The main crop of this vegetable will be lifted and stored as soon as possible. Care must be taken not to place the roots in too large a heap or they will become heated and damaged. Late sowings are thinned sufficiently to prevent overcrowding. As small Carrots are always acceptable, the plants are thinned as required for use.

Beetroot should not be left in the ground after the roots have reached their full size, or they will become coarse and unfit for use. The roots should be stored in a cool, dry shed, placing sand amongst them in sufficient quantity to exclude the light and keep them moist.

The Potato crop appears very promising in this district, disease, so far, not having affected it seriously. Mid-season varieties will now be lifted, for should cold, showery weather set in, a large percentage of the tubers may become diseased. Choose fine weather for the lifting, and where the facilities exist place the tubers in sheds, and then carefully examine them for diseased tubers before placing them in clamps for the winter. If freshly-slaked lime is lightly sprinkled over them it will dry up any affected tubers that may be overlooked. It also acts as a general sweetener and improves the flavour. Straw or dry Fern should be placed carefully over the tubers previous to covering them with a 9-inch layer of soil, which will be sufficient protection until frosts occur.

Turnips for the winter are now ready for thinning. A space of 9 inches is left between each plant, frequent light dressings of soot being afforded and the surface of the soil between the rows stirred as frequently as circumstances permit.

French Beans.—Plants from seed sown in cold pits early in August are growing strongly and require plenty of water at the roots. Frequent light dustings of soot keep red-spider and other pests in check. F. W. G.

SCOTLAND.

Vegetable garden.—Present sowings should include Cauliflowers for spring planting. In a general way the seedlings are pricked off into cold-frames in which they remain over the winter, although I have seen plants pricked out at the foot of a south wall and protected during frosty weather with Spruce branches, turning out much superior to those wintered in a frame. In the latter case damp is always present to a certain extent; and, further, in a mild winter growth is always on the move, with the result that the plants are often too large and too soft to be of much use when planted out. In many places autumn sowing is now dispensed with, and reliance placed upon young stuff raised in heat from sowings made about the New Year. Still, a few plants in frames are always useful if the season is favourable, and a sowing made in the last days of August or early in September can be relied upon to provide plenty of seedlings in time for pricking off before the nights get cold. Every grower has his favourite sorts. I like Early Erfurt, with Eclipse and Autumn Giant for succession. Early London is a good Cauliflower, so, too, is Walcheren, but a good strain of these seems nowadays very difficult to get hold of. Further lines of Carrots of the Horn type may now be sown in frames. Shallots now ripe, if not already pulled, should be harvested without delay, and spread out thinly until the bunches are thoroughly ripened. In the event of any scarcity of this bulb, if a few of the ripest cloves be selected and replanted immediately, quite a useful second crop may be lifted

toward the end of October. The Cloves from this planting, however, will not keep very well, so it is as well to use these first. It grows late for Lettuce sowing; but a pinch of seed sown in rich soil with a good exposure may give some fairly good heads late in the season. I have found nothing better this year than Henderson's New York Lettuce among the Cabbage varieties. Good in colour, and moderate in size, with beautifully crisped foliage, this variety does not bolt for a long time. A supplementary sowing of autumn Onions can now be made. These will do quite well on the quarter vacated by Potatoes. Spinach, the prickly variety, will also succeed now in a similar place, and with the cooler weather and the recent rains ought to be satisfactory. Take advantage of the moist state of the soil to thin out Spinach Beet, as the more room allotted to individual plants, the more robust will the leaves be. Seedlings of this useful substitute, it may be mentioned, transplant readily. Keep the hoe at work among breadths of winter vegetables. Before hoeing, a dressing of guano or other stimulant—even soot, if nothing else is available—will benefit the plants. Any superfluous French Beans ought to be picked at close intervals and salted down for winter use. We generally grow a line or two especially for this purpose, but when the supply from other lines is in excess of the demand the surplus is preserved. Nothing is gained by permitting spent lines of Peas to remain on the ground. The same observations apply to Broad Beans. Second-early Potatoes, if grown to any extent, may now be lifted and stored. If, however, these are not largely cultivated, it is just as well to allow them to remain in the soil until they are required. Before earthing up Celery a good drenching of water or, better still, liquid-manure ought to be given.

Lavender.—An excellent crop of this favourite flower was harvested in the course of the week. The particular bed from which the spikes were cut is now in its third season, and with a little attention may be depended upon to last for some seasons yet. Where it is intended to renew or to increase the supply, cuttings ought to be taken early in September. Opinions differ as to the best method to pursue. I treat Lavender cuttings in all respects like those of the bedding Pelargoniums, even to the extent of keeping them in heated pits over winter and spring. The advantage thus gained is never lost, the plants when hardened off and put out in spring go away rapidly and flower in a moderately free way during the following summer.

Stove.—If it is necessary for any reason to cleanse this house before winter sets in an opportunity should be made for doing so without delay. At this time the plants usually associated with the stove will not suffer if removed for a short time to another house, and the sweetening up of walls, woodwork, and glass will go far towards success in the dull winter months. Among some plants this is the time of resting or of ripening, so that as much air as possible ought to be given on all suitable occasions. Any good Gloxinias may now be increased from leaf cuttings. These, inserted in the propagating pit, kept shaded, and moderately moist, will soon callus and form firm little bulbs which will be useful early next year. Similarly, leaves of Saintpaulia ionantha will soon develop into neat little tufts, which are of value in 3-inch or 4-inch pots. Gesneras for early-winter blooming are already showing the central flower-stalk. These are being pinched out as they are noticed with a view to inducing a freer break of side shoots. It is intended to use a proportion of these plants for greenhouse purposes, some which were so grown last season being equally as good as those in the stove, although, naturally, later in coming into flower.

Melons in pits have been top-dressed during the week. As the ripening stage approaches less water will be given and a chink of air left on during the night. Owing to the lack of sun in the early part of the season, the crop will be a little later than usual although, on the whole, more satisfactory than in the case in 1915.

W. McGUFFOG.

Balmac Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Unhealthy Gloxinias (W. B.).—The leaves are badly affected with "thrips," a great insect pest to Gloxinias, and generally brought about by a hot, dry atmosphere in the house, and sometimes also the plants may have been allowed to get dry at the roots. The only thing to do now is to maintain a cool, moist atmosphere around the plants, and to give very frequent light fumigations with Tobacco. These must be often repeated, or the "thrips" will not be destroyed.

Lavender, cutting down (Lavender).—We should advise you to put in a lot of cuttings at once under a handglass, if you have such; if not, in the open under a shady wall. Cut down the plants next March, and put a layer of manure over the roots, keeping them well watered if the weather is dry. The old plants should break from the bottom and become thick and strong. If they fail to do so dig them up and well manure and till the ground, and plant the cuttings which have been struck and will be well rooted.

Hydrangeas, blue (Bournea).—There is always a great amount of uncertainty about obtaining flowers of the right colour, even when, as far as our knowledge goes, we adopt what is considered the best means to secure the object in view. The following compost for plants in pots has been recommended:—One half should be turfy loam (broken up with the hands and not sifted), the other half a mixture of peat, crushed charcoal, and about 2 lb. to the bushel of iron filings. It is generally supposed that the blue colour is due to soil which contains iron. Kindly send a few leaves of the Primulas you refer to, and tell us something of how you are growing them.

Asparagus plumosus nanus (G. Penwell).—Since the introduction of this useful plant its cultivation has gradually extended, and at the present time some growers have it by the thousand. It is chiefly grown for cutting, the flat, feather-like branches being very useful for almost all kinds of floral arrangements. Among florists it is frequently called Asparagus Fern. It is now a greater favourite than *A. plumosus*, and can be easily increased from seed, which can be had when the plants become established. This Asparagus is generally treated as a stove plant, and where kept free from insects it does well in a high temperature. It will do equally well in a cooler atmosphere, and is not so liable to the attacks of red-spider, which is one of its greatest enemies. To grow it successfully the chief point is to give it plenty of root room and good drainage. Any ordinary potting com-

post may be used, but a light fibrous loam is preferable. To this may be added leaf-mould and some well-rotted manure, or some peat may be used if the loam is heavy. Where required for cutting, planting out is the best system; under favourable conditions a few plants will give a regular succession of useful material. The plants should never be cut in too hard, but to secure good-sized branches the old stems should be thinned out occasionally. Where the plants are strong and healthy they require a good deal of water and will suffer if allowed to get dry. Full exposure to the light is necessary.

Carnations from cuttings (Patch, Dublin).—The only really quick and certain way of treating cuttings in the open is as follows:—From any large tuft that contains many growths that could not be layered in time, let anyone take and strip off from the parent plant, each with a heel attached, as many pieces as are required. Taking the growth in the thumb and fore-finger of the right hand, and giving a slight, yet sharp, downward pull, the piece will come away with a perfect heel almost every time. Now make a little trench as though setting a Box edging, and so deep as to admit the so-called cuttings being buried up to the leafy tuft, and insert them without trimming, stem-splitting, or stone wedges. A little pure sand or very sandy soil may be put into each trench at option, all depending on the nature of the soil. There is, however, no need for any prepared bed of soil at all. As the cuttings are placed in the trench, and while held in position by the left hand, draw sufficient soil with the right hand to keep them fairly erect, and, finally, finish off with the spade while also preparing a second trench. A good gentle tread with the foot when the trench is two-thirds filled with soil is a necessity. Not only is this a quick way, but a way that ensures cuttings of the size of layers, and quite large enough for spring planting. You may put in the cuttings of Rambler Roses at any time during the autumn, selecting the firm and well-ripened wood. When sending queries, please put each on a separate slip of paper.

FRUIT.

Mildew on Vines (H. G. T.).—The causes of mildew are often very difficult to trace. Mildew may be caused by cold, damp, sunless weather, with a stagnant atmosphere, especially if bright sunshine follows this. Again, it may be due to cold draughts of air allowed to play over the foliage. One of the surest preventives is plenty of fresh air, which can be had by attending to the ventilation and keeping the air warm and buoyant by using the hot-water pipes. If the house is a cold one, then keep it dry during cold, damp weather, and do not syringe or damp down. Sulphur sprinkled on the foliage is the best remedy, or, if the house is heated, paint the pipes with flowers of sulphur mixed with milk, the fumes arising from the heated pipes being destructive to the mildew.

VEGETABLES.

Cutting and drying Herbs (An Old Subscriber).—Mostly all herbs should be cut and dried before the middle or end of September, not so much for the sake of the herbs to be dried as for the roots left in the ground. There are many kinds of herbs, such as Mint, Sage, Thyme, etc., which perish during winter if they are not cut in time to allow the plants to make short growth before the growing season comes to an end. Herbs must not be dried, as some do, before a kitchen fire. Those who buy bottled Parsley and such like should smell it first. The best way to dry herbs is to spread them out in a dry, airy room or loft, turning them over frequently to prevent the leaves getting mouldy. In damp, dull weather a dry vinery or Peach-house is a good place, hanging the bundles over the wires. The object in all cases should be to dry them gradually, and the leaves should retain their colour to a considerable extent and adhere firmly to the branch. When they crumple up in the hand, they have been subjected too much to the kitchen fire process, which destroys their virtue. After being thoroughly dried, hang them up in a dry shed. We doubt very much if small growers could find a sale for herbs.

SHORT REPLIES.

W. Oliver Grindley.—The plant you are growing is what is called wrongly the "Jerusalem Artichoke" (*Helianthus tuberosus*), a Sunflower, and whose tubers are eaten, the other being known as the true Artichoke (*Cynara Scolymus*), the base of the scales of the flowers of which, and also the bottom of the Artichoke, are eaten either cooked or raw. Cookery recipes, too, are muddled by the error of giving the same name to wholly different plants.—*Agnes Unwin.*—No; cutting off the dead flowers will do no harm in either case.—*Clanswoman.*—Yes; there are various trustworthy English firms which can supply what you require. Of course, you are aware that no Hyacinths or early single and double flowering Tulips can be had from our seedmen, but in this country we have a sufficient variety of other bulbs to meet all requirements.—*W. M. Crowfoot.*—The name Rose Apple has been given to the species of *Eugenia*.—*Mrs. Nicholson.*—The best plan would be to leave the cutting back till the spring, as, should we have a severe winter, the plants would probably suffer. Yes; the Lavender is best pruned back immediately after the flowers have been gathered.—*Tom.*—1, Yes, the border you refer to will do well for Gooseberries, Red, and Black Currants. In such they will come in late and be very useful. 2, Dig in the manure at once in order to prevent any loss of its fertilising value.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*Amateur.*—The Fire Thorn (*Crataegus Pyracantha*). To protect the berries from the birds the only thing you can do is to cover them with a net.—*B.*—1, *Elecampane* (*Inula Helenium*); 2, *Phacelia campanularia*; 3, *Alstroemeria aurantiaca*; 4, *Hypericum oblongifolium*.—*Y. B.*—1, *Blue Cupidone* (*Catananche cerulea*); 2, *Oenothera fruticosa*; 3, *Campanula pusilla alba*; 4, *Helenium autumnale*.—*C. R.*—1, *Rudbeckia Newmanii*; 2, *Solidago Virgaurea*; 3, *Aster*

Amellus; 4, *Astrantia major*.—*A. S.*—1, *Campanula lactiflora*; 2, *Centranthus ruber*; 3, *Erigeron speciosus*; 4, *Aster Thomsoni*.—*F. M. W.*—1, *Gentiana asclepiadea*; 2, *Plume Poppy* (*Bocconia cordata*); 3, *Galega officinalis alba*; 4, *Lysimachia clethroides*.—*G. A. S.*—1, *Diplacus glutinosus*; 2, *Tradescantia virginiana*; 3, *Sedum spectabile*; 4, *Scabiosa caucasica*.—*A.*—1, *Linaria reticulata aureo-purpurea*; 2, *Sedum album*; 3, *Echinops Ritro*; 4, *Thalictrum adiantifolium*.—*Leeds.*—1, *Harpalum rigidum*; 2, *Veronica Andersoni*; 3, *Lysimachia clethroides*; 4, *Veratrum nigrum*.—*J. C. C., Devon.*—1, *Abutilon Thompsoni*; 2, *Begonia metallica*; 3, *Sedum carneum variegatum*; 4, *Polygonum baldschuanicum*.—*M. C. G.*—1, *Sedum spurium*; 2, *Dianthus sp.*; 3 and 4, *Aubrietias*. It is quite impossible to name your plants with any degree of certainty from the dried-up specimens in the case of Nos. 2, 3, and 4 you send us.

Names of fruits.—*H. Gillott.*—1, Specimens insufficient; 2, *Margaret*, so far as we can say from the poor specimens you send us.—*W. B.*—Apples: 1, *Devonshire Quarrenden*; 2, *Lord Suffield*; 3, *Worcester Pearmain*; 4, *Jacob's Seedling*.—*W. W.*—Apples: 1, *Margaret*; 2, *Keswick Codlin*; 3, *Mank's Codlin*; 4, *Duchess of Oldenburg*.

CATALOGUES RECEIVED.

DOBBIE AND Co., Edinburgh.—*Catalogue of Bulbs, Roses, Carnations, Pinks, Violas, etc.*
ALFRED DAWKINS, 408, King's-road, London, S.W.—*List of Bulbs, Autumn, 1916.*
EDWARD WEBB AND Sons, Ltd., Stourbridge.—*Bulb Catalogue, 1916.*

Parcels sent to our office insufficiently stamped will, in future, be refused.

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LIST OF AWARDS AT THE R.H.S. MEETING ON AUGUST 29, 1916.

ORCHID COMMITTEE.
Awards of Merit.

Laelio-Cattleya Thyrone, var. *Bryndir*, from Dr. M. Lacroix, Roehampton; *Laelio-Cattleya Golden Wren*, from Messrs. Armstrong and Brown, Tunbridge Wells.

Medals.

SILVER FLORA.—Messrs. Charlesworth and Co., Haywards Heath; Messrs. Armstrong and Brown.
SILVER BANKSIAN.—Messrs. Hassall and Co., Southgate, N.; Messrs. Sander and Son, St. Albans.

FLORAL COMMITTEE.
Awards of Merit.

Rose Callisto, from Rev. J. H. Pemberton, Havering-atte-Bower, Romford; *Montbretia Queen of Spain*, from Mr. S. Morris, Earham Hall, Norwich; *Dahlia (Cactus) Bizarre*; *Dahlia (Collarette) Mascot*; *Dahlia (Cactus) Alabaster*; *Dahlia (Cactus) Saffron*; *Dahlia (Collarette) Pte. E. Drury*; *Dahlia (Cactus) Amethyst*. These Dahlias, all of which were shown by Messrs. Stredwick and Son, St. Leonards, were also given the First-class Certificate of the National Dahlia Society.

Medals.

SILVER GILT FLORA.—Mr. J. Box, Lindfield, for hardy plants.
SILVER FLORA.—Messrs. H. B. May and Sons, Edmonton, for Ferns, etc.; Mr. G. W. Miller, Wisbech, for hardy plants.
BRONZE FLORA.—Rev. J. H. Pemberton, for Roses; Mr. G. Reuthe, Keston, for hardy plants; Mr. W. Wells, Jr., Merstham, for hardy flowers.
BRONZE BANKSIAN.—Messrs. Cheal and Son, Crawley, for Dahlias.

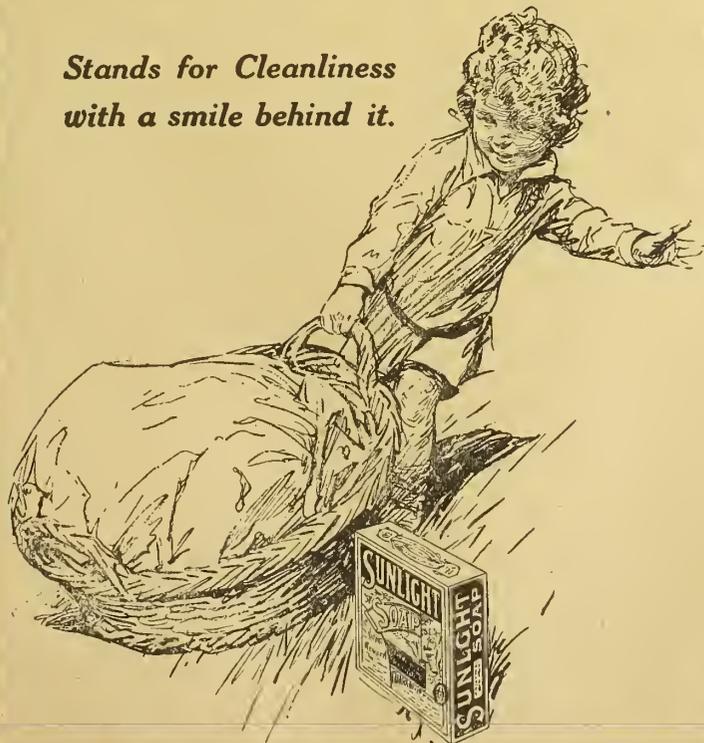
FRUIT COMMITTEE.
Medals.

GOLD.—Mr. C. A. Cain, The Node, Codicote, Welwyn (Gr., Mr. T. Pateman), for collection of fruit.
SILVER KNIGHTIAN.—Mr. J. C. Allgrove, Laugley, Slough, for collection of fruit.

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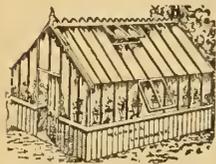
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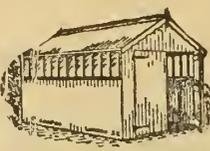
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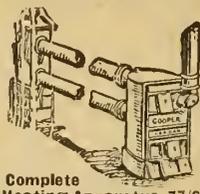
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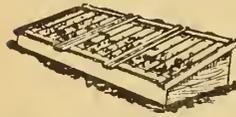
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No. 1958.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

SEPTEMBER 16, 1916.

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NOTES OF THE WEEK.

Nemesia Orange Prince.—A new variety bearing this name and exhibited by Messrs. Dobbie and Co. in July last, when it gained an Award of Merit, is the largest and most brilliant of its shade that has yet appeared. The habit of the variety, too, gave the impression of increased vigour, a desirable quality not possessed by all the members of this race.

Crinum capense.—This does well with me in a warm border against a south wall, planted deeply in rich soil, and is now throwing up its spikes of handsome pink blossoms. It needs very little care beyond seeing that it does not get too dry in summer, and rapidly increases. In a severe winter it is best to put a mulch of leaves or ashes over it, but if planted deeply it will come through any ordinary winter without protection.—NORTH LONDON.

Gypsophila ortegioides.—This is a pretty species from Asia Minor, whose acquaintance I made for the first time recently in the Kew rock garden. A foot-high plant as seen, bushy, slightly woody or wiry of stem at the base, and smothered with tiny flowers of the purest white, it appealed to me. Having the reputation of being a good perennial, breaking afresh from the soil each year, after the manner of some Linums, hardness and neatness—good attributes—are assured.—E. H. J.

Aconitum Napellus album grandiflorum.—The white variety of the common Monkshood has never impressed us, hence the coming of this much-improved form should be welcome. Of a decidedly purer white, so far as the individual flowers are concerned, the much taller growth and pyramid-like panicle of blossoms render it quite distinct. The effect should be good when grouped amid suitable surroundings. It was shown by Messrs. Barr recently and gained an Award of Merit.

Campanula White Star.—This is a carpatica form raised ten or a dozen years ago, I believe by Mr. M. Prichard, and which, by reason of vigour, free flowering, and distinctness should be in every garden. Nine inches or so high, the handsome, pure white flowers are salver-shaped, and in the largest examples each nearly 2 inches across. From mid-June till August it is quite among the indispensables of its race, admirably adapted to grouping in the border or the rock garden. It is of the easiest culture in a cool, loamy soil.—E. H. J.

Hardy flowers in railway station gardens.—In most of the best railway station gardens in Scotland this year herbaceous plants appear to be in the ascendancy, and they certainly have proved the most valuable, especially when some good hardy annuals are employed to fill up the gaps caused by the decay of the leaves of early-flowering bulbs. There can be no comparison between these and some of the other beds filled with *Calceolarias*, *Lobelia*, *Zonal Pelargoniums*, *White Alysium*, etc.—S. ARNOTT.

Marguerite Carnations.—For many years I have grown these in the flower garden and also in pots for the supply of cut flowers. Good strains give a large percentage of double flowers, but I am very partial to the single ones. From seeds sown in a slight heat in February, flowering plants are available at the end of the summer and onwards throughout the winter if proper treatment be given. Some may be grown in pots, others in the open border and then lifted and potted in September. Till Christmas, plants in the open, temporarily protected, yield sheaves of blossom for cutting.—G. G. I.

Campanula arvatica.—I procured this from Sündermann in March, 1913, under the name of *acutangula*, and since then it has increased enormously. It has easily survived the last two winters in the open, both in rather heavy, limeless loam and in limestone chips. It grows luxuriantly in the former, but is not quite so happy in the latter. It can be propagated by division with a trowel. Soil, climate, and situation are in general so adverse here that it is a wonder to me that what thrives here should prove difficult elsewhere, as E. H. Jenkins suggests (August 19th). Possibly, like some other *Campanulas*, it dislikes lime.—L. J. ROGERS, Leeds.

Campanula Chastity.—This, when shown by Messrs. Grove in mid-July, when it gained an Award of Merit, gave one the impression of a small pure white form of *C. carpatica*, which is also very free flowering. To some extent the purity of the flowers may have been due to cultivation under glass; the dwarfness of the plant—it was but 6 inches or so high—to youthfulness. It was so full of bloom, however, that it was generally admired, while the more established plants, even with the flowers less pure in colour, were most attractive. The flowers are somewhat more bell-shaped than in the white *C. carpatica*, and with their smaller size render the variety quite distinct.

Tiger Lilies in station gardens.—I have recently visited some of the best railway station gardens in the south-west of Scotland and have been struck with the use made in many of these of the Tiger Lilies. In several of these the variety appears to be *L. tigrinum superbum*, but in others the handsome *L. t. Fortunei* is employed. As a rule they are well grown, especially in gardens, for which a premium is offered by the railway companies.—S. ARNOTT.

Gypsophila paniculata fl.-pl.—This plant has been doing exceptionally well this year, as proved by some fine examples of it in the herbaceous border at Kew, where it has reached 4 feet or so high, forming a bush of mound-like character several feet through, and covered with innumerable pure white flowers. The effect of so large a group is much whiter than in the typical kind by reason of the increased spread of the far more numerous petals. Both are desirable, however, in the garden, and when established provide much material for associating with cut flowers. Frequent disturbance of old plants is not desirable, though young plants and seedlings transplant well.—E. J.

Gentiana ornata.—I post you a couple of blossoms of *Gentiana ornata*. Do not you think it is one of the loveliest plants you ever saw? The flowers are carried on prostrate stems, and they turn up and are carried erect. I find it does very well in a cool, rather moist, bed of peat, leaf-mould, and loam, and although it is very rare at present it is not a difficult plant to grow. I have another form of *Gentiana ornata* which flowers a little later, is a much stronger grower, and has larger flowers, and when it is out I will post you a few blossoms. Of this larger form I already have several hundred plants, but of the one I send to-day only three or four.—CLARENCE ELLIOTT.

Clematis Jouniana.—In some gardens this *Clematis* is grown as *C. grata*, under which name it was distributed a few years ago. *C. grata*, however, is a distinct plant, a species from China and the Himalaya, whilst *C. Jouniana* is of hybrid origin, its parents being *C. Vitalba*, the Virgin's-bower of our hedgerows, and the low-growing, blue, tubular-flowered *C. Davidiana*. *C. Jouniana* is of vigorous habit, growing at least 12 feet high, with large dark green leaves and very long inflorescences of white, violet-tinged flowers, the end of a shoot 2 feet or more long often appearing as a large panicle of

blossom. The flowering time is August and September, and at that period it is usually one of the most noticeable shrubs in bloom. It should be planted so that it can grow over a large bush or small tree. Failing that, a group of rough Oak branches forms a good substitute. Rich loamy soil should be provided and a little lime given as a top-dressing now and then is an advantage.—K.

Rose Gruss an Teplitz.—In a paragraph in GARDENING ILLUSTRATED, August 26th, 1916, I notice a remark that "on strong soils" it is "shy-blooming," especially if the knife is used "too freely," and I think that it may be interesting to record my experience with this Rose on a strong soil in the west of Scotland. I find it a very free-bloomer, and it has been most successful for many years past grown on a wire fence 2 feet high. It was pruned freely in the first week of April this year, having suffered much from frost in November, 1915, and having much dead and injured wood. It made splendid growth of new wood, began blooming June 24th, 1916, and is now (August 26th) covered with flowers. In 1915 it began flowering June 14th, and on October 16th it is recorded "good blooms." In 1907 it is recorded on November 8th "Gruss an Teplitz hedge, splendid sprays, very bright and effective."—R. S. CAMPBELL, *Achnashie, Rosneath.*

Campanula Vidali.—Of all the Bell-flowers this distinct species from the Azores is probably the most remarkable. Unfortunately it is not hardy, and to see it at its best it must be grown in the greenhouse. Quite recently a big group of it was in excellent condition in No. 4 greenhouse at Kew, where it had evidently been in bloom for some time. Distinct in its thick, fleshy, coarsely-toothed leaves, and almost tree-like stem, its flowers are unique, these being white, wax-like in character, pendulous, 2½ inches to 3 inches in length, much contracted about the middle, and somewhat expanded at the mouth. Internally they are characterised by the broad ring of bright orange, which encompassing the ovary, renders that part of the flower highly distinct. Raised from seeds it is by no means a difficult plant to grow. It is only rarely seen at exhibitions, this probably accounting for its being so little known. It received a first-class certificate over twenty years ago.—E. H. JENKINS.

The Mount Omi Rose (*Rosa omiensis*).—In 1901 seeds of this Rose were received in England by Messrs. Veitch from Mr. E. H. Wilson, who at that time was collecting for the firm in China. That it or one of its varieties may have been grown in England before under the name of *R. sericea* is probable, for the two species are closely allied, and as both vary in character there may be connecting links amongst the varieties. The Mount Omi Rose is a strong-growing bush 8 feet to 12 feet high, its relationship to *R. sericea* being very noticeable in the flowers, for both have four creamy-white petals instead of five petals as is usual in most of the Roses. The branches are closely beset with spines, which are often abnormally large, with wide-spreading bases. In some instances they are brightly coloured during the first summer, as in the variety *pteracantha* (also called *R. sericea pteracantha*). This is a very pleasing feature, but perhaps the plant is seen to the greatest advantage during late summer and early autumn, when covered with rich, orange-scarlet hips, each one about ¾ inch long and curiously narrowed at each end, making it somewhat barrel-shaped. Like other Roses, it gives the most satisfactory results when planted in good, deep, loamy soil. As a

rule the more vigorous the shoots the better the colour and the larger the spines, therefore it is advisable to treat it liberally when first planting it, and later by surface-dressing with well-decayed manure.—D.

Double Calendulas.—These were very late starting to bloom with me this year, but now they are in their full glory. Of all annuals for town gardens I think these are the best, for when in full bloom they are a regular sight. Of the several varieties it is hard to say which one likes the best, but the yellow sorts, such as Meteor or Sulphur Queen, are perhaps a little less showy than such sorts as grandiflora or Prince of Orange. The orange varieties often develop blooms of tremendous size, and the more blooms you cut the more you seem to get. They last well in water and are much appreciated by soldiers in our military hospitals. Calendulas are of very easy culture. They should be sown in a very sunny position in autumn or spring, or they may be sown in pots and planted out.—E. T. ELLIS, *Westwood, Ecclesall, Sheffield.*

Hollies losing leaves.—I have in my grounds a large number of Hollies of sorts (principally *maderensis*) and of various ages and growths. During the present summer most of them have been casting their leaves, and the adjoining ground and borders are always covered with dead leaves. I am aware that Hollies cast their leaves when growth of fresh leaves is taking place, but this is usually at the commencement of summer. Are you aware of anything to which their recent behaviour may be attributed? The soil in which they are growing is of a light, sandy nature, but some of the bushes are 40 years old and have always before appeared fairly healthy.—SUBSCRIBER.

[It is just possible that dryness at the roots may be the cause of the leaves falling. This you could ascertain, and if such is the case then it would be well if you would give the trees a thorough soaking of water, and, if possible, mulch them for some distance round the stems with well-rotted manure. We should have no fear of the trees coming right, in due course if there is nothing detrimental in the soil.—Ed.]

The Macartney Rose (*Rosa bracteata*).—The large number of garden Roses available for general use has done much to crowd out the single-flowered species from our gardens, although many of them are very beautiful when in bloom, while some are well worth growing for the sake of their attractive fruit. The Macartney Rose is a case in point, for it is lovely when covered with lustrous dark green leaves and handsome white blossoms. The fruits, however, in this case have no special recommendation. It is a native of China and has been known here since 1793, in which year it was introduced by Lord Macartney. Amongst other Roses it may be distinguished by its rather dense branch system, greyish bark of the young wood, its deep green, glossy, evergreen leaves, and its large white flowers, each 3 inches to 4 inches across, with a central mass of golden stamens, which are produced singly from the points of short shoots from early July until October. Unfortunately, it is not very hardy, and except in the mildest parts of the country requires a wall. If, however, it can be placed in such a position that it can develop naturally, the effect is much in advance of that of plants that are severely pruned each year. When in bloom not only does it attract attention by the beauty of its flowers, but its presence can be detected from a considerable distance by its perfume.—D.

FRUIT.

PLANTING STRAWBERRIES.

I AM going to make a bed of Strawberries. Will you kindly let me know the distance I should keep them apart, and what would be the best manure and soil to plant them in?—W. G.

[For growing Strawberries it is always best to choose soil that is inclined to be heavy than otherwise, but it should be well drained. Light soils may be made more suitable for Strawberry growing by the addition of loam of a heavy texture or road sidings. This should be well dug in and thoroughly incorporated with the staple. Such a dressing is better than applying quantities of manure. Heavy soils, on the other hand, are greatly benefited by being well manured, and the manure should be thoroughly decomposed. In choosing a site for a Strawberry plantation ignore low, damp situations, for although the Strawberries may succeed in a dry season, they would in a wet time fall a prey to mildew, and the fruit would rot. The digging done, matters may be left alone until the plants are ready for setting out, and then the soil should be made quite firm by trampling it evenly all over previous to planting. This will make a good firm bed for the plants to root into, and it will also in a great measure prevent the plants being thrown out or lifted by frost during the winter months. Some few hours before planting, the young plants should be well watered, and it is also a good plan to water them home directly the planting is completed. A trowel should be employed for setting out pot plants and pegged-down runners, and the soil must be made very firm about them. On light soils a mulch of spent Mushroom-manure or suchlike material spread round about the fresh set-out plants is of great assistance in preventing them drying quickly and needing so much water. On heavy soils, which naturally retain more moisture, mulching is not so essential. The usual distance for planting Strawberries is 2 feet between the rows in gardens and 3 feet for field culture, and the plants may be set out 18 inches apart. If planted closer than this every other plant would have to be lifted the second season.]

CANKER IN MELONS.

REPLY TO "GROWER."

As a rule, canker does not show itself before the plant is carrying fruit, and the cultivator may not be aware of its presence until after a somewhat lengthened spell of dull weather. The sun suddenly bursts forth, causing a total collapse of the plant and consequent loss of the crop. Canker in Melons is not always due to the same cause any more than is shanking in Grapes, but one of its most fertile sources, especially in early houses insufficiently heated, is a too low night temperature combined with a stagnant atmosphere, strong, rank growth also being more susceptible to the malady than that which is opposite in character. Careless ventilating, by which large volumes of cold air are admitted suddenly, the application of too cold water to the roots, allowing the same to come into contact with the base of the stems, excessive overhead syringings, especially on dull, sunless afternoons, and a consequent wet foliage at nightfall, are all frequent causes, either directly or indirectly, of this most virulent disease. In order to guard against it, Melon-seed should always be sown in loam pure and simple, and firm potting should always be practised. Water should never be applied to the roots at a lower temperature than 80 degs., and as these tropical subjects are

not so partial to the syringe as many people seem to imagine, its use should not be indulged in, save only in the finest weather, and even then in strict moderation. In planting, the mounds or ridges of soil should be made quite firm, and the collars of the plants be well elevated above the level of the soil. If the plants are in fairly close proximity to the hot-water pipes so much the better, as the heat from these disperses all superfluous moisture, and so prevents it from settling at the base of the stem. Surrounding the stems with a pliable piece of zinc or tin, and filling in the intervening space with small pieces of charcoal, is also a good preventive. No stimulant should be given till the crop tells upon the vitality of the plant, after which gross growth need not be apprehended. The growths which start from the base of the leaves between the ground and the trellis should not be stopped back too closely, especially if the plants are strong, and pinching with the finger and thumb is preferable to the use of the knife, as, the pores of the wounds being thereby closed, air is excluded, and cankerous attacks warded off.

TREES AND SHRUBS.

GROUPING TREES AND SHRUBS.

THE illustration shows a group of various trees and shrubs in an Irish garden. In the left forefront has been placed a New Zealand Flax, and to the centre and right a collection of various Hydrangeas, which always thrive the better when protected from winds, and at the same time serve to break the straight line of the Yew hedge behind. On the extreme right is a Scotch Fir with Birches beyond, the lower branches of the Fir having been removed in order to emphasise the white stems. In the middle distance is a large group of Ribes atrosanguineum, the blood-red form of the wild Currant, while between the latter and the Birches may be seen a group of Escallonia macrantha.

R. H. BEAMISH.

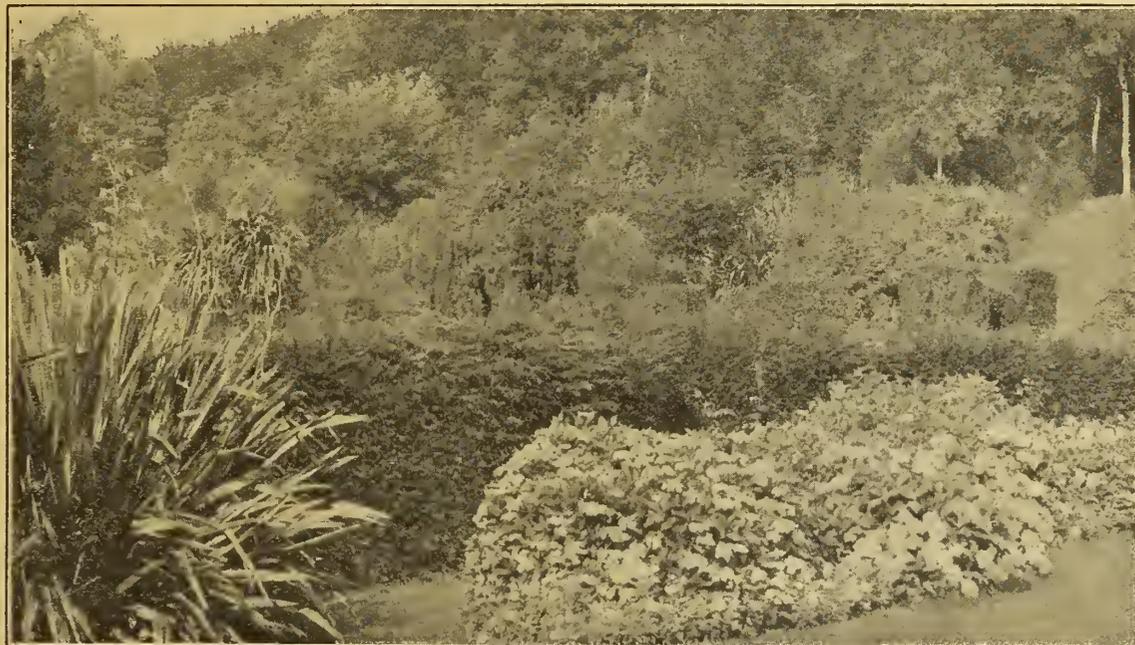
**THE AMERICAN ROCK ELM
(ULMUS RACEMOSA).**

GROWING in a plantation on the Penrhyn estate at 600 feet altitude on a spur of the Snowdon range of hills is quite a number

little difference and not more than could be expected between fully-matured and forty-year-old specimens of the wood. The American Rock Elm always impressed me as a tree that was peculiarly suitable for exposed, wind-swept parts of our country, and though the tree is rarely grown here, yet its growth under trying conditions of both soil and climate in Wales shows it to be a valuable species for afforesting mountain lands. As firewood the timber of the Rock Elm has few equals, burning with a steady, bright flame—the opposite of our English Elm-wood, which is dour and cheerless. The American Elm (*U. Americana*) is of much larger growth than the Rock Elm, but it has not done well in this country. It is offered for sale by some of our nursery firms. The timber of the American Elm is imported, or was a few years ago, in considerable quantity to this country, where its lasting properties gained for it a considerable reputation.

A. D. WEBSTER.

Climbers for house walls.—I want to know the names of the most robust and rampant creepers for planting on the east, west, and



Groups of trees and shrubs at Ashbourne, Glounthaune, Co. Cork.

When the disease appears, the best plan is to mix common stone lime and powdered charcoal in equal proportions, and rub it well into the affected parts with the finger and thumb. This process should be repeated day by day, allowing no moisture from the syringe to come into contact with the wound. This composition will eventually form a hard crust, and finally destroy all cankerous matter. This old remedy has often been ridiculed, but those who have proved its efficacy will not readily discard it.

Black Currants.—A good proportion of these is bottled, and, as in the case of Raspberries, the bottles are filled direct from the bushes. The finest samples are used for this purpose. After the crop is gathered it is advisable to thin out, even at this early date, any exhausted or superfluous wood. I do not mean, of course, that the bushes ought to be attended to for good at present, merely that a certain amount of thinning be done to admit air and sunshine to assist in the maturing of the wood. Fortunately, the bushes are free from big-bud, but, naturally, a vigilant outlook is kept, for the mite is prevalent in the district.—K.

of trees of the American Rock Elm. There, exposed to the fury of the south-west winds, this denizen of calcareous and gravelly districts of Canada is quite at home in a mixed wood of Larch and other conifers. This is easily recognised by the curious thick, corky appendages to the bark of the younger branches and long racemes of flowers, unlike those of any other species of Elm of my acquaintance. Shaly slate rock with a slight coating of Gorse-loving loam may be said to constitute the soil which has not only grown this species, but our native Cornish Elm (*U. cornubiensis*) to perfection, the latter having been planted at 30 feet apart over a 50-acre plantation adjoining.

The American Rock Elm is a stocky tree, not remarkable for quick growth or size, but producing timber of first-rate quality. It is fine of grain, compact, and of a beautiful buff or reddish-yellow towards the centre, and takes on a nice, smooth surface under the tool of the carpenter. A comparison of timber grown at Penrhyn and specimens shown at some of our exhibitions in London revealed but

south walls of a house. The walls are now bare and hideous, cemented over with a creamy shade. The house is really of noble proportions, and in a beautiful but bleak position. My idea is a house entirely covered with the self-climbing Virginia Creeper as a background (two now are doing well), and against these I would plant climbing Roses, yellow Jessamine, Clematises, etc., the most hardy sorts (I hear they do well here). Please tell me what would do best on the different aspects? I hear the south gets very blown about in winter, as from that direction the prevailing wind comes.—LANGTON.

[You can depend on many of the best Climbing Roses, both the Chinas, like *Cramoisie supérieure* and those nearer the Teas, like *Rêve d'Or* and *Bouquet d'Or*; also the finer of the single wild Roses, like *moschata*. You cannot do without the Clematises of the nobler sorts, and the species, like *C. montana*, are sure to do well. There is far too much Virginia Creeper in the world, and you should only have one or two plants, but not as a background. You can easily find out if in the district the *Wistaria*, noblest of all climbers, flowers. Some of the newer climbers from China, as well as the hardy

Vines, like *V. Coignetia*, do very well in the home counties, and we think would do with you. Some of the *Cotoneasters*, *Crataegus Pyracantha*, and on the warm sides *Jasmines* would do, with the hardy *Honeysuckles* everywhere.]

Moving Yew-trees.—I would be much obliged for some information regarding the removal of Yew-trees. I have two Yew-trees, about 25 feet high, and perhaps 20 feet across, which are in the way of some buildings, and must be moved. Would it be possible to transplant them? They are growing rather close together. (1) What is the best time of year to move them? (2) Is it best to dig half round the roots, so as to cut them, several months before moving the tree?—L. IRIS ORPEN.

[The trees might be moved with great expense and care, but as far as one can judge they are not worth it. Besides, Yews near a house are always a danger to stock.]

Colorado Blue Spruce.—This striking Conifer suffers, like so many others of its kind that are horticulturally attractive, from a multiplicity of names. Here we have decided to call it *Picea pungens* var. *glauca*, but in the United States, where it is a native, *P. Parryana* is the preferred name, and it has been called *P. menziesii*. It was first introduced into this country about forty years ago, and at once attracted attention on account of the milk-blue colour of its foliage. In some soils and positions it thrives from the first, but in many places it proved a failure. In Colorado it occurs in certain groves along the banks of streams and in open grassy valleys, the largest trees being found in open positions near water. It dislikes shade more than most Conifers, and likes an open, well-drained soil. Where it is happy it lives to the age of 400 years or more, but, being slow in growth, trees 100 years old may not be more than 4 inches or 5 inches in diameter. Full-sized trees are about 100 feet high and about 2 feet in diameter. The silver-blue colour of the foliage is peculiar to young trees, for it gradually disappears as the trees get older, full-grown specimens being quite green. With age, also, the distinctly pyramidal arrangement of the branches is altered to a less regular outline, and when the lower branches fall away the tree has a less pleasing look.

[This from the "Field," but nothing is said of the green form of the tree, the better of the two. In gardens we are apt to make too much of silvery forms, rarely so enduring in their beauty as the wild form. The normal colour is a bronzy-green. The tree is as hardy as a Scotch Fir.—Ed.]

Magnolia hypoleuca.—This *Magnolia*, though still very rare, has been grown in a few gardens for upwards of twenty years. In Japan it is said to reach a height of 100 feet. On vigorous young plants the leaves are each as much as a foot and a half long and half as wide. Their size is, perhaps, most closely approached by that of the leaves of *M. tripetala*, and exceeded only by those of *M. macrophylla*. The flowers of *M. hypoleuca* are each 6 inches to 8 inches across, white or cream coloured, with a central mass of crimson stamens, and very fragrant. It flowers in summer after the development of the leaves. The fruits are cone-shaped, each 6 inches to 8 inches long, and bright red or scarlet in colour. Like other *Magnolias*, it requires warm, loamy soil, and appreciates a little peat placed about the roots at planting-time. It shares the dislike of other species to frequent root disturbance, therefore it should be given a permanent position when quite small. Although sometimes grafted upon stocks of other kinds, the best trees are those which have been raised from seed.

PLANTS AND FLOWERS.

CHRYSANTHEMUMS.

CHRYSANTHEMUM NOTES.

By this time the roots will require feeding, for whatever was put into the soil at potting time in the way of manure will have been used up during the warm spell of weather we have lately experienced. Probably there are instances where the foliage presents a sickly, starved look just now. This is an indication that water alone is not enough to keep the plants in a vigorous condition. Feeding may be done in more than one way—that is, by liquids made from animal manures, and by the use of artificial manures. For growers in towns the latter are the more easy to obtain, and good results should follow the employment of either, or both. Animals that feed on Grass supply us with material that is excellent because its nature is cool, and even if used in a strong state the roots of the plants are not likely to be burned. This may be collected, placed in a bag, and then thrown into a tub of water. In a week or so its virtue will be gone, then a fresh supply should follow. The quantity to be used with water is difficult to name, but when fresh one should be more sparing than as days go on and the liquid weakens. Soot-water prepared in the same way, in a bag, is a capital stimulant. Care, however, should be taken that this is quite clear, and not over strong. Put enough into the can to just colour the water and all will be well. Manure from the chicken-run is first-rate, too, made into liquid, but this being, like soot, of a hot nature, requires care. That is to say, weak doses and often should be the rule. In fact weak and regular should be applicable to the use of all liquid manures.

Respecting stimulants in the form of dry powder, which may be given at intervals of three or four days, it is best to apply them as a surface dressing and water them in. There are few of these all the parts of which form readily into a liquid state, and the sediment left on the surface of the soil will encourage roots. In the case of artificials, as we term them, it is not easy to state offhand the quantities to be used. Each has usually full instructions when sold. At the same time, if a general rule that a teaspoonful be used for a flower-pot of 10-inch diameter—and less, of course, for a smaller one—we shall be on the safe side. Sulphate of ammonia, sometimes recommended for *Chrysanthemums*, requires even greater care, and one ounce to two gallons of water will not burn the roots. One thing should always be remembered about fertilisers, liquid or otherwise. In themselves they are practically useless to plants in pots if other important items, such as abundance of roots and no neglect of watering, have not been assured. Just now we are in the season of

BUD-TAKING, a cultural point which has perhaps been made to appear anything but simple. If the cultivator has once learned what a crown-hud is then the matter is not by any means difficult. Anyway, "crown" huds should be plentiful early in August, and these flower-huds can be noted at the tips of the young growth. A hud may be found in the centre of a cluster of tiny shoots. Take the latter away and leave the flower-bud, then we get the same to develop into a big bloom because of the time for the same to do so—well into October or November. If the hud be not saved the tiny shoots will go on and smother the former, and these

in their turn will produce clusters of flower-buds. The only thing an exhibitor of giant flowers has to learn and remember is as to the better date for each variety to produce its crown-hud so as to give a highly-developed bloom at a time desired, and so propagate the plants accordingly. In the past this phase led to much "stopping" and "timing," which probably never assisted to any great extent. In any case the better cultivators of to-day try simply to grow their plants well throughout the season and depend upon crown-buds even if these appear as early as July. This, of course, refers to exhibitors. Growers generally may follow the early flower-hud selection if large flowers are desired; or let the blooms come in their own season—he it late or early—with the aid of thinning to induce the growth of large blossoms, if, indeed, these may be comparatively smaller than those from crown-buds. One thing may be added: Early-formed flower-buds produce blooms of extra size and very double, but the colours of all except yellows and whites, perhaps, are not of striking brilliancy, nor are the individual petals notable for good quality.

Allow the plants abundance of room; this rule cannot be insisted upon too often. Both for profit and pleasure it is better to have a dozen specimens that will produce good flowers than a hundred with soft, ill-matured growth which, more than likely, will give "blind" buds or at the best weakly and unsatisfactory blooms. One always regarded the examples exhibited by Mr. F. S. Vallis, Chippenham, a few years back, as being about as good as any *Chrysanthemums* ever seen, and he paid great attention to the matter of room. Thinning the growths in time—that is, before they are far advanced, is another detail that needs thought. We should make up our minds early as to the number of blooms intended on each plant, and take away everything that is superfluous.

H. SHOESMITH.

NOTES AND REPLIES.

Shoots at base of Chrysanthemums.—I have a number of *Chrysanthemums* which I grow for special blooms. Several which I have disbudded are now showing shoots from the roots. If I let these grow can I take them as cuttings, and will they bloom this season, and will they injure the progress of the plant or the size of the flowers?—GROWER.

[If you desire to grow large, handsome blooms on your plants you should remove the shoots now quickly developing at their base. These shoots seriously interfere with the prospect of a successful blooming, and there should therefore be no delay in carrying out this seemingly drastic treatment. Care, however, should be exercised when removing the shoots, so that no damage shall be done to the roots in the operation. It is a very simple matter. With a sharp knife detach the shoots, making the cut immediately below the surface of the soil. By these means there is no risk of damaging the surface roots, which assist so much in the development of the special blossoms you wish to produce. You may insert the cuttings in any light sandy soil, using boxes or small pots for the purpose; in fact, propagate them as was done with others earlier in the season. When the cuttings are rooted, pot them up singly into 3-inch pots and when these in turn are well filled with roots give the plants their final shift into pots either 4½ inches or 6 inches in diameter. Grow the plants on freely from their first potting, and retain the first bud developing in the point of the shoot. Rub out all other growths, leaving the bud absolutely alone

at the apex of the shoot. The buds should develop sufficiently early for the resulting blooms to attain excellent proportions, and they should also provide you with a nice late display.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

PENTSTEMON HETEROPHYLLUS IN ROCK GARDEN.

THE wealth of America in Pentstemons is remarkable. There are many beautiful kinds, but some are not quite hardy with us. I have never seen this very beautiful American plant so happy and so vigorous as at Friar Park, embraced by rocks. *P. Scouleri* is hardy even in London gardens, and *P. isophyllus* is hardy with me. From the vast range of the Rocky Mountains we might expect others. The most graceful so far we grow is the one here shown, a

species, also planted in mortar-rubble but without a rock behind, do not flower with anything like the same freedom.—STUART HOGG, *Roxford, Hertingfordbury.*

— I have always looked upon *Saxifraga oppositifolia* as one of the most free-flowering of all the species, and it was interesting, therefore, to read Mr. J. Cornhill's note in GARDENING ILLUSTRATED, September 2nd, page 440, telling what a shy-flowering plant it is with him. My pot-grown plants of *S. oppositifolia* (and its various forms), of which I have several thousand, are covered with blossom every spring with the utmost regularity and almost unbelievable freedom, and it is the same with planted out specimens. The pot plants are in a good, free, gritty potting mixture, decayed turfy loam, silver sand, a little leaf-mould, and a dash of gritty broken flower-pots. At present I only have planted-out specimens on a limestone moraine, but in the past I have had

in the soil, or to the air of Stevenage, or possibly the plants make mountains out of what M. Corveon called the six molehills, and are led to believe that they are back in the Alps. But if Mr. Cornhill has not tried the top-dressing he might find it worth while to experiment, and I would suggest the addition of a little lime in some form to the mixture.—CLARENCE ELLIOTT, *Stevenage.*

— Mr. Cornhill, at page 440, complains of *Saxifraga oppositifolia* not flowering. I used to have the same trouble with it until I planted it on a northern slope in rough limestone rubble and loam. Since I did this it has been every year a great sheet of bloom about 5 feet by 3 feet, the blossoms so thick as to quite hide the foliage. I noticed in the Alps that it grew best in semi-shade, and after 11 a.m. my patch gets but little sun. It is now one of the most reliable and satisfactory things I have. The beautiful variety



Pentstemon heterophyllus in the rock garden at Friar Park.

beautiful flower-garden plant. Where not hardy it deserves frame protection in winter. It is well worth raising from seed. W.

SAXIFRAGA OPPOSITIFOLIA.

IN the issue of GARDENING ILLUSTRATED of September 2nd Mr. Cornhill asks what are the conditions which produce the maximum amount of bloom in *Saxifraga oppositifolia*. I have two plants which, planted side by side some ten years ago, are every year such a mass of bloom that the foliage cannot be seen. They cover a space 3 feet by 2 feet and are a goodly sight in February. They are planted in a raised bed of mortar-rubble under a large rock, the aspect south-west. I attribute their free-flowering to the fact that their roots go under the rock behind them and are thus kept moist while the poor stuff in which they are planted forces them to flower. I am confirmed in this view by the fact that other plants of the same

them in gritty loam on ordinary rock garden. I always grow them in full sun, except the variety *W. A. Clark*, which scorches badly and should have a west or north-west aspect, and in dry weather they are watered. Not long after flowering they should be top-dressed. A thick dressing of the same soil as that in which they are growing is as good as anything. I scatter it over the plant so thickly that only the tips of the leaves are visible. Rain or subsequent waterings soon wash this top-dressing in, and it keeps the plants strong and vigorous, prevents their dying off brown in the centre, and possibly induces the formation of flower-buds for the following year. I sometimes top-dress in this way two or three times during the spring and summer, and the result is an annual mass of blossom which entirely hides the plants. Of course, the free-flowering of my plants may have nothing whatever to do with this top-dressing. It may be due to some unknown constituent

W. A. Clark is much less free, but the variety *Latina* is as good as the type.—R. L. ROUTH, *Sibford Ferris, Banbury.*

— This type generally does well in gardens about here. My experience is that it flowers well when it spreads horizontally over porous stone, such as a slab of millstone grit, and badly when it spreads over earth. Aspect is immaterial, though a patch I have on a bank exposed to the north blooms at least a fortnight later than in some neighbouring gardens which have a southern aspect. It does not need lime.—L. J. ROGERS, 6, *Hollin-lane, Leeds.*

NOTES AND REPLIES.

Epilobium Dodonæi.—Flowering in August when the rock garden is none too gay, this species is more attractive than it would be earlier in the year, when it would be overshadowed by its more brilliant neighbours. It is quite a pretty little plant, and gives profusely of its small purplish-crimson flowers, and is of neat and dwarf habit, with no tend-

ency to stray out of bounds—at least, it does not with me. I grow it in a sunny position in very gritty and limy soil on a raised part of the rock garden, where it seems quite happy, and flowers very freely.—W. O. C.

The Meadow Saxifrage (*Saxifraga granulata*).—This is well worth growing in the rock garden, both in its single and double forms. It is found wild in damp meadows, and in cultivation, cool, half-shady positions suit it best, and when it is at home it rapidly increases. Associated with Primroses, Cowslips, wild Orchis, and other spring flowers, it looks very pretty in a partially shaded part of my garden, which I have planted with these lovely wild plants, which flourish in spite of the somewhat smoky condition of a London suburban garden.—N. L.

Saxifraga Alberti.—The names of the encrusted Saxifrages are legion, but this in my opinion is one of the best of the larger ones, both as regards foliage and flowers. It has long, rather narrow leaves of a deep bluish-green, heavily encrusted, and very handsome spikes of white flowers, which last in beauty a long time. Like most of its family, it likes a sunny position with a cool root-run in limy soil, wedged in between rocks, and is then as easy as any, and beautiful all the year round.—W. O.

Veronica satureioides.—Among the many Veronics for the rock garden this is useful as being one of the earliest to come into bloom, although it is not so brilliant as some of the other creeping Speedwells. It is of quite prostrate habit and neat growth, and does not encroach on its neighbours. Like so many of its family, it roots from its creeping stems, and so is readily propagated. It blooms in May.—N. L.

Trollius patulus.—This is quite distinct from the usual type of *Trollius*, the flowers opening flat instead of globe-shaped. It flowers about mid-July, its large, deep-yellow blossoms, each often 3 inches in diameter, making a fine patch of colour in the bog garden. It is of easy culture in rich, boggy soil, and seems quite happy in semi-stagnant conditions provided the crowns are raised well above the water level.—W. O.

Spiraea decumbens.—Unlike many of its relatives, this tiny little *Spiraea* only grows a few inches high, and so is admirably adapted to the rock garden. It is of neat habit, with small, whitish flowers, and quite pretty when grown into a nice clump. It never ramps, though it grows fairly freely when established, and likes a sunny and fairly dry position. It can be freely increased by division.—N. L.

Saxifraga cuneifolia.—I think this is one of the neatest and prettiest of the London Prides, the small rosettes of fleshy, rounded leaves being very attractive, though its flower-spikes are not so handsome as some. It does not like a too sunny position, and seems to suffer from drought, but is very happy among stones on the cool side of the rock garden.—O. C.

Veronica spuria.—This was in bloom in the Botanic Gardens, Oxford, on June 17th. It grows from 1 foot to 1½ feet high, and is well covered with sky-blue flowers produced on branching stems. It is a good bee plant. Any good soil seems to suit it so long as the position is sunny, and it looks well also in the rock garden or on walls.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Veronica saxatilis.—This is one of the best of the dwarfer sorts, and can be grown in the rock garden, on the wall, or on the margin of the herbaceous border. Any ordinary soil suits it, and the position should be sunny. Its height is from 4 inches to 6 inches, and the flowers are of a lovely pale blue.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Sifting soil (*Anon*).—Unless for seedlings and newly-rooted plants the rougher you can have the soil the better. Do not sift it, as this takes away all the fibre, the most important constituent in the soil. Note how the roots of a plant cling round the fibrous pieces of loam that are used for potting *Chrysanthemums*, *Pelargoniums*, *Fuchsias*, and such like. We have some *Aspidistras* now that are potted in only the fibrous pieces of loam and some silver sand, with a little manure, and they are very fine specimens, the pots being quite filled with roots.

GARDEN FOOD.

MARROWS.

AT this time of the year, in almost any garden, Marrows are very plentiful, and they deserve better cookery. The Italians, who are experts in the art of frying, make good use of the young Marrows. I never tasted them quite so good as at Milan, fried in thin slices, as dry as nuts. There is a mass of valuable food neglected in this way by rich and poor alike, the common way being to dish it up in a watery mess. The origin of the plant is not easily solved. Its native land is said to be tropical Africa. It is as easily grown in our climate in summer as the hardiest vegetable, and is most wholesome when well cooked, and more valuable in that way than some popular vegetables. The various kinds seem about the same in value in cookery, but some prefer the compact forms as more nutty in flavour. Cottagers often let them grow too large.

MARROW AU GRATIN.—Peel the Marrows and divide into round pieces of about 1½ inch in diameter. Blanch in salted water for a few minutes, and drain on a sieve. Butter a gratin-dish and arrange the Marrow in it, season with salt and pepper, sauce over with a little Béchamel sauce, and sprinkle with grated cheese, half Gruyère and half Parmesan. Bake, and brown nicely and serve hot.

MARROW A LA LYONNAISE.—Peel the Marrow, cut it in half, and remove the seeds; then cut it into small cubes about 2 inches long. Place them in a basin, with a tablespoonful of salt, cover, and let stand for twenty minutes. Wash well, then drain. Put them in a saucepan with 1 oz. of butter, a pinch of pepper, a teaspoonful of sauce, a bouquet-garni, and a little stock. Braise and drain when cooked. Slice a peeled Onion, toes in butter, and when of a nice colour pour off the butter and mix with the Marrow. Stew gently for a few minutes. Add a little chopped Parsley.

MARROWS AND TOMATOES.—Take three good-sized Tomatoes; take out seed, place in a stewpan with one large Potato, one large Onion, sprig of Thyme, and Parsley; fry together a few minutes, add one gill of stock, boil for fifteen minutes, pass through a hair-sieve, put into stewpan, add one tablespoonful grated cheese, season, cover the Marrow, place in oven ten minutes.

SAVOURY MARROWS.—Peel a Marrow, cut it into convenient pieces, place them in a stewpan with half a sliced Onion, spread over with butter, and season. Moisten with a little white stock and white sauce, and cook till tender. Reduce the sauce to a glaze, add a pat of butter, a little Lemon-juice, sprinkle with chopped Parsley, dish up, and serve.

MARROWS WITH CHEESE.—Peel two green Marrows, not too large in size; cut them lengthwise into quarters, scoop out the seedy parts, place them in a sauté-pan with 1 oz. of butter, season with salt and pepper. Put the pan on the fire for a quarter of an hour, shaking it from time to time; moisten with a little cream, and add a tablespoonful of grated Parmesan cheese. Dish up the Marrow neatly on an oblong dish; sprinkle with breadcrumbs and Parmesan cheese; place in a hot oven for a few minutes.

Whatever way of these is followed, it is essential not to over-cook and reduce to a pappy mess. That way spoils the dish and destroys the natural salts of the vegetable.

MARROW SOUP is made thus: Boil the Marrow till very tender, previously removing the seeds, drain, and pass through a sieve, add to the pulp some milk or stock, season with salt and pepper, and, if necessary, thicken with a little flour rubbed into hot butter. Serve with fried bread.

Why do we not grow the American squashes which afford such a fine supply of food in winter?
W.

CARDOONS, BLANCHING AND COOKING.

You often give good recipes for cooking vegetables. Could you give one for cooking Cardoons? I have a nice row, grown on the flat and then earthed up. They look very well, but I am told they should have been wrapped up in hay-bands. What is your opinion?—HENRY GAIR.

[For growing the Cardoon a trench prepared on similar lines as for Celery is needful, the plants having a space of 2½ feet between them and a distance of 3½ feet to 4 feet is required between the trenches for earthing up in the autumn. Earthing up should not be done until the growth is finished, previous to which the leaves and stems must be tightly bound up with hay-bands to exclude air and prevent the soil getting in among the leaves and stems. Six weeks or more must be allowed for blanching and then they must be lifted and stored for winter use in a cool, yet frost-proof, building, or, at any rate, in some place where they can be kept free from frost. A cool cellar is a very good place, and here they may be stood with a ball of roots attached, and, if not too damp, the blanching still continues. If you have no place to store them in this way they can be protected where growing by placing litter along the ridges. The advantage of lifting them, however, is that they can be got at easily in severe weather, whereas those left outdoors sometimes cannot be dug up owing to severe frost. The blanched stalks or ribs of the inner leaves are chiefly used as a winter vegetable, as well as the main root, which is thick, fleshy, and tender, and of an agreeable flavour.

COOKING.—To cook Cardoons, wash them in water, and leave them in vinegar and water until about to cook them. Boil them in an enamel saucepan in milk and water (three parts of water to one of milk) until tender. Drain them, and serve with melted butter. The French way is to melt a small piece of butter in a saucepan, and when they are well drained put them in and add a small quantity of good brown stock. The Italians place them in a very hot dish after draining them, and sprinkle them with grated Parmesan cheese, which they allow to melt into them.]

NOTES AND REPLIES.

Early Potatoes.—The season, on the whole, has been favourable for the development of early Potatoes, and the crop is good, while individual tubers are of quite an exceptional size. Every grower has, of course, his favourite varieties. Personally, I depend on May Queen and Mid-Lothian Early for the earliest supply in the open. The former is a very early-maturing Potato, and if not a very heavy cropper it yet gives quite a good yield at a very useful time. It is a Potato which possesses a good flavour—a point occasionally wanting in first earlies. Mid-Lothian Early turns in just as May Queen is finishing and is both a well flavoured variety and an excellent cropper. Beauty of Hebron follows Mid-Lothian Early, and, if old, still remains a useful all-round Potato. This in turn is succeeded by Puritan, and with these four varieties the average demand can be met until the later sorts are fit for lifting.—W. MCG.

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OUTDOOR PLANTS.

A COTTAGE PORCH.

IN our cool land the porch fulfills the purpose which the loggia does in warmer lands. It is a comfort in many ways and may be beautifully covered. This one was at first made of open Oak-work in the upper part, but being in a cold and windy position it was found better to panel it within so it becomes a sun trap. There are two Oak benches and it is large enough to serve for a place for a meal on fine days. The inside space is about 6 feet by 6 feet; low walls of brick. When such a porch comes into a garden all the greater the charm. The porch may also improve

creased either by division or from seeds, which it produces in profusion. It flowers in June and is especially welcome for its colour at a time when there are not so many yellow and orange hues in the garden as there are later in the season.—W. O.

HARDY FLOWER NOTES.

HERBACEOUS PHLOXES.—The advantage of growing a portion of the stock in a semi-shady position is once more apparent. At the time of writing, plants in the open are past, a great portion of the trusses frizzled up in the hot sun. Good waterings would have, in a great measure, neutralised the effects of heat and prolonged drought, but one cannot water

in vigour with me, whereas *P. Mariesi* seems to stand still and frequently disappear, probably through the combined influence of wet and cold, which lowers the vitality of many things that come from Japan. On several occasions I have saved a good lot of seeds from this *Platycodon* and they came up well, but they disappeared during the resting period at the rate of 95 per cent. I can only think that this hardy plant is affected by local conditions, and, like some other things, will in some places flourish indefinitely and refuse to become established in others. Good drainage I believe to be imperative, the nature of the roots tells us so.

ANTIRRHINUM COTTAGE MAID is a very taking variety, the soft pink and white of



Porch. Moat Cottage, Gravetye.

the look of a cottage. Before this porch was added the cottage was a very commonplace affair. Mr. Alfred Parsons gave me a little sketch which was carried out with local materials, and ever since it has been a comfort. W.

Inula glandulosa. — This old-fashioned plant is not so often seen in good condition as its merits deserve. I think it is by far the finest of the *Inulas*, but it is a slow-growing plant and is not seen to fullest advantage until it has become a good-sized clump. It responds to good cultivation, its flowers being then each 5 inches or 6 inches in diameter, or even more. A large group, when in full flower, makes a striking effect in the border. It is in-

everything. Those where the sun passes away about mid-day are quite fresh. Those who need flowers for cutting should make note of this, as the *Phlox* bulks largely where bunches of outdoor flowers are in request.

SAXIFRAGA CRENULATA. — This species cannot be classed among the aristocracy of the family, but it is pretty when in bloom, and the foliage is pleasing. It also has the merit of being of easy culture, and is a good thing for beginners in the culture of alpine to take in hand. It should be a good companion to the *London Pride*.

PLATYCODON MARIESI. — I fancy that this is not quite so hardy as the old *P. grandiflorum*, which has yearly increased

the flowers presenting a delicate harmony of colour which is not often found in hardy flowers. As regards habit of growth and free-flowering it is all that can be desired.

AQUILEGIAS. — Unfortunately, some of the most beautiful species, such as *A. alpina*, *A. cœrulea*, *A. glandulosa*, and *A. Stuarti*, are, in a general way, short-lived when treated as ordinary border plants. *A. chrysantha* is much stronger, and, given plenty of space in a sunny aspect in a free soil, it will take on perennial vigour, and, in the form of three-year-old specimens with hundreds of blossoms, is extremely ornamental. *A. Skinneri*, in its true form, is not quite so robust, but what one usually gets from seed differs con-

siderably from the true form, the colour of the flowers not being so intense, but the growth is stronger, and these seedlings are capable of holding their own when in companionship with other things so long as they get fair play and have not to go through the semi-choking process which many things have to undergo in the mixed border. As regards the first-mentioned species, there are, in my opinion, no dwarf-habited plants more worthy of careful culture than these little Columbines, as they are so distinct and so well fitted for small gardens. What they want is a place to themselves in very free, well-drained soil, where they can be attended to. Failure is apt to occur, more or less complete, if they are mixed with other things unless they can be given a place in the rockery, and by reason of their elegant growth and dainty blossoms they are as worthy of a place of honour as the majority of alpine plants. The hybrid forms, which can be raised from seeds, are very beautiful, varying much in vigour according to the way in which they have been influenced by their respective parents. Where the *A. chrysantha* and *A. Skinneri* blood prevails they are more vigorous than when descended more directly from *A. cerulea*, *A. Stuarti*, and *A. alpina*. Unless these seedlings are well watched the weaker plants will disappear, and some of the most delicate and charming shades of colour will be lost. The fact is, these long-spurred Columbines need special culture if they are to have perennial life, and they are worth it, for they are among the most precious hardy flowers in cultivation at the present day. J. CORNHILL.

BEGONIAS FOR THE FLOWER GARDEN.

Will you kindly tell me which you consider the most effective Begonia for filling large beds on a terrace? I like the kinds that have small flowers in abundance, narrow leaves, and from about a foot high. If I sow seeds of these in January will they make good plants for planting out in spring?—A. M. B.

[The most effective of the named varieties of tuberous Begonias for the flower garden are Major Hope (rose) probably the best of all, Lafayette double scarlet and Worthiana single scarlet. Tubers of these would have to be purchased, as you would not be sure of getting them true from seed. If you prefer to raise your own plants purchase seed from a good firm, stipulating that you require very free varieties with rather small, erect flowers. Sow as suggested in January and grow on as quickly as possible so that they are nice stocky stuff by the time it is necessary to harden off for planting outside. Under such conditions there is no difficulty in obtaining a fine display the same season. If you require special colours of the habit indicated it is better to put this batch of plants into prepared beds in the reserve garden. Select when in flower and propagate for another season.

Great care is necessary in the sowing owing to the very tiny seeds. Have the surface of your seed-pan perfectly level and fine, with the soil sufficiently moist to promote quick germination. Cover very slightly and shade until the seedlings appear. If you decide to plant your batch of tuberous varieties in reserve beds, and select, perhaps you would like to use the fibrous section in the flower garden next summer. These come true from seed, make a fine display, and continue in flower well into the autumn; also they are about the height you require. Scarlet Beauty and Salmon Queen are good varieties. In the case of both tuberous and fibrous sections you might,

if the beds are small, fill each with one variety, but with large beds it is advisable to plant the Begonias in small groups and carpet intervening spaces with *Koniga variegata*. A pleasing break is provided by an occasional plant of *Grevillea robusta*.]

PARRYA MENZIESII.

The Parryas are a small group of, for the most part, bushy growing plants belonging to the order Cruciferae, and are interesting rather than possessed of a beauty calculated to render them popular as garden plants. That they have their uses there is no doubt, and it remains for the intelligent cultivator to find out the conditions best suited to their requirements. The general habit of the species is that of low-growing glabrous or pilose, herbs, some, like the above, more after the manner of *Alyssum saxatile*, though the much smaller leaves are roundly crenate at their margins. Strictly of perennial duration, they are best regarded as biennials, and thus treated, sowing the seeds each year when ripe, are capable of pretty effects. Disliking rich vegetable soils, and short-lived in such, they should be planted either in stony ground or in fissures where rocky debris abounds. Firm—I had almost written hard—planting is most desirable, essential, indeed, in conjunction with the position named to secure longevity. The species are native of Arctic regions generally, *Parrya Menziesii* coming from north-western America. Its flowers are violet-purple. There is a white-flowered form, and occasionally varieties having striped flowers appear. Early spring is the flowering period, though this may vary with cultivation and locality. Its height is from 6 inches to 9 inches. E. H. J.

NOTES AND REPLIES.

Gerardia tenuifolia.—Will you kindly name the enclosed for me? It came to me from a very interesting garden in Devonshire as a *Gerardia*, but looks very much like a variety of *Pentstemon*. It does not keep well in water, and I fear it may not travel well.—CHARLES PRENTIS.

[It is *Gerardia tenuifolia*, the only kind we have seen growing in England. An American kind of much beauty, *G. purpurea*, grows on the roots of other plants. It would be worth while to get seed and try to naturalise it with us.—ED.]

Lilium giganteum bulbs, treatment of.—I am expecting shortly some bulbs of *Lilium giganteum* from Darjeeling. Should I plant these in the open at once or store them till the spring?—W. M. CROWFOOT.

[If the district in which you reside is considered a favourable one generally for Himalayan plants you may plant the above-named in the open to the end of the present month with safety. After that time the bulbs would be better potted and placed in a cold frame, and, if plunged in ashes or coconut fibre, would require little or no water during the winter after the first application to settle the soil. Dry storing takes too much out of this species and should not be indulged in. It is to be hoped that the bulbs you are expecting will be not more than half-grown—planting the biggest bulbs is, invariably, a most disappointing business. The planting stations in the open must be well prepared, the species succeeding best in a considerable depth of rich, light loam and in thin shade. For the safety of the freshly-planted bulbs it would be well, for the first winter, to protect them with light litter, leaves, or like material.]

Campanula Elatines.—This pretty and interesting species is too rarely seen in cultivation. A native of the Alps of Piedmont, Liguria, Naples, etc., and usually

found in shady, rocky places, it is, under cultivation in this country, admirably suited to rock crevices, and, in such, if planted in broken rock and soil in equal parts, is hardier and more enduring than in a freer soil away from crevice or fissure. I see no reason for giving it shade in this country, provided a good depth of fissure is assured it. With an inclination to trail after the manner of *C. garganica*, it cannot boast the robust habit and freedom of flowering of that kind, or even its hardiness, hence it is better planted as suggested. The small flowers are axillary, bluish-purple in colour, with deeper-coloured base, corollas very deeply divided, the pointed lobes strongly recurved and distinctly grooved. The leaves are heart-shaped and coarsely-toothed, and in the young state downy. Flowering in August, it is valuable at a time when good alpines are scarce.—E. H. JENKINS.

Crinums.—There are many gardens in neighbourhoods near the sea in which these fine bulbous plants would succeed. They are well suited in a rich, warm border with, if possible, the shelter of a wall or of a greenhouse gable, and in a position where they will not be disturbed. In such a position the ripened foliage will be a sufficient protection during even a severe winter. Where the protection of a wall is absent a barrowful or two of leaves, held in position by a piece of wire-netting pegged down, will be ample. The blooms, borne in umbels upon long stalks, are useful for cutting in autumn. *C. capensis* and *C. Moorei*—the former pink, the latter white—are the best forms for outdoor cultivation.—W. MCG.

Hardy-flower borders.—At the present time the display of bloom in the hardy-plant borders is very fine. In addition to the plants which have from time to time been referred to, mention may be made of the Sea Lavender (*Statice latifolia*), one of the most attractive members of the family. The Gauze-flower (*Gypsophila paniculata*) is useful alike in the border and in a cut state. Large pieces of *Helianthus rigidus* give a fine touch of yellow, while the later-flowering *H. Miss Melish* will prolong the display. An attractive and distinct plant is *Lysimachia clethroides*, with its spikes of white bloom. The purple Loosestrife (*Lythrum roseum superbum*) is also very free. Among the taller plants, *Rudbeckia laciniata*, if not one of the choicest varieties, is noticeable; and *Napæa dioica*, with its handsome foliage, attracts attention. The approach of autumn is heralded by the earliest Asters and by the opening of the Japanese Anemones. Altogether, the close of summer is one of the brightest periods in the calendar of hardy-flower borders.

The Dove-dale Mimulus.—It is worth making the journey in late July from North or South to this secluded heart of England, if only to see the glorious masses of *Mimulus luteus* lighting up the rippling waters of the Dove. Whether a native or a garden escape, it is at this time the glory of the Dove, and seems equally happy on marshy banks or on islets of debris in mid-stream, frequently submerged by the current. Curiously, the *Mimulus* of the Dove has a few reddish-brown spots or blotches (one very decided one on the lower lip) which give it great distinction; whereas the plant growing equally luxuriantly in the Manifold, a tributary of the Dove, is pure gold.—The Garden.

Salvia turkestanica.—This is a handsome plant when in blossom, for though the flowers are small, they are surrounded by large lilac-pink bracts, the soft, harmonious colouring of the two combined having a very pretty effect. It seems quite hardy and an easy doer in ordinary garden soil, a good group of it being very effective in the herbaceous border in August. Unfortunately, it has rather an unpleasant smell, which is not particularly noticeable with a single plant, but a large clump on a sunny day is apt to be offensive when one is close to it.—N. L.

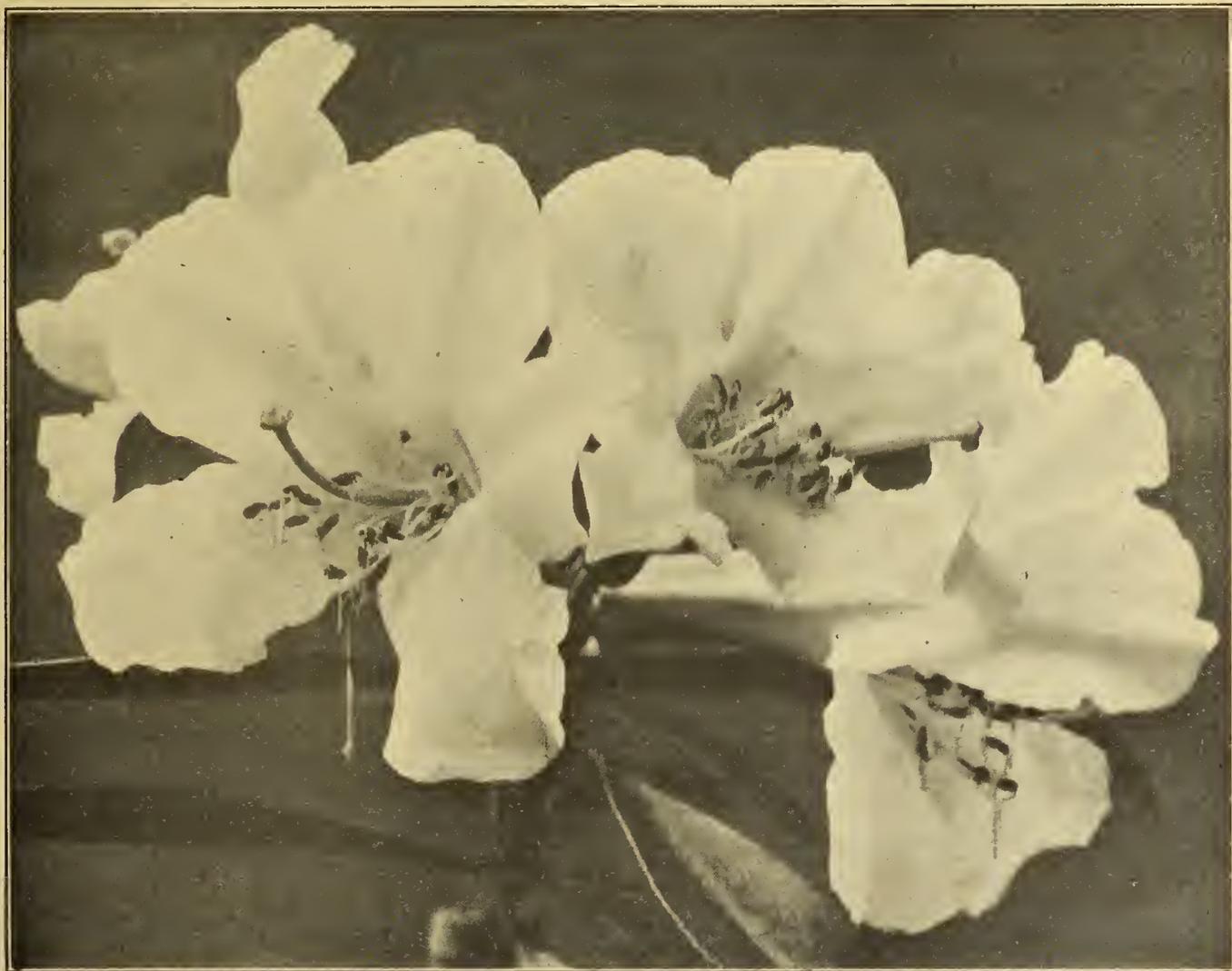
INDOOR PLANTS.

RHODODENDRON MADDENI.

This is one of the most tender of the Himalayan Rhododendrons, and also one of the last to unfold its blossoms, for its white, tubular-shaped flowers may often be had well on into July. The flowers are not borne in compact trusses as in *R. arboreum* and many others, but in loose heads, with, as a rule, not more than half a dozen flowers in a cluster, while they are frequently fewer. Individually they are from 3 inches to 4 inches long, and as much across the expanded mouth, the colour when fully expanded being pure white. Different names that have been

and your plants want repotting, the best time to do this being the spring, just before the plants start into growth. After being potted they should be watered whenever necessary. A suitable compost may be formed of two-thirds good turfy loam, and the remaining third made up of leaf-mould, dried cow-manure, and sand. At the same time, we may point out that *Agapanthus* flower better when the roots are fairly pot-bound than if growing too freely. For all this, root constriction must not be carried to excess, and any which in your opinion would be better for larger pots should be shifted next spring. If any of them are not repotted it will be a great advantage to

of attention than during great heat or drought, for the pots, being full of roots, it takes a heavy rainfall to wet the ball through, as the foliage of the plant carries a large proportion of the rain quite clear of the roots. Consequently only the surface is wetted, but this, with the frequent damping of the foliage and moist condition of the atmosphere, causes the plant to show but little of the ill effects for some time, although it does not grow at all satisfactorily, and if the owner were to turn a few of the plants out of their pots he would probably find them dust dry at the lower parts of the pots, and for this reason it is especially desirable to give plants a thorough good soaking of water



Rhododendron Maddeni. From a photograph at Nymans, Sussex.

applied to this *Rhododendron* or to slight forms thereof are *calophyllum*, *Jenkinsi*, and *virginale*. Seedlings even from the same pod show a certain amount of variation. Plants four or five years from seed and in pots 5 inches to 6 inches in diameter will often flower, thus taking much less time than some of the Himalayan species. A notable feature of this *Rhododendron* is the manner in which the old bark peels off the stems after the manner of *Arbutus Andrachne*.

NOTES AND REPLIES.

Growing the *Agapanthus*.—Will you kindly let me know how to treat the *Agapanthus*? I have three large pots full, and there is only one flower amongst them. I have had them a long time.—ELLA.

[The soil is evidently quite exhausted

assist them during the growing season with occasional doses of liquid-manure or one of the many concentrated plant foods now so much used. During the winter the *Agapanthus* may be kept in a shed or stable where there is a little light and the plants are safe from frost. No water will be needed throughout the winter. In spring, however, when ready to start into growth, the plants must be watered. It is then necessary to remove them to a lighter position, such as a greenhouse, conservatory, or cool vinery, as, if left in semi-darkness, the new leaves will become so weak as to topple over and quickly turn yellow.]

Watering in showery weather.—Plants in pots that are set out-of-doors frequently suffer more in showery weather from lack

at times, even in showery weather, for moisture is the very life of plants, and no matter how well the other items of culture may be carried out, any defect in the water supply will defeat the success of all. Wall trees need careful supervision in this respect, as the walls ward off a good deal of the rainfall, and borders are sometimes raised so much above the general level of the garden that a heavy downpour runs away into the low-lying parts, leaving the roots of the trees still dry. Only careful examination will detect these frequent causes of failure.

Zonal *Pelargoniums*.—These plants are very often seen grown in such quantities as to exclude things that are more varied and interesting. When massed together in a greenhouse in large numbers in summer,

the idea that presents itself is that the display is only another phase of bedding which may be done as well out-of-doors. The season most appropriate for these flowers is in winter, when there are comparatively few plants in bloom, and when their flowers are useful for cutting. Market growers strike their plants late, having them much smaller at the end of summer than is usual in private places; but their houses are so constructed that the plants are close to the glass; this enables them to flower freely under a comparatively high temperature. If an attempt were made to bloom plants on this method in the badly-lighted houses often met with in private gardens, they would grow more to leaf than flower. It is, therefore, safer to depend upon older plants that have their wood hard and matured. These may consist of cuttings struck last autumn, or older examples that have been cut back. They should now be standing out-of-doors in a moderately open situation, giving sufficient water to keep them healthy and the growth moving slowly. They ought to be rather under than over-potted, and manurial stimulants should be given sparingly. Prepared in this way the plants will give double the amount of bloom when placed in heat than those having their growth insufficiently matured will do. The large-flowering varieties are liked by some; but the most suitable sorts are those that bloom most profusely, and have the individual flowers comparatively small.—T.

Coleus thyrsoideus.—A good batch of this was moved into 5-inch pots during the week. Last spring a number of plants was used in the greenhouse—ordinarily they are grown in the stove—and did remarkably well under the treatment accorded to a mixed collection of greenhouse plants. Bearing this in mind more cuttings than usual were put in, and in the absence of bulbs it is expected that they will again be useful in the spring. *C. thyrsoideus* is of a rather ungainly habit, and frequent pinchings are necessary in order to obtain bushy plants. Pinching, however, must cease at the end of July, for if the shoots be stopped after that time the growths are liable to be weak and spindly, carrying but indifferent spikes.—KIRK.

Plant-houses continue to be attractive. More use than usual has been made of brightly-coloured Coleuses, which, interspersed with Ferns, are showy. Zonal Pelargoniums and double-flowered Begonias yet remain in good condition, and will prolong the display with a little reinforcing until the time arrives for housing the Chrysanthemums and staging the winter-blooming plants. A useful roof plant is the climbing Fern (*Lygodium scandens*), which in its own way is as useful as Smilax.

GARDEN PESTS AND FRIENDS.

BROWN FRUIT ROT.

APPLES, Pears, and Plums throughout the country are badly attacked this year by the fungus known as brown fruit rot, which, according to Masee, is *Sclerotinia fructigena*, "undoubtedly the most destructive and widely distributed of fungus parasites attacking fruit of all kinds belonging to the order Rosaceæ." It attacks Apples, Pears, Plums, Cherries, and Peaches, and is even found on wild fruits such as the Bullace, Crab, etc. It first appears as a little brown patch on the fruit, quickly spreading until in a few days the whole fruit is brown and rotten. Numerous tufts of white or pale brown warts, really clusters of spores, grow out of the skin in more or less concentric circles. Finally the whole fruit becomes dry or mummified, and often remains on the tree in this condition throughout the winter. The fungus is said to first attack leaves, young shoots, and even flowers,

causing thin dark olive-green patches to form on the surface, from which spores are produced, and these infect the fruits. It is important that all fruit attacked by this disease should be at once collected and either burnt or deeply buried, and as the spores pass the winter in the bark of dead or cankered twigs these also should be carefully cut off and burnt before spring. Masee also recommends drenching the trees and the soil about them in winter with a solution of sulphate of copper, and spraying with a dilute solution of Bordeaux mixture when the leaves are unfolding in spring. It has been suggested that the fungus gets access to the fruit through punctures made by insects, and for that reason an insecticide, such as Paris green, should be helpful as a preventive.

The Board of Agriculture, in Leaflet No. 86, recommends drenching the trees and soil with a solution of sulphate of iron, prepared as follows:—Sulphate of iron, 25 lb.; sulphuric acid, 1 pint; water, 50 gallons. Pour the sulphuric acid upon the sulphate of iron, then add the 50 gallons of water by degrees. A barrel is the best vessel to use; a metal vessel must not be used, as it would be acted upon by the sulphuric acid. Spraying with the above solution should be done in January or February, before the leaf-buds begin to swell, otherwise the foliage and blossom will be destroyed. When the leaf-buds are expanding, and at intervals as required, the trees should be sprayed with quite weak Bordeaux mixture. The above line of treatment must be followed for at least two seasons.—*The Field*.

Romneya leaves injured.—I enclose a few leaves of a very fine *Romneya* which grows freely and flowers every year in my garden, but the leaves of which are, every one, perforated as the specimens I enclose. This has been the same every year. What would you advise me to do? To cut it down and disinfect? And with what? It had brown spots, but "Anti-pest" has cured that.

[The leaves of your *Romneya* have been attacked by one of the shot-hole fungi, probably a species of *Cercospora*. Pick off and burn all the infected leaves, gathering up as well any that have fallen. Then spray the plant with Bordeaux mixture or the following:—Mix $\frac{1}{2}$ oz. of carbonate of copper, 2½ oz. carbonate of ammonia, dissolve them in about 1 pint of hot water. When thoroughly dissolved stir well into eight gallons of cold water. When the leaves have fallen skim off about 1 inch in depth of the surface soil and replace it with fresh. Burn or bury the soil which has been removed some 9 inches below the surface.]

Caterpillars injuring Roses.—I would be obliged for any information re enclosed caterpillars, which have been attacking my pot Roses. This is the first time they have been seen here. The Roses have been out-of-doors some time.—**INQUIRER**.

[By the time the caterpillars reached us they were no longer in the caterpillar stage, but had become chrysalids. They were probably the caterpillars of the lackey moth, which often feeds on Roses. The moth lays its eggs so as to form a bracelet round the twigs of the Roses, and these should be searched for during the pruning in the spring, removed, and burned. For these and all caterpillars on Roses, if there are too many for hand-picking to cope with, there is no better remedy than spraying with lead arsenate, which can be purchased in the paste form and mixed at the rate of 1 lb. to 15 gallons of water—enough to do seventy-five to 100 climbing Roses and a proportionately greater number of dwarfs, and applied with a garden syringe with a fine nozzle.]

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM SEPTEMBER 6TH.—*Catalpa japonica*, *Buddleias*, *Hardy Fuchsias* (in variety), *Calycanthus floridus*, *Sambucus canadensis*, *Spartium junceum*, *Rhus* (in variety), *Polygonum baldschuanicum*, *Clematises*, *Roses*, *Solanum jasminoides*, *Desmodium penduliflorum*, *Wistarias*, *Jasminum officinale affine*, *J. primulinum*, *Indigofera Gerardiana*, *Hydrangeas*, *Hypericums*, *Ceanothus* (in variety), *Olearia Haasti*, *Esculus parviflora*, *Viburnum Tinus*, *Veronicas* (in great variety), *Cistus* (in variety), *Nandina domestica*, *Aloysia citrodora*, *Polygonums* (in variety), *Gyneriums* (*Pampas Grass*), *Lythrum roseum*, *Lysimachia clethroides*, *Sagittaria*, *Nymphæas* (in variety), *Cyperus longus*, *Astilbes* (in variety), *Tritomas* (in variety), *Hyacinthus candicans*, *Gladiolus* (in variety), *Cimicifuga racemosa*, *Liliums* (various), *African Lily*, *Montbretias*, *Yuccas*, *Tropæolum speciosum*, *Lobelia cardinalis*, *Vaccinium*, *Vitis Idæa*, *Romneya Coulteri*, *Asters* (*Michaelmas Daisies*) (in variety), *Delphiniums*, *Hollyhocks*, *Morina longifolia*, *Echinops*, *Helichrysums*, *Erigerons*, *Heleniums*, *Rudbeckias*, *Lavateras*, *Anemone japonica* (in variety), *Enotheras* (in variety), *Acanthus*, *Sidalceas*, *Coreopsis grandiflora*, *Funkias*, *Thalictrums*, *Phloxes* (in variety), *Achilleas*, *Geums*, *Potentillas*, *Linarias*, *Linums*, *Verbena venosa*, *Agrostemmas*, *Statice* (in variety), *Francoa*, *Androsaces*, *Ethionema* (in variety), *Dryas octopetala*, *Scabiosa Parnassi*, *Platystemon californicum*, *Cyclamen hederacifolium*, *Colchicums*, *Sedums*, *Mesembryanthemums*, *Annual Dianthus* (in variety), *Phlox Drummondii*, *Nemesias* (in variety), *Salpiglossis*, *Cosmos*, *Nigellas*, *Mignonette*, *Godetias*, *Annual Delphiniums*, *Stocks* (in variety), *Antirrhinums* (in variety), *Pentstemon* (in variety), *Scabious* (in variety), *Sweet Sultan*, *Cannas*, *Begonias*, *Tufted Pansies* (in variety), *Gazania splendens*, *Carnations* (in variety), *Early-flowering Chrysanthemums* (in variety).

WORK OF THE WEEK.—The weather during the past week has been very unsettled, and 2 inches of rain have fallen since writing my last notes. Advantage was taken of a wet day to turn out of pots and boxes and sort over a quantity of bulbs that were forced last season. These have been planted in the Grass, throwing them into irregular groups, and putting them in with a light digger or mattock. This is better than using a bar, as the soil gets well loosened when the bulbs are put in. Preparations have been made for sowing hardy annuals for early flowering next year. There is a great difference in the stamina and continuous flowering of hardy annuals raised from seeds in the autumn and those which are sown in the autumn. Among others which may now be sown in soils of a poor and rather dry nature are *Antirrhinums*, *Asperula azurea setosa*, *Bartonia aurea*, *Eschscholtzia*, *Linarias*, *Matthiola bicornis*, and *Saponarias*; for ordinary garden soils, *Calliopsis*, *Candytuft*, *annual Chrysanthemums*, *Clarkia*, *Eutocia viscida*, *Erysimum*, *Lavatera*, *Larkspur*, *Linums*, *Lupinus*, *Amaranthus caudatus*, *Malope*, and *Nemophila*. For many of these latter the site should be well prepared by digging in a quantity of well-decayed manure, for the ordinary contents of the mixed border soon rob the soil, and these plants are generally sown to fill up gaps made by things which have had to be pulled up after flowering themselves to death. Each little plot should be well dug and watered thoroughly if dry before, sowing the seeds rather thickly to allow for losses by slugs, etc. The seedlings must not be allowed to remain too thick, thinning them gradually until they have got beyond the size liable to attacks.

TUFTED PANSIES.—Plenty of good cuttings is now available from plants cut back for the purpose. These are now being taken and inserted in a cold-frame previously made up with sandy soil. The frame will be shaded on bright days, and the cuttings sprayed over in the afternoon on fine days. It is useless trying to strike the stout cuttings, the stems

of which are hollow, as roots will not form from these, the only good cuttings being those which are quite solid throughout and small.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Orchard-house trees.—Trees that require a shift into larger pots or tubs, or which need repotting, should, if the fruit has been gathered, have attention. To get this done while the trees are still clothed with foliage is a great consideration, seeing that not only are new roots emitted and the fresh compost partially taken possession of by them before the fall of the leaf, but they, as a result, are much better fitted to undergo the ordeal of forcing than when such operations are deferred till later in the season. The receptacles, whether pots or tubs, must be clean and well drained. The compost should consist of the best fibrous loam obtainable, the only additions necessary in such case being a little fine lime-rubble, and a dash of bone-meal and wood ashes. Loams of poor quality may be enriched with a fair proportion of well-decayed manure, which has been dried under cover to get rid of worms. In the case of repotting only, as much of the old compost as possible should be picked out from between the roots all over the balls, and the roots found in the surface mulch and amongst the drainage material must be sacrificed to make way for the new. The potting must be thoroughly well done, making the compost as firm as possible with the aid of a potting-stick.

Winter-flowering Carnations.—Plants intended for this purpose and which have been in pits and frames for the past three or four months now need to be staked and tied and taken into the house in which they are to bloom. If the pots are well filled with roots a sprinkling of Carnation manure will prove beneficial. Plants which have been flowering more or less since last autumn may be induced to yield a still further supply of bloom if cleaned over, relieved of useless growths, and top-dressed with suitable compost containing a little Carnation manure.

Malmaison Carnations.—The layers being well rooted must now be repotted. Three-inch and 4-inch pots, according to the size of the plants, are large enough, and until the roots get to work in the compost the frame or pit in which they are stood should be shaded and kept fairly close. Old plants recently potted should now be given a position in a house where they will have an abundance of light and air. To keep the growth sturdy there must be plenty of space between the pots on the stage.

Border Carnations.—Unless found by actual experience to winter well outdoors, the rooted layers are best taken up, potted at once, and stood in cold-frames or pits, where they can be protected when necessary. On all other occasions, wet weather excepted, they should be freely exposed.

Callas.—Where the practice of planting out after the flowering season is over obtains, the crowns should now be lifted and potted. After such a summer, it is doubtful if these will afford such satisfactory results as will crowns which have been kept in pots and stood in full sun to get thoroughly ripened. Callas do best in a compost consisting almost entirely of loam, the only additions necessary being a little rough leaf-mould and lime-rubble to prevent it, if of a heavy nature, becoming too retentive. A vinery in which the Vines are at rest is a good place to stand the plants in after they are potted.

Achimenes and Gloxinias.—These, as they pass out of flower, should be removed to a pit or frame and kept quite cool, so that they may gradually go to rest. The water supply must be reduced by degrees as the foliage and stems are noticed to be ripening off. The same remarks apply to Caladiums.

Libonia floribunda.—Plants intended for autumn display should now be moved into the greenhouse after vaporising them if there is any fly present. Water carefully for a few days, as the change oftentimes causes loss of

foliage. Afterwards, or until the plants come into full bloom, weak liquid-manure may be given.

Lorraine Begonias.—Plants of the various types of this useful winter-flowering Begonia are now growing freely and require attention in the way of training. For general purposes one stake to each plant to which the growths can be looped up suffices, but if large-sized, round-headed, rather than pyramidal-shaped plants are required, then from four to five stakes are needed round the outside as well as one in the centre. To have this Begonia at its best the young plants should be grown in an intermediate temperature in a house by themselves.

Heliotropes.—For autumn and winter flowering these, where scented flowering plants are appreciated, are much prized. After a continuous suppression of flowers and pinching and repinching of growths to obtain bushy plants, the time has now arrived when the forwardst may be allowed to bloom. To ensure fine trusses of bloom give an occasional dose of Clay's fertiliser, which should be sprinkled on the surface and watered in. Specimen plants, with bare stems, about 18 inches in height, and pyramidal-shaped heads some 15 inches through in the widest part, are also very useful for house decoration.

Clerodendron fallax.—Plants now coming into bloom should, to extend the blooming period as far as possible, be moved to the warmest part of the show-house and where they will not be subjected to cold draughts.

Calanthes.—These, having made an abundance of roots, should be assisted with mild doses of stimulants when water is required, which will assist in the building up of bold pseudo-bulbs, which, in turn, will yield vigorous flower-stems and inflorescences in due course.

Flower garden.—As the different types of Rambler Roses pass out of bloom they should be relieved of the oldest of the wood to make way for the current season's growths, which should be lightly tied to the trellis or arch on which they are trained. Roses in beds need looking to every few days, picking off faded blooms and spudding the suckers as they push up. Flower beds require looking over frequently, when dead flowers and decaying foliage must be picked off, and all kept as tidy as possible. Specimen plants in tubs and pots of Zonal, Ivy-leaf, and Scented-leaved Pelargoniums, Myrtles, Fuchsias, and early-flowering Chrysanthemums must not only be kept well watered, but fed with stimulants also. A mulch of old Mushroom manure passed through a ½-inch sieve is much appreciated by all the foregoing.

A. W.

MIDLAND COUNTIES.

Morello Cherries.—The crop, which has been a good one, having been gathered, the trees will now be given the necessary pruning. It is wiser to prune the trees now than wait until the leaves have fallen, as the operator will be better able to decide while the foliage is still on the trees which shoots can best be spared. Another advantage is that the young shoots are more likely to be allowed a proper distance apart and the danger of overcrowding avoided, also more light and air will reach the remaining wood, thus enabling it to ripen more thoroughly. The Morello Cherry requires to be pruned quite differently from the Sweet Cherry, the method being similar to that for Peaches and Nectarines. All useless and old fruiting wood should be cut out so as to allow room for training in some of the young shoots, as these will produce the best fruits next season. After the necessary pruning has been completed the trees should be given a good syringing with an insecticide to cleanse them of any insect pests that may be present on the foliage.

Apples and Pears are ripening rapidly, and the gathering of these will now require almost daily attention. Dry days must always be chosen for the gathering of all kinds of fruit, and when taken in they should be carefully sorted, otherwise imperfect and bruised samples, which cannot be expected to keep, will soon rot and destroy many of the good

ones. The fruit-room has been thoroughly cleansed and made ready for storing the fruit.

Begonia Gloire de Lorraine and varieties. —Late-rooted plants of this Begonia should now receive all the encouragement possible, as growth made after the month of September is too late to produce a satisfactory crop of flowers. Pinch off the flower-buds once more from those plants intended to bloom in October and November. Allow them plenty of room, overcrowding always resulting in inferior quality. Keep the shoots tied up to neat stakes, but avoid using more stakes to a plant than are necessary, as over-staked plants have a stiff and objectionable appearance.

Housing plants must now receive attention, as it is not safe in this locality to trust anything of a tender nature in the open air after the middle of September, for, though the night temperature may not fall so low as to permanently injure the plants, a few degrees below freezing point often give the foliage an unsightly appearance from which it does not recover. Previous to housing the plants, it is usual to give the glass and woodwork a thorough cleansing with soft soap and water, but owing to shortage of labour this season all we are able to do is to wash down with the hose-pipe.

Brussels Sprouts.—A few of the old leaves at the base of the plants should be taken off to allow a free circulation of air and light, particularly where much growth has been made and the leaves are now thick together. If this work is neglected the young Sprouts will become drawn, weakly, and loose.

Celery.—See to the earthing up of this at the first favourable opportunity, but never on any account do it when the leaves or stems are damp, or decay of the crowns is sure to take place.

Cauliflowers.—The second sowing of Cauliflower seeds will now be made on a warm border, sowing the seeds thinly in shallow drills. As soon as the seedlings are large enough they will be transplanted to cold frames, using soil of not too rich a nature. The chief aim is to procure sturdy plants; therefore, whenever possible the fullest amount of air should be given, even in winter. The sowing of Cauliflowers during September and wintering the plants in cold frames are not nearly so much practised now as formerly, owing to the numbers of new varieties that may be raised in heat during the early spring and quickly forced. The results from autumn-sown plants are infinitely better than those from plants raised in spring.

Cabbage.—The principal batch of Cabbage intended to furnish a supply in spring must be planted without delay on land which has been well prepared. The surface of the ground should be broken down finely and a good dressing of soot and wood-ashes applied. Allow a distance of 18 inches or 2 feet between the rows, according to the variety, and 1 foot from plant to plant. Every alternate Cabbage can then be cut when quite young. I always plant a small number of the largest plants on a south border, these coming in useful for cutting very early, as compared with those on the principal break. Continue to hoe as frequently as possible the surface soil between all winter crops. The season of growth is now becoming very short, therefore every assistance should be given to the various crops so that they may become properly matured and be, therefore, the better able to withstand severe weather in winter.

F. W. G.

SCOTLAND.

Vegetable garden.—During the week second early Potatoes, now quite ripe, were lifted and stored. The crop is good and even, and if there are no specially large tubers, there is, on the other hand, a gratifying absence of very small ones. Disease is practically non-existent, only two tubers which were slightly affected having been noticed. It is unwise, I think, to store these Potatoes in a heap if such a method can be avoided. There is a tendency to heating, which is against the Potatoes keeping well. It is better, therefore,

to place them thinly in the store, which at this time of the year must be freely ventilated. Autumn Onions have germinated well, and the hoe was run lightly through the lines. As soon as the growth of the Onions permits, weeds will be carefully hand-picked from among the plants, and this clean-up will probably keep the quarter clean until spring. Peas, about which some doubts were for a time entertained, have turned out most satisfactorily. As soon as possible after picking any given line is finished the straw is cleaned off, and, if dry enough, burned. Otherwise, it is removed to the rot-heap, for if allowed to lie in a heap it is apt to form a very convenient lurking-place for insects. Only a few lines of Peas are grown upon stakes, wire being used in the majority of cases. Contrary to the usually expressed opinion, I find that Peas do quite well upon wide-meshed wire-netting, which is easily put up, easily removed, if a little tedious to clean, and, if well looked after, practically indestructible. Surplus French Beans continue to be regularly picked for preserving for winter use. Spinach and Spinach Beet have evidently been suited by the weather, both being available in quantity. Onions planted in spring from last autumn's sowing have now been pulled and laid out thinly to dry. The stems of hulbs from seedlings raised in heat during the present spring were twisted over to hasten ripening. Sown-out Onions are moderately good, and as growth will continue for some little time yet, they have been cleaned down. Hand-weeding and thinning were attended to in the case of late-sown Parsley. Cauliflowers, on the whole, have been very disappointing, the mid-season varieties having been practically a failure. This matters the less at present as there is an abundance of other vegetables, and it is hoped that the autumn varieties will give a better account of themselves. More Cahages were put out into nursery beds for planting at a later date.

Figs in pots.—A very useful second crop is being assisted by the application of frequent doses of weak liquid manure. To finish the fruits it may yet be needful to give them a rather warmer temperature. Up till now the trees have been grown without the aid of artificial heat, and both wood and foliage are robust. A little top-dressing was afforded to the trees in the course of the week.

Peaches and Nectarines out of doors.—In the case of Peaches the date of ripening is, roughly speaking, a fortnight later than is customary. As usual, Hale's Early was first, and will be followed by Stirling Castle and Dymond. The crops are moderate, but not heavy. In respect of Nectarines, the crop, more precarious on south walls than Peaches, is decidedly heavier, but will be later by a week. The trees in both cases were again looked over during the week, shoots tied in, and the fruits exposed to the sun by the removal of superfluous or obtrusive foliage. Time was found to give all the Peach and Nectarine trees a good soaking of liquid manure. This is the last application which they will receive so far as stimulants are concerned.

Pears.—In order to hasten these along, the trees were, at the same time, given a good allowance of the same liquid. The crop is, on the whole, better than looked likely at one time, although, perhaps, individual fruits, generally speaking, will not be so large as usual. Yet there are some. Benrre Giffard for example, upon which the individual fruits are of a superior size. Lateness in maturing, all over, will be the rule.

Plums.—Shoots which have grown since summer pruning was done were again pinched back, and, as in the case of Peaches, such foliage as was interfering with the fruits is, as opportunity offers, being reduced.

Flower beds.—The out-and-in character of the season has been adverse to the plants, but the display is now fairly satisfactory. Beds of the Swan River Daisy, through which rises one of the taller blue Larkspurs, are quite good. A bed filled with Ageratum and the same Larkspur and edged with Lobelia has filled out capably. I think that, on the whole, Ageratum is more satisfactory for summer bedding than is Heliotrope. I saw some beds of the latter recently, which, owing no doubt to the

cold weather experienced after planting, are an entire failure. Further, Heliotrope succumbs to a trifling frost comparatively early in the season, while Ageratum is much more hardy. The latter is, by some, propagated from cuttings, but this is quite unnecessary, for a packet of seed sown in early March will provide strong plants which are ready for putting out at the end of May, and which bloom equally as well as those from cuttings.

Ferns for cutting.—Fronds of Adiantums are always in request for cutting during the winter. Plants, therefore, intended to provide material for this purpose ought now to be grown as coolly as possible and given abundant ventilation, with a free exposure to light. Grown under such conditions the fronds are robust and the foot-stalks firm and hard. If Ferns are grown in a humid, rather high temperature it is idle to expect that fronds will last any length of time when cut for the purpose referred to. A little weak soot-water, occasionally, keeps them of good colour.

Plant-houses.—With the advancing season a little re-arranging from time to time is of service. Withered blooms and foliage must be regularly removed, especially in the case of such things as Zonal Pelargoniums, which are liable to be affected by damp. Begonias of all kinds, including B. Weltoniensis, yet remain in good order, and will prolong the display until it is necessary to house the earliest Chrysanthemums. In the stove, Gloxinias remain bright, and the earliest Gesneras begin to show the spikes. Some of these will be permitted to bloom, but the majority of the spikes will be pinched out. In this house it is now necessary to run a little heat through the pipes, but, for the present, a very moderate allowance suffices if early closing is practised. Watering is now much less insistent, although it must be by no means neglected. Syringing is done once a day, in the early afternoon, and only in bright weather. In the stove a night temperature of round about 70 degs. is easily kept up with very quiet firing, and if the thermometer indicates 65 degs. in the morning such a temperature is high enough for most things at present. W. MCGUFFOG.

Balmie Gardens, Kirkeudbright.

OBITUARY.

MR. D. E. THOMAS.

It is with deep regret we have to announce the death of Mr. D. E. Thomas, at the age of 55, on Saturday, September 2nd. He had been connected with "Farm and Home" for nearly thirty years. In the farming world he was well known, being a member of The Farmers' Club, while in the horticultural world many of his acquaintances will be sorry to hear of his death at a comparatively early age. Mr. Thomas was born in Carmarthen, and at an early age worked as a printer, this experience standing him in good stead later in life, when he took up journalistic work. After giving up the practical side, we understand he joined the *Bath Chronicle* as chief reporter, leaving this at an early age to edit a paper in his native town. Eventually he found his way to London, where, after a varied experience in journalistic work, he joined the staff of "Farm and Home." Never enjoying robust health, he was always cheerful and uncomplaining, and did not spare himself. He was, in the words of one who knew him well, "one of those anxious workers who always put work and duty first."

Having been brought into contact with him day in and day out for over thirty years, I have had every opportunity of seeing the interest he took in his work and his sterling worth. He was always ready to help with his advice in any difficulty, and it pains me to find that a confrère of so kindly a nature and so modest withal is no more. He leaves a widow and two sons, both of whom are now in the Army, to mourn his all-too-early death. W. P. T.

CORRESPONDENCE.

Questions.—Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.

Naming plants.—All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.

Naming fruit.—Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.

PLANTS AND FLOWERS.

Ehretia serrata (V. M.) comes from the East Indies and is generally treated as a stove or greenhouse evergreen tree or shrub. The flowers are white, small, numerous, and have a powerful honey-like perfume. It is said to grow to a height of 6 feet.

Azalea leaves turning brown (A.).—The leaves are covered with "thrips." Lay the plants on their sides and well syringe them with strong Tobacco-water. Place them afterwards in a partially-shaded situation out-of-doors, setting them on elates to prevent the worms entering the pots. Syringe them freely every afternoon with clean soft water, and repeat the Tobacco-water washing (placing the plants on their sides) twice a week for two or three weeks.

Tuberous Begonias as basket plants (F.).—Yes, these do make capital basket plants, and there are now very many excellent kinds to be had; and if treated in this manner, and well managed, the large, brilliantly coloured blossoms, which are naturally of a drooping character, can be seen to advantage. They should be grown in good soil and kept well supplied with water, and if placed in a moderately cool, dry house they will produce a charming display of flowers for months in succession.

The Throat-wort (*Trachelium cœruleum*) (A. B.).—This is the name of the plant you send. It is easily propagated in the spring from cuttings taken from the base close to the soil, some of these possibly having roots of their own. Such plants will flower the same season in 6-inch pots, being afterwards kept to grow on the following spring, so as to provide, if need be, a set of larger plants. Seedlings can also be easily raised, but when this plan is adopted the seed should be saved and sown as soon as it is ripe from plants that have flowered early in August. The seedlings can then be kept in a box or pan in a cool greenhouse during the winter. This plant will do good service at a season when any novelty is a pleasing change. The best trusses of violet-blue flowers are produced on the terminals, but the lateral shoots on strong plants are also very effective. The best soil is loam and leaf-mould, with a little sand, potting being done very firmly.

TREES AND SHRUBS.

Magnolia grandiflora not blooming (R. R. N.).—A very probable cause, due in great measure to the poor sandy soil in which the plant is growing, is dryness at the roots. We should advise you to give it a heavy mulching

of rotten manure and water freely. If you do this and get well ripened wood, you will, we think, find that your plants will flower in due course.

Pruning the Oleander (C.).—The Oleander is naturally of a loose, Willow-like style of growth, so that any attempt to keep it dwarf will result in the production of few, if any, blossoms, and, generally speaking, the more pruning the fewer flowers. Still, if the plant is not showing flower, it may be cut back to within a couple of feet of the pot at once, or, if there are any blossoms, as soon as they are past. Good, stout growths are very necessary for flowering, hence, in cutting back, any weak and exhausted shoots may be removed altogether. If you cut your plant back now you must not be surprised at a poor floral display next year.

Campanula glomerata (C.).—The plant of which you send flowers is *Campanula glomerata*, a hardy border perennial growing about 18 inches high, and producing its violet-purple flowers in clustered heads on the top of the stems, and sometimes also in axillary clusters in the uppermost parts of the stem. The plant may be raised from seeds, though a better way of obtaining a quick return would be by the purchase of a half-dozen plants from any of the hardy plant nurserymen. The plants may be had for about 6d. each. It is not only quite hardy, but grows freely in any ordinary garden soil. The plant may be increased by dividing the roots in early spring. There is a large-flowered kind known as *C. g. speciosa*. This is a rather stronger grower.

FRUIT.

Treatment of Raspberries (E.).—You may cut away the old fruiting canes on your Raspberry stools at once. In future, cut them away as soon as they have done fruiting, as then more room is given for the young canes to grow and ripen. If your stools are a few feet apart in rows, the usual course is to allow about five stout canes or six weaker ones to remain for the following year's fruiting, cutting out all the rest. Do that now, also as many small canes or suckers, only do not injure those it is desired to save. When that is done, it is well, unless you can give the surface some manure, to allow the breadths to remain until the leaves have fallen, then to tie up the canes to stakes loosely, and give the soil a dressing of manure or decayed garden-refuse.

Grapes shanking (R. H. Butler).—From what you say and without our seeing the Grapes you refer to, your Grapes are what is known as "shanked," a term applied to denote the withering up of the stalks and berries of the Grapes, as is happening in the case of those you refer to. Sometimes only a few berries shank, in other cases the whole bunch, and in bad cases the entire crop. The berries thus affected never ripen, and soon decay. Many reasons have been given for this disease, among others overcropping. If the roots get into a bad subsoil shanking is sure to follow, while a sour and sodden border will also cause it. If the roots have gone down into a bad subsoil, then the only remedy is to lift the Vines and replant them, affording good drainage if the position is low, and making the border of good porous soil, so that the roots can run freely. We should advise you to procure a copy of "Vines and Vine Culture," which can be had from this office, post free, for 5s. 6d.

Summer pruning Currants, etc. (Anon.).—Black Currants may be freed from any straggling growths or somewhat shortened back, but not close pruned. They fruit on the new wood of the previous year, so a fair portion of such wood must always be left to produce the crop. Red Currants require the opposite treatment as they fruit mostly on spurs. Plums may now be pruned, cutting back what is termed foreright shoots—i.e., those produced in front of main branches, but laying in side shoots if on a wall; if otherwise, multi-pruning is not desirable unless trees are overcrowded. Prune later on early in autumn or early winter, at that season cutting lateral or side growths back to a few buds, leaving only main shoots to form branches or extend, these latter being shortened. Damsons should not be pruned at this season, and not much even in the winter,

unless crowded, merely removing cross branches or weak, crowded wood to let in sun and air to ripen the wood and facilitate gathering of the fruit.

VEGETABLES.

Peas falling (P.).—Your Peas are covered with thrips and red-spider, caused by excessive drought, and moisture in abundance is the only remedy. Your soil is probably light and none too rich. In dry seasons the plants should be sown in deep drills, and the sides of each row mulched with manure if the weather be hot and dry.

Caterpillars on Cabbages (Percy W. Cross).—Hand-picking is the best remedy, but if caterpillars are too numerous syringe the Cabbage plants with warm, mildly salt water, and soon after give a heavy washing with clear water. Dustings of fine salt overnight, washed off with clear water the next morning, often do very much to destroy the caterpillars.

Tomatoes cracking (Amateur).—The cracking of fruit of any kind when ripening is generally due to an excess of moisture in the soil when the crop is finishing. In some cases this may have been brought into greater prominence by previous dryness causing a tightness of the skin. It is good practice to give Tomatoes in pots or in boxes a good top-dressing just when the fruits begin to ripen. This enables the plants to finish off the fruit properly without any special aid from the water-pot beyond what is requisite for the well-being of the plants.

Tomatoes damping off (A Grower).—You keep the Tomatoes too moist, the atmosphere too close, and you have given too much manure. How can plants absorb bone-meal, then a good dressing of cow-manure, finally, liquid-manure, all in a short time? You have been far too good to them; either one or other of the manures would have been sufficient. You say they did well till the manure was applied. You should remember cow-manure is moisture-holding, and your plants cannot do with the surface roots completely smothered up and watered as yours have been.

Tomatoes scalded (Starter).—The fruits sent are what is known as scalded, which is caused when in the morning the fruits are damp with moisture because the house has been shut up close, and the sun coming out brightly has scalded them before they were dry. Scalding, too, is often caused by the stupid plan of cutting away the foliage. Rich food is given in excess to the plants, with the result that, there being no foliage to absorb such food, it is forced into the fruits, causing bad flavour, spot, and scalding. We do not denude other plants of their leaves in the same way as one often sees Tomatoes treated, and when this severe removal of the foliage is carried out little wonder is it that scalding ensues. The smooth varieties of Tomato are more liable to scalding than the corrugated sorts, probably due to the skin being more sensitive.

Cabbages and Brussels Sprouts clubbing (C. C. and T. E. Wild).—The best remedy for clubbing, from which you say your Cabbages, etc., are suffering, is gas-lime. That should be applied to vacant ground in the autumn, at the rate of 2 bushels to 3 rods, if clubbing is very bad. If it be not, then put 1 bushel to 2 rods of ground. After lying on the ground from four to six weeks, dig the dressing in. Even a dressing at the same rate of fresh lime is good also. Rather than plant any of the Cabbage tribe, plant Potatoes, Sea-kale, or Rhubarb, or sow Onions, Parsnips, or Beet—indeed, anything other than Cabbage. By doing so for a couple of years the club trouble may disappear. Peas or Beans also may be sown with advantage. Of course, you must understand that ground dressed with gas-lime cannot be cropped for three months after the dressing has been applied.

SHORT REPLIES.

Failure.—It is very difficult without seeing one of your plants to hazard a guess as to what is the cause of failure. We should say from your description that your Cabbages, etc., are suffering from the disease known as "clubbing." If you lift one of the plants you can soon settle the question. See above.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*A. B. Flower.*—We cannot undertake to name florist flowers.—*A. Boy.*—Dog's Mercury (*Mercurialis perennis*). The only way is to trench the ground and clear the roots out as the work proceeds.—*J. N. B.—1,* the Salt tree (*Halimodendron argenteum*); 2, *Gnaphalium angustifolium.*—*Eleanor Pain.*—*Hibiscus syriacus* *Bleu Coeleste.*—*E. Clarke.*—Please send specimen of the white Echinops you refer to.

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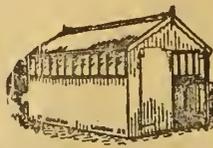
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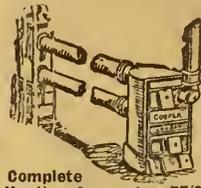
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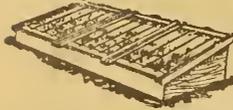
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CLEMATIS DISEASE AND ITS CAUSES.

My friend Mr. Morel, of Lyons, has sent me an interesting letter on this subject, of which he has much experience as the raiser of some beautiful kinds. I have thought it better to print his letter as it came to me—in French—lest a mistake should be made in making a translation. One may see in it certain things of importance, such as the mistake of grafting on our English *C. Vitalba*. But the letter mostly concerns grafting, whereas we want to fix people's minds on those that are not grafted. Why should we graft things that are easily raised and increased by layers, as in the case of the Clematis? Except, perhaps, in the case of new things, we can see no reason at all for grafting, and I have a large collection of Clematises, and do not lose any of the plants by disease, or very rarely, and in every case I grow them on their natural roots.

W. R.

MONSIEUR.—J'ai été beaucoup intéressé par votre commentaire sur le travail de Jackmann à propos de la mortalité des Clématites.

En réalité, toutes les causes qui sont mises en avant ne sont que secondaires, quand elles tout même pour une part dans la disparition des plantes. On a aussi invoqué la présence des anguillules sur les racines; or j'ai des plantes qui vivent bien depuis dix ans avec ces anguillules par milliers sur les racines.

La véritable cause de la mort soudaine des Clématites, qui périssent souvent en pleine floraison, me paraît d'origine bactérienne et siège dans un point souvent assez réduit de la tige, plus ou moins haut placé, le plus souvent près du pied, mais aussi parfois à mi-hauteur ou dans le tiers supérieur. A ce point, qui est facile à trouver au moment où l'on voit une plante flétrir, on découvre que l'intérieur du rambeau, quelquefois sur une hauteur de quelques millimètres seulement, est rempli d'une poussière noire provenant de la décomposition des vaisceaux et de la substance ligneuse ou herbacée qu'ils contiennent. Au dessus de ce point la plante est morte, au dessous elle est vivace et repart vigoureusement pour une nouvelle floraison.

Il arrive même quelquefois, lorsque le mal se produit au pied de la plante, que la partie restant au dessus du point attaqué porte quelques racines qui font vivre le haut de la plante, tandis que la

souche repart de son côté, alors on a deux plantes en supprimant le tronçon de tige qui la maladie a détruit.

Quels sont la cause et le traitement de ce mal mystérieux et irrémédiable jusqu'à présent? Personne ne m'a encore répondu d'une façon un peu satisfaisante.

Il semble que les variétés issues de l'hybridation y sont plus sujettes que les espèces typiques. Les *Viticella*, les *florida*, les *lanuginosa* mêmes, en tant qu'espèces types, y échappent à peu près, mais il n'en est plus de même dès que l'on se trouve en présence d'hybrides de ces diverses espèces, ou de variétés dans lesquelles l'hybridation a pu jouer un rôle.

Des moyens préconisés pour éviter ou guérir cette maladie aucun de m'a réussi. Je m'efforce d'obtenir des plantes qui n'y soient pas sujettes.

Les *Viticella*, sous ce rapport, sont privilégiées. Donc en améliorant les *Viticella* en cherchant à enrichir leur coloris et à agrandir leurs fleurs, mais sans hybridation avec des patens ou des *lanuginosa*, on arrive à de très bon résultats.

Les hybrides de *Clematis coccinea* et de *Megalanthes* sont aussi dans une certaine mesure bien plus épargnés, et si quelques tiges périssent ce n'est presque jamais complètement et il en reste assez de vivaces pour continuer le rôle ornemental de la plante.

J'ai déjà constitué pour moi tant une collection de belles variétés rustiques. Je vous en ai envoyé quelques unes. Je vous en enverrai d'autres aussitôt la fin de la guerre.

Malheureusement cette recherche est fort longue. Les graines de Clématites ne germaient que la deuxième année du semis—je parle des *Viticella*. Ce n'est donc qu'après la 4 ou 5 année d'attente qu'on peut voir les fleurs des plantes qu'on a travaillées en vue d'obtentions nouvelles—je parle des *C. Viticella*, *florida*, *patens*, *lanuginosa*. C'est la vie d'un homme qui passe tout entière à des recherches persistantes portant sur plusieurs générations de plantes. Mais c'est très passionnant.

Vous avez raison de blâmer le mode de greffage sur *C. Vitalba*. J'ai souvent remarqué chez les plantes reçues d'Angleterre le fâcheux système dont vous donnez l'image. Mais ce mode est à peu près abandonné, on greffe sur racines de *Viticella*, ce qui donne en somme une bouture qui n'emprunte à son support qu'une aide

passagère pour former elle-même les racines sur lesquelles elle vivra.

Si vous trouviez un micrographe disposé à étudier cette maladie, je pourrais l'année prochaine vous envoyer des tiges atteintes en assez grande quantité pour permettre des recherches suivies et complètes.

NOTES OF THE WEEK.

The Snowdrop Windflower (*Anemone sylvestris*).—This, as usual, is throwing up a few autumn flowers which are particularly welcome now, when the rock garden has none too much blossom. Both the single and double forms are in flower, and both are lovely. It thrives and blooms well in a warm soil and an exposed position.—N. L.

A large Puff Ball.—I have found in my orchard a Puff Ball measuring 2 feet 6 inches round. Is it known what causes them? There was a lot of smaller ones.—C. PHELIPS.

[Fungi are, as a rule, found in soil containing decaying matter or in the wood of dying or dead trees.—ED.]

Single Asters.—The single varieties of Asters are equally as showy as the stiffer doubles when in bloom, and not only are they more useful for cutting, but they are not so readily affected by wet. The heads are carried on stiff and wiry stems, and, associated with *Gypsophila paniculata*, they last for a considerable time in vases. There are now many fine shades of colour among them, and all over single Asters are worthy of more extended culture for the summer flower garden.—Kirk.

Campanula Mayi.—Everyone admires the pure white *Campanula isophylla alba*. This newer form makes a delightful companion to it, the long pendulous shoots being thickly studded with blossoms of a charming porcelain-blue shade. So free-flowering is it that a succession is kept up from one particular plant for some time. It is supposed to be of hybrid origin, with *C. isophylla* as one of its parents, but little seems to be known on that score. The foliage is hoary, and in this respect is very different from that of *C. isophylla*.

Fruit trees and moisture.—There is no doubt that the recent rains have been all against the success of the fruit crop during the present year, but we are apt to overlook the fact that the rain has been

in favour of the trees. In the majority of cases a look round shows that the buds for next year are strong and numerous. There is no doubt that this is due to the roots having been kept comfortably moist throughout the growing season, and if the crops this year have been disappointing there will be, it may be hoped, judging from present appearances, a better return next season.—W. MCG.

Destruction of Bananas.—From the *Jamaica Times* of August 19th we learn that a terrific hurricane has visited the island, with the result that the Banana plantations are ruined, while the Bread Fruits, Mangoes, and Cocoa Nut trees have suffered heavily. There will be no Bananas till 1917, while in some cases there will be but few until 1918, as the larger stems have all been broken down, the only ones left being those that were too short to bend over. It is somewhat strange that in past storms the Bananas were laid low, while this one has broken the plants off in the middle. In addition to the destruction of the various fruits mentioned above, great damage was done to property and shipping.

Floral novelties.—A well-known architect up Westchester way, according to the *Saturday Evening Post*, was standing before one of his newly-completed creations. Its mistress, plentifully sprinkled with diamonds at eleven in the morning, turned to him and said:—"It's grand! And I've just decided not to employ a landscape gardener. I know just what I want myself. Banked up right against the porch there I want a real thick border—now what is that name? You know; those bright-red flowers that look so dressy—yes; now I have it—Saliva!" The architect was staggered for a moment, but soon recovered and came back enthusiastically. "The very thing!" he agreed. "And right in front a nice row of spitunias!"

The Sage-leaved Rock Rose (*Cistus salvifolius*).—The dull, cool season has prolonged the flowering of this beautiful Rock Rose to a much later date than usual. The flowers are not so large as in some of the other kinds of *Cistus*, but they are, to my mind, as beautiful as any, the pure white flowers just flushed with yellow at the base of the petals. It makes a nice shrub for the bolder parts of the rock garden, and I have it growing very satisfactorily on the lower part of a big retaining wall. It grows fairly rapidly, but can be kept well within bounds by judicious cutting back after flowering. Cuttings taken off with a heel in the autumn and planted firmly in sandy soil will be well rooted by the following summer.—N. L.

Roses from cuttings.—Several references have lately been made to these. I find the weaker-growing varieties do not make much headway from cuttings on our heavy soil, but strong growers, like Caroline Testout, make good plants, flowering well. Dwarf varieties with which I have been successful are: Caroline Testout, Mme. A. Chatenay, Frau Karl Druschki, Mme. Ravary, Gruss an Teplitz, Killarney, President Carnot, Mme. E. Metz, Ulrich Brunner, and Duke of Edinburgh. Another Rose which is said to do well in some districts on its own roots is Zephirin Drouhiu. I am testing it in a short length hedge, the plants having been bought in quite small on their own roots three years ago. All have grown, but only about half the plants have thrown up young, vigorous shoots, without which they cannot long continue. A tall-growing Rose that has given much pleasure grown from cuttings is Conrad F. Meyer.—C. TURNER.

Questionable advice.—In a pamphlet entitled "Economy in the Garden," issued by the Royal Horticultural Society, various suggestions for economy in all parts of the garden are made. I was, however, surprised to read the advice contained in one paragraph, namely, "Sow Cabbages and other Brassicas where the plants are to grow and not in seed-beds. The seed will cost more, but the saving of labour will more than repay the cost." The advantages of this plan appear to me very doubtful, as a newly-cleared piece of ground may be planted with Cabbages, whereas, if the seed is only sown when the plot is available, it will be too late in the season to sow the seed. On the merits or demerits of the scheme the opinion of some of your readers with practical experience would doubtless prove interesting.—IN DOUBT.

Cactalia coccinea.—This annual is flowering freely now in our Sheffield garden, its bright orange-scarlet flowers making it very showy indeed. It is an easy thing to grow and comes up freely from seed. I sowed mine indoors in March and planted out at the usual time, and this method is better than sowing out-of-doors. My plants have reached a height of about 1 foot this year. Catalogues say that they should grow up to 18 inches or even more, but perhaps they would have done so in more congenial weather. Any way, this is a very bright little annual, and as the flowers are useful for cutting it will commend itself to many people. In warm districts it could be sown out-of-doors any time now, but in our exposed Sheffield garden we have not attempted autumn sowing of annuals for many years.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield.*

FRUIT.

THE MORELLO CHERRY.

In some gardens the Morello Cherry is most disappointing, the branches dying away in an apparently inexplicable manner. But even in these cases the grower need not despair, as some means might be found by which the trees may be got to succeed fairly well and successful crops be assured. I think a sluggish root-action is answerable for most of the failures. To this and hard winter pruning, or the two combined, may be fairly traced the downward course of many trees. With others it is the want of suitable food, the yellow cast of the foliage plainly denoting this, and which, if not arrested in its early stages, soon brings about the tree's downfall.

On heavy and cold soils too much care cannot be taken in the preparation of the site for the trees, especially in affording ample drainage—that is, if not present naturally. The site—a northerly aspect, and which is the best generally that can be devoted to the culture of the Morello—is often, on account of its position, in anything but a satisfactory state both as regards soil and drainage. In this garden this Cherry succeeds splendidly, but at one time it would not do so, the branches dying away wholesale. The remedy was found in affording free drainage and devoting a good portion of the border solely to the roots, without any disturbance of the surface for other crops. The roots by this treatment are kept quite up to the surface; consequently they derive the full benefit of the sun's rays. In preparing the site the border was raised above the ordinary ground-level, a tile drain also being laid direct from the base of each station into the drain running along the

walk. Over the bottom, before returning the soil, flat tiles were laid, these in their turn being covered with old brick rubbish. To the soil, as it was being returned, was added a fair amount of burnt refuse and wood-ashes. As regards pruning, the trees are gone over in the early summer, shortening back any shoots not required for laying in so as to form spurs. In the early autumn, after all the fruit is gathered, the trees are generally overhauled, further pruned if necessary, and the shoots nailed in. My opinion is that the shoots are not best nailed in until the period named. In the first place it would interfere with the fruit, and, further, the shoots are enabled to become better ripened if allowed more freedom throughout the summer. Black aphid, often such a pest, will not be troublesome if the trees are syringed with an insecticide during the winter, and also before the buds burst in the spring. Black aphid can be kept under if carefully watched, but once let it get hold, the difficulty commences, and in the end most likely the trees will entirely fail. T.

The Strawberry-Raspberry.—I would like to know if any reader has grown the "Strawberry-Raspberry." I find it very poor, a dry, tasteless fruit.—LADY ALLISON.

[The so-called Strawberry-Raspberry is *Rubus palmatus*, syn. *R. sorbifolius*. Its only value is as an ornamental plant, both when in flower and fruit. Its fruit can hardly be considered edible. We have heard of the fruit being converted into jam, but are not in a position to give definite information on this point.]

Plum-trees too large.—What is the best thing to do with fruit-trees that are getting almost too large for one's garden?—C. W. H.

[The only thing to do under the circumstances is either to destroy the trees, which we imagine you do not wish to do, or to lift every other one and transplant elsewhere. This would provide more space for the remainder. If this plan is not feasible you could, if you have an orchard, and there is space available, transfer the trees thither or use them to form an orchard if you have land at liberty for doing so, planting the trees 15 feet apart each way if they are bushes or pyramids and 21 feet if standards. The trees could, of course, be reduced in size by cutting the branches back somewhat, but this would be a very drastic remedy and one we should not advise being adopted unless the circumstances were very exceptional.]

Raspberries unhealthy.—I enclose some Raspberry leaves, and will be glad to have an opinion on them. The crop has been bad for two years, and the leaves unhealthy. The fruit dries before ripening. The young growth is strong and vigorous. The plants have been in the same place for years. The ground has been heavily manured.—LADY ALLISON.

[The Raspberry leaves are affected with the Raspberry leaf fungus (*Phragmidium Rubi-Idæi*, for which remedies will not be of any avail this season. You should, however, be careful to burn the old fruiting canes, as also the foliage on the young or next year's fruiting canes when it falls later on. Next year spray the young leaves, as soon as they are fully expanded, with liver of sulphur (sulphide of potassium), using 1 oz. of the chemical to 4 gallons of warm water. The spray is more efficient if 4 ozs. of soft soap are first dissolved in a gallon of boiling water, then add the sulphide, and afterwards dilute sufficiently to make 4 gallons. The drying of the fruit before it ripens is due to another cause altogether, but unless we could see specimens cannot say with cer-

tainty the particular kind of insect, as injury of this description is due to insect agency. If you have any trusses of flowers and fruit not in too dry a condition still present on the canes we should be glad to see them and advise you further.]

Currant, Red Cherry.—Those who grow Currants generally ignore that fine variety known as La Versailles or Red Cherry, for the distinction, if any, is trifling. And yet this is not only a very prolific variety, but it also produces by far the longest bunches and most richly-coloured fruits of them all. The variety has somewhat brittle wood if allowed to grow loose, as Red Currants commonly are. Some bushes I saw lately are on clean stems well above the soil, and although some eight years planted are still comparatively small, as they have their shoots shortened back just as the fruit is ripening to enable them to

TREES AND SHRUBS.

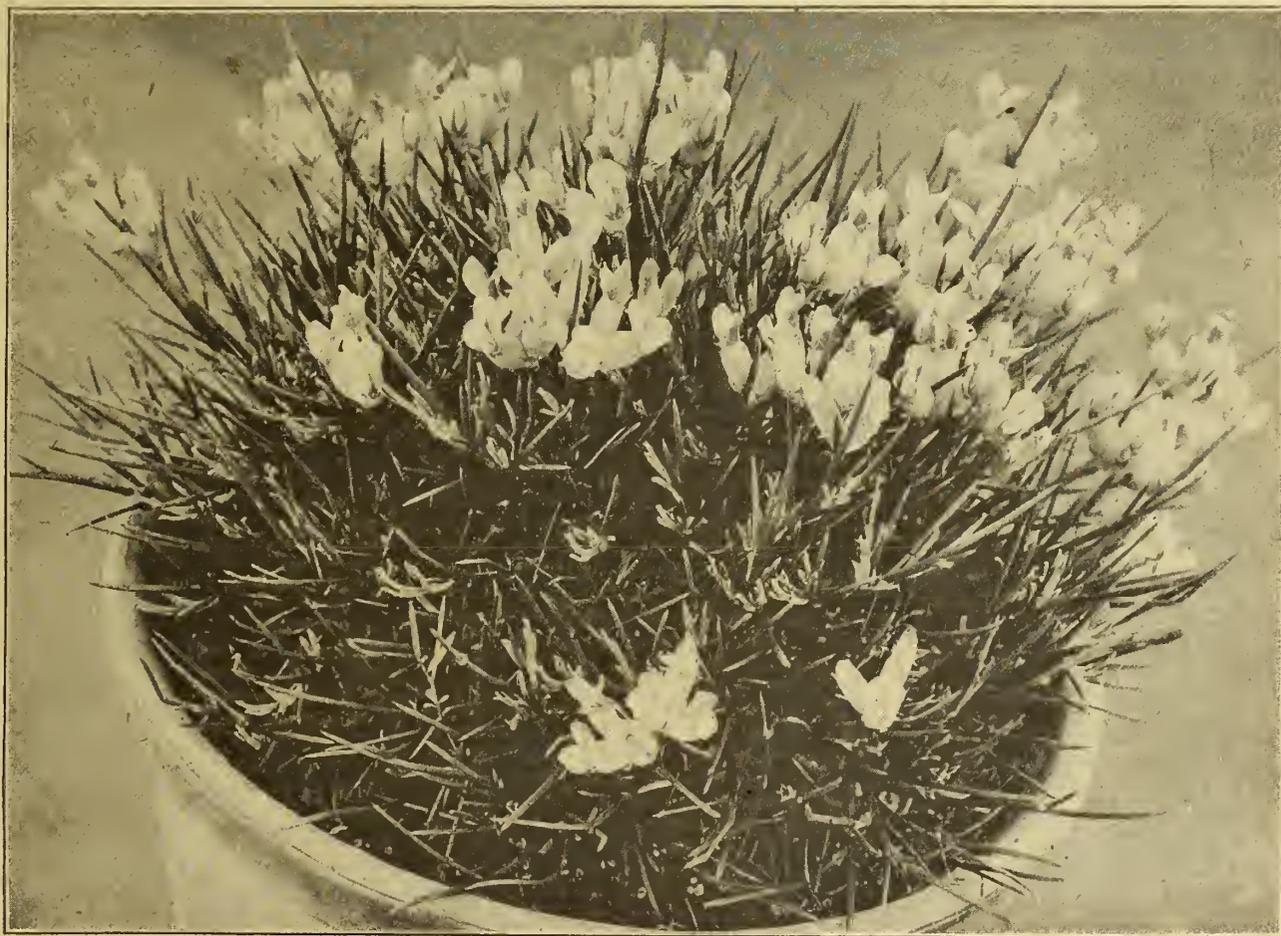
**THE HEDGEHOG BROOM
(ERINACEA PUNGENS).**

Thus, a native of Spain, whence it was introduced in 1759, is one of the most precious of miniature-growing rock shrubs, almost unique in habit, and quite so in the inimitable beauty of its Pea-shaped flowers, which are bluer than those of any other hardy leguminous shrub. Some doubt has ever existed as to its complete hardiness, and by reason of its rarity it is worthy of a place in the rock garden where natural protection is afforded. In southern England and at Cambridge, among other places, the plant is apparently hardy enough. The plant forms a dense, spiny, almost leafless bush—the few leaves that appear are small

or more across, the white petals being relieved by a central mass of golden stamens. *C. laurifolius* must be propagated by means of seeds, which ripen freely. These may be sown in sandy soil in spring, and as soon as the seedlings are large enough to handle they should be pricked off into boxes, eventually potting each plant singly, and keeping them in pots until they can be placed in permanent quarters, for it is almost impossible to transplant successfully plants which have been growing in the open ground for a year or two. When planting, there is rarely any need to introduce better soil or manure if the ground is poor, for the plant grows well in very inferior material.

MELIOSMA.

The nearest relations of the *Meliosma* among garden plants are the Sumachs



Erinacea pungens. Nymans.

be easily netted over, and in the winter are hard pruned, so that the heads are clusters of fruit-buds. The variety is a capital one for growing in trained or cordon fashion against walls to give late crops. Currants always set bloom-buds freely in such case, and when well trained and hard spurred carry heavy crops that are very easily netted up.—T.

Pyramid and bush fruit-trees.—Where from any cause these have to be kept restricted, the summer pruning should now be performed. With the exception of the leaders—i.e., the extension shoots on the branches and the main stems—all young growths should be stopped back to four buds on Apples, Pears, and sweet Cherries. Plums may be left a trifle longer. The Morello and Kentish Cherries may have the young shoots cut back to about half their length if the allotted space allowed each tree is filled. The leaders alluded to above should be either merely tipped or shortened back one-third, according to the exigencies of each individual case.—A. W.

and quite silvery—in which are set the pretty flower clusters. It flowers in May. In the rock garden a sunny spot should be selected and perfect drainage given. It is not very particular as to soil, very sandy loam or peat and loam suiting it quite well. It can be propagated by cuttings or layers, and occasionally by seed.

CISTUS LAURIFOLIUS.

THIS is the hardiest and the tallest-growing of the various *Cistus*s, and is excellent for a sunny position or for planting on a dry bank. *C. laurifolius* is a native of south-west Europe, and under normal conditions it grows from 5 feet to 6 feet in height. Its evergreen leaves are dark and ample, thus serving as an excellent groundwork for the large white blossoms which appear freely over a period of six weeks, from the middle or end of May. The fully-expanded flowers are each 3 inches

(*Rhus*). Three of them are considered to be hardy, namely, *M. cuneifolia*, *M. Oldhami*, and *M. Veitchiorum*, all Chinese.

M. CUNEIFOLIA was introduced by Messrs. J. Veitch and Sons, and flowered for the first time in their nursery at Coombe Wood in July, 1909. In a wild state it forms a large tree, but in this country so far it is only a well-branched shrub which flowers freely every summer. The leaves are not unlike those of the Japanese Loquat, having regularly pinnate nerves, marginal teeth, and a dark green glossy surface; but they are smaller, the largest being about 8 inches long and 4 inches wide. The flowers are white, and in effect they are like those of some of the Sumachs.

M. VEITCHIORUM has noble pinnate leaves each 2 feet or more long, with five pairs of leaflets and a terminal odd one, the largest being 6 inches long and 3 inches wide; the rachis and principal nerves dark

red, the other parts a rich green. It forms a fairly large tree, not unlike a Walnut, and the panicles of small white flowers are said to be 18 inches long and very decorative. The young shoots are stout with smooth bark, and the leaves when they first develop are dark crimson. Wilson found the trees in flower in June at an elevation of 5,000 feet to 7,500 feet in South Washan, Western China.

M. OLDHAM is another pinnate-leaved species, but it is more like an Ash than a Walnut, the leaflets being about 3 inches long with teeth on the margins, and the rachis dull red with a large boss, by which they are attached to the smooth light grey bark of the very stout young shoots; when young the leaves are of a rich chocolate-brown colour. The tree is said to be about 50 feet high, and the white flowers, borne in large terminal panicles, are said to be fragrant. All three species are represented by healthy examples in the Kew collection.—*The Field*.

THE BARBER IN THE GARDEN.

THE pictorial advertisements of nurserymen inviting orders for trees and shrubs distorted out of all recognition suggest that there is a danger of this decadent form of gardening gaining some hold on the public taste. This would be deplorable at a time when beautiful flowering shrubs from China and Japan are coming to this country and are found to be hardy in our climate. With so large a choice of trees, shrubs, and plants of rare beauty and grace ready to our hands there never was a time when there was less reason to revert to the efforts of the barber for the decoration of our garden.

There seems to be some confused idea in the minds of those who distort trees that this gives an old-world charm to a garden. This idea probably comes from the frequent coincidence of topiary work with old houses. Thus a sentimental affection for a bad thing has been created in the minds of many people because of its association with a good thing. So hardened in this false sentiment are the admirers of topiary work that to remove shaved trees from the neighbourhood of a picturesque building would almost certainly leave them lamenting that the old-world charm had gone, whilst to the eye of an artist it would have demonstrated that the old-world charm, unobstructed by misshapen objects of plant life, stood fully revealed.

A defender of the barber's work has rashly asserted that "the attempt to copy and reproduce Nature artificially seemed to result only in vulgar desecration." It would be difficult to imagine a defence more easy to dispose of than this. The barber's work is the most flagrant example of vulgar desecration that can be cited. For instance, a bird is a beautiful form of creation. The topiarian attempts to copy and reproduce its form artificially in a shrub, with the result that he ruins the shape of a shrub and burlesques the beauty of a bird.

To those who realise that no man's life is long enough to do more than stand on the threshold of a vast store of tree and plant life infinite in beauty and variety, and to touch but the fringe, this shaving of trees and shrubs seems but a pitiful and degrading thing.

Perhaps there are few things we are so apt to pride ourselves on as our good taste.

It is really no matter for pride at all. Good taste is a more likely comrade of humility, and goes with a childlike reverence for the work of the Creator, as shown to us in the clouds, the mountains, the waves, the forests, the flowers, and in the flight of birds.

PLANTS AND FLOWERS.

INDOOR PLANTS.

ZONAL PELARGONIUMS FOR WINTER.

THE Zonal Pelargonium is one of our most beautiful winter-flowering plants, but it is seldom we see it grown to perfection. We attribute this failure to (1) lack of proper pinching and training of plants when young; (2) an insufficiency of sun to ripen the growth during summer; and (3) too much moisture about the house during winter, causing the flowers and foliage to damp off. The

PROPAGATION of the Pelargonium is simple. In the early spring select young ripened tips, cut off the base of the cutting below the joint, trim off one or two of the bottom leaves, and insert the cuttings in 5-inch pots filled with sandy soil, three in a pot, and place them in a slight bottom-heat until they root. When well rooted turn them out of their pots and re-pot them singly into small pots, using a compost of light loam, leaf-soil, and sand. After potting, place them on a shelf near the glass, where they will soon start into growth, provided too much water is not given before they root, as it tends to make the soil sour. In a few weeks they will be ready for another shift, this time into 3-inch pots, using the same compost. Place them in a dry place, water carefully, and pinch out the tops so as to make them of good shape. The last shift should be into 6-inch and 7-inch pots, using a compost of good fibrous loam two-thirds, the rest being manure, bone-meal, or rotten cow-manure, well-decayed leaf-soil, and some sharp clean sand. Another point of much importance must not be lost sight of, and that is firm potting. If the soil is left loose the result will be a batch of leggy plants denuded of foliage at the base.

About the middle of June remove the plants to a cold-frame; some recommend placing them outside on a bed of ashes, but frame treatment will be found more satisfactory, as the lights can be put on to ward off heavy rains which sometimes occur. Zonal Pelargoniums will stand extreme drought better than frequent soakings. During this period occurs the most important phase in their history, and that is the first item which we have mentioned as the cause of failure—viz., lack of proper pinching and training of the plants when young. This must never be lost sight of. Pinch out the points of the shoots when they have made about two leaves, and keep at it. If one side does not attain the same height as the other, leave it unpinched, as nothing looks worse than an unshapely plant. In addition to the points of the shoots being pinched, the flower-buds must also be removed until the end of August, when all pinching must cease. The

WATERING must be carefully looked after. The plants may require water two and sometimes three times a day during hot weather, but it is better to err on the dry side. Every other day supply the plants with weak liquid-manure, or if this is not to be had then some artificial manure. Do not give too rich food or the growth will be very succulent, which destroys the chance of a good show of flowers in consequence of the growth being insufficiently ripened. While the plants are in the frames give plenty of air, and let them have the full force of the sun, gradually as the plants increase in size and the roots commence to ramify.

The best house for the growth of Pelargoniums is a light, airy one, facing south, if possible, so as to get the full advantage

of the sun at all times. Remove the plants inside about the middle or end of September, according to the weather. Give plenty of air, unless cold, and, above all, refrain from pouring water about the house (unless very hot), as it tends, as before stated, to cause the damping off of foliage and flowers at a time when least expected. In dull, damp weather a little fire-heat is essential, in order to keep the atmosphere in a normal condition. If it be desired to preserve the blooms for cutting, etc., a tiny drop of floral gum dropped into the eye of each flower will keep the petals from falling.

So much for plants from cuttings, but what to do with the old plants is a point which many cannot understand. Some do not believe in cutting the plants down to the base. They sometimes cut off a little from the tops, which leaves the old plants, if they do live, skeletons that have not a leaf or bud within 12 inches or 18 inches from the pot. Prune down those long-stemmed plants, care being taken to prune to an eye pointing outwards, which secures the plants from being too thick in the middle. Put the plant into a warm place, and if it gets over the double misfortune—i.e., the long stems and bleeding—it will do so sooner by being kept in a warm place. Give it no water until the wound is healed; after that give it a plentiful supply, and if a little water is sprinkled over the plant occasionally it will not fail to make a good plant if the roots are healthy. When the plants have started into growth shake the soil from among the roots, trim them, and re-pot in the compost previously advised. The cultural requirements are identical with those given the first year's plants.

NOTES AND REPLIES.

The Chili Jasmine (*Mandevilla suaveolens*).—Kindly advise as to how best to propagate *Mandevilla suaveolens*, of which I have three plants in full blossom covering a south-south-east wall. We have a mild climate, but would this stand any colder, frosty regions?—RIDUNA, Alderney.

[This is a well-known greenhouse climber that flowers during the latter half of the summer and early autumn. The blossoms are a good deal like those of a very large pure white *Convolvulus* and are very fragrant. It is a native of Buenos Ayres, and in the particularly favoured districts of England, such as in the Isle of Wight and in South Devon and Cornwall, it can be successfully grown as a wall plant out-of-doors. It climbs by twining, not by means of tendrils. The *Mandevilla* is particularly liable to red-spider, which quickly causes the leaves to drop. It succeeds much better planted out in a prepared border in the greenhouse than in pots. It needs a light, airy structure to flower it well. It can be increased from cuttings of the short, stubby side shoots placed in pots filled with sandy soil and plunged in a gentle bottom heat until rooted. See to it that the young plants do not get pot-bound before shifting them, as if this happens the growth is checked and more liable to insect pests.]

Begonia Corbeille de Feu.—This *Begonia* is not mentioned in the answer to "A. M. B." (page 468), who needs varieties with small flowers in abundance. This quality is certainly very pronounced in the variety *Corbeille de Feu*, and as "A. M. B." stipulates for varieties from about 1 foot high, the height attained by this may not militate against its use. It belongs to the fibrous-rooted section, having been raised by M. Lemoine, of Nancy, between *B. semperflorens* and *B. fuchsoides*. It forms a freely-branched specimen, from 18 inches to 1 yard in height, and will flower

throughout the summer; indeed, if grown in pots and employed for greenhouse decoration, it will continue to bloom till autumn is well advanced. The flowers are of a bright-red colour. Of late years this variety has been a great deal used in the flower garden. It cannot be raised from seeds, but cuttings strike root readily, so that it can be obtained at a comparatively cheap rate.—K. R. W.

HIBBERTIAS.

ACCORDING to the "Dictionary of Gardening" there are about seventy species of Hibbertia known to botanists, practically all of which are natives of Australia. There are, however, very few in cultivation in this country; in fact, only three species are generally met with.

The most desirable species and the ones referred to are:—

HIBBERTIA DENTATA, a free-growing

during the summer. They give off a most unpleasant smell. Both will grow and flower profusely planted out in a good-sized greenhouse or conservatory. A third species is, however, quite a different plant. This is

HIBBERTIA READI, sometimes met with as *H. Reidi*. It forms a compact, twiggy bush, clothed with small leaves, while the yellow flowers, borne during the summer, are each about the size of a shilling. Good flowering examples of this species may be grown in pots 5 inches in diameter.

All of the Hibbertias can be readily struck from cuttings of the half-ripened shoots put into sandy soil in a propagating-case where there is a gentle bottom-heat. They will all thrive in ordinary potting compost.

Perpetual-flowering Carnations.—The flower-buds on the earliest plants grown for flowering in winter are now getting into a

CHRYSANTHEMUMS.

OVER-FEEDING CHRYSANTHEMUMS.

A FREQUENT cause of failure in Chrysanthemum culture is over-feeding. The desire to obtain plants of gigantic proportions in the matter of leaves and stems is so widespread that in very many cases feeding is overdone. Frequently all will go well with the plants up to the time of their final potting, then a too free use of highly concentrated manures in the soil causes the check. The roots refuse to run freely in the good things prepared for them, and the successful beginning is thereby spoiled. But more often the breakdown occurs in regard to over-fed plants at the time the blossoms are opening, pithy, soft growth being unable to build up flowers of good substance. There is very little produce of the garden, be it flower, fruit, or vegetable, brought to perfection when the conditions are such that a sappy form of growth is secured. Who expects Grapes to perfect well when the leaves remind one of Rhubarb, Tomatoes to finish a good crop with stems as thick as an ordinary broom-handle, or Roses to bloom well on stems as large as one's finger? And so with the Chrysanthemum. Give the plants a long season of growth, a compost that will allow of free rooting, ample pot-room, and steady feeding when the soil has become exhausted, then a good flowering season is sure to follow. Of course, attention to moisture at the roots and plenty of space in the open quarters must never be neglected.

Anything that is done in the way of feeding should be to aid the formation of surface roots. These tiny feelers keep the plants in perfect health if kept going up to the last. Some growers have great faith in top-dressing, and it is no doubt beneficial. Only one must afterwards be particularly careful in the matter of watering, or the soil at the bottom of the pot may become dry, whilst that newly placed on the surface is quite moist. Loam of a fibrous nature and bone-meal make a perfect top-dressing. We do not like the mode sometimes seen, of putting on the surface a thickness of animal manure, such as that of horse or cow; nor is such strong burning material as fowl-manure safe, unless mixed in a small proportion with the loam. Soot, again, if used too freely, would burn what roots there are on the surface of the soil, instead of assisting their increase. Fertilisers have great effect in showery weather; it is then surface roots run most freely, and again after the plants are placed under glass. Meanwhile, when the weather is brighter, and the calls for root moisture are great, we may use manures in a liquid form. These are various and well known. The rule which cannot be too often mentioned regarding their use is that they be applied very weak and often rather than in strong doses occasionally. It is important, in feeding Chrysanthemums, that we should note those of more weakly growth and feed them less.

Although these notes refer principally to the culture of the Chrysanthemum for large blooms, good cultivation is desirable all the same for whatever purpose the plants are intended. They all need what is known as feeding to maintain a healthy vigour just now when the abundant leafage and swelling flower-buds are causing such a strain on the sap-giving powers of the roots. The value of careful feeding will be seen in the blooms.



Flowering shoot of Hibbertia volubilis. From a photograph at Nymans.

climber of a woody nature. The slender, thong-like shoots are of a twining character and quickly mount upwards by means of any support available. They, as well as the young leaves, are bright red in colour. When mature the foliage becomes of a bronzy-olive tint, which serves admirably as a setting to the bright yellow flowers. These, which are about a couple of inches across, are borne during the first three months of the year, when greenhouse climbers in flower are by no means numerous. While glass protection is necessary in most parts of the country, it will succeed as a wall plant in the extreme south-west, where so many otherwise tender subjects thrive. A second species, herewith illustrated, is

HIBBERTIA VOLUBILIS, which is as vigorous a climber as the preceding, but of a stouter nature. The leaves are narrower than those of *H. dentata*, and green. The flowers of *H. volubilis*, too, are larger than those of the other, and borne, as a rule,

forward condition, and the plants must be housed. If allowed to remain outside after they commence to show colour, the blooms are never so fine as when developed under glass. The inside of the house is thoroughly washed before introducing the plants. The plants are arranged thinly on the stages, and the house fumigated at the first opportunity to get rid of any fly. Tying and disbudding must be attended to, this latter operation being essential if the finest blooms are desired. If after housing, any hot weather is experienced, the blinds will be let down for an hour or two in the day and the plants lightly sprayed late in the afternoon. This will have a similar effect to the night dews to which the plants are accustomed when out-of-doors.

Schizanthus.—Plants intended for flowering early in spring have been potted into 4-inch pots and stood in an unheated frame close to the glass. The pots should be quite clean and well drained, and for potting use a light, rich soil with plenty of well-decayed leaf-soil incorporated with it. The plants should be kept in a cool frame throughout the winter, the *Schizanthus* being very impatient of heat.

VEGETABLES.

TOMATOES.

WHERE there is yet a good deal of unripe fruit on indoor plants the foliage may be further reduced to let in sunlight and air, while the plants should be prevented from extending further by pinching the point-growth back to the last truss of fruit, *i.e.*, when the house is shortly required for other purposes. To further expedite matters the fruits, as soon as they commence to colour, if gathered, will allow of the remainder ripening more quickly. Tomatoes finish colouring in a short time if laid out on shelves or stages in full sun. Plants now coming into full bearing should have all side growths persistently removed and the leaders kept tied to the stakes or trellis, as the case may be. Plants intended for winter and early spring fruiting should now be shifted into 12-inch or 14-inch pots, leaving ample space when doing so for top-dressings to be applied later on. Fruiting plants now in pots require ample supplies of water fortified with stimulants, frequently renewing the surface mulch, or until the plants show signs of exhaustion, when they should be dispensed with. The weather of late has not been altogether favourable for outdoor Tomatoes, especially when the plants have not the advantage of the shelter of fruit-walls or low supporting walls of green-houses, etc. In any case the fruit must now be fully exposed to the sun, to which end the foliage must be considerably reduced, the best way of accomplishing this being to cut half of each leaf away. As it is useless to allow further trusses of flowers to develop and set, the plants should be kept stopped. G. P. K.

NOTES AND REPLIES.

Growing vegetables under glass near smoky town.—Will you kindly give me some advice about growing vegetables under glass near a smoky town? I have good glass-houses (modern), and should like to grow Potatoes, Peas, Lettuces, and French Beans, if you could advise me whether it is worth while, and, if so, how to proceed. I think the heat of house is important. We have very little sun in winter, though the houses get all there is.—E. G. BRIGHE.

[With such climatic conditions as those you have to contend with we do not feel justified in advising you to attempt the cultivation of the vegetables you mention under glass. They can, of course, be grown in glasshouses, and successfully, too, but a clearer atmosphere than yours and all the sunshine obtainable are very essential. These conditions, combined with the necessary knowledge in regard to management, can alone command success. Fire-heat, of which, except in the case of French Beans, but little indeed is required, would not, we should point out, prove of any avail in providing compensation for any deficiency of light and solar influences. If, after perusing the above, you still feel inclined to venture the growing of vegetables in your houses, we advise you to confine your attention to Potatoes and Lettuces, for which you will require beds of soil some 18 inches deep in the first case and 12 inches in the second on either side of the footpath if the houses are span-roofed, or one side only if they are lean-to. If you do so decide, please write us again, when we will give you further instructions.]

Celery ridges may be usefully employed for many catch crops. It is a common practice to utilise the ridges for Lettuces and Radishes, but other quickly maturing crops may also find room on them. Early Cauliflowers and Spinach may be mentioned, and at present a very fine crop of White Stone Turnip is

following on the same ridge upon which the first Lettuces were grown. A dwarf French Bean, such as Canadian Wonder may be sown upon the ridges of the trenches devoted to late Celery, and with the depth of soil an excellent crop may be expected.—KIRK.

Broad Beans.—The tips have been pinched out of the final sowing of Broad Beans. Occasionally, if a line from which the crop has been picked be cut back, well watered, and top-dressed, a second growth will follow, which may give a welcome basketful or two at the close of the season where Broad Beans are in request. Even should the crop not ripen, the labour is, in the case of failure, trifling.

Tomatoes.—Reduce the foliage on Tomato plants in the open air, and give a dressing of artificial manure to hasten the development of the fruits before cold weather sets in. These plants are easily injured by cold, wet weather, and protection should be given if possible. If planted against a wall or fence, a few old lights can easily be placed over them, these also assisting the ripening of the fruits.

GARDEN FOOD.

SOME VEGETABLE MARROW RECIPES.

THE Vegetable Marrow is nice when plain boiled and served with butter, salt, and pepper, or with a good white sauce poured over, but the Marrow is capable of being made the *piece de resistance* of the mid-day meal, especially during the summer, when food should be simple.

VEGETABLE MARROW EN CASSEROLE is nice for supper, as it can be prepared in the morning, and the casserole will cook it without any trouble during the day. Take a medium-sized Marrow, peel it and cut a piece off the top. Set this last carefully aside until the Marrow is stuffed. Scoop out the seeds, but leave the outside part entire. Take a cupful of cold boiled macaroni or Rice, the same quantity of fine breadcrumbs, a tablespoonful of chopped Onion, a teaspoonful of chopped Sweet Herbs, and sufficient white sauce to make the whole moist. Add a little cayenne pepper and salt to taste, and mix thoroughly. Fill the Marrow with the mixture and replace the top, fastening it in place with two small skewers. Butter the inside of a casserole and lay the Marrow in it, pour over a cupful of nice vegetable stock, add a small piece of Lemon, a faggot of Sweet Herbs, a small Onion, and salt and pepper to taste. Stand the casserole in a moderately warm oven or on top of the stove, and cook gently for three hours. Take up the Marrow, keep hot, and thicken the sauce in which it was cooked with a dessertspoonful of flour rolled in butter. Cook for five minutes, pour over the Marrow and serve at once.

MARROW PIE is made with very small Marrows. Take a deep pie-dish and butter thickly. Spread half an inch of breadcrumbs over the bottom, and sprinkle with a tablespoonful of white sauce. Cut the Marrow into cubes and lay on top of the crumbs, then a sprinkling of chopped Onion and a layer of sliced Tomato. Continue the layers of Marrow, crumbs, Onion, and Tomato until the pie-dish is full. The last layer should be of crumbs. Take a small cupful of good vegetable stock, sufficiently salted, and pour down the side of the dish. Sprinkle a little dissolved butter on the top, and bake in a moderate oven for three-quarters of an hour. Cover the dish for the first fifteen minutes with a plate, then remove the plate and let the top brown.

MARROW FRIED.—Another useful recipe consists of slices of Marrow dipped in flour, flavoured with salt and pepper, and then fried a rich brown in deep fat. Place the slices on croûtes of fried bread, and fill the centres with the following mixture. Take a cupful of cold boiled macaroni, and chop finely. Put into a pan with a tablespoonful of Tomato sauce, and the same of thick cream; salt and pepper to taste. Heat the mixture, and, after filling the centre of the Marrow, cover the whole with grated Parmesan cheese. Put the whole in the oven or under a gas-griller to brown the tops slightly. Sauté some halves

of Tomatoes, place one on top of each slice of Marrow, sprinkle a tiny pinch of chopped Parsley in the centre, and serve at once. A simple variety of this dish is to fry the Marrow slices and Tomato halves, and lay the latter on top of the Marrow, and send to table very hot. This makes a nice breakfast dish. H. T. C.

OLIVE OIL V. COD LIVER OIL.

THE fat that is usually added to malt extracts is cod liver oil, which also possesses real food value. The truth is that cod liver oil is, strictly speaking, a food and not a medicine, and its food value is very much the same as that of any other oil. But there are distinct disadvantages against cod liver oil, and very few patients find it palatable or pleasant to take. Cod liver oil often causes nausea or vomiting, and may even cause diarrhoea. A leading medical authority writes that it "must not be given if detrimental to the appetite." Of course, it is possible in a large degree to disguise the fishy smell and vile taste of an oil which is prepared from the livers of the cod fish. Why not use olive oil, an oil which scarcely possesses any odour and that not unpleasant, and a taste that is decidedly agreeable to the majority of people? It is a bland oil and a food of the highest nutritional value, being readily digested and assimilated by the majority of patients. There seems to be no doubt but that olive oil combined with extract of malt makes in every way as wholesome, nourishing, and valuable a preparation as the old-fashioned combination of cod liver oil and malt, and has the additional advantage of palatability.

THE DIGESTIVE PROPERTIES.—The combination of olive oil with extract of malt does not destroy the diastasic ferments present in the latter. Therefore the preparation is equally valuable as an aid to digestion of starchy food. This is a matter of the greatest importance in dealing with the diet of invalids, and especially those that require the administration of not only the malt, but also the oil.—DR. OLSEN in *Good Health*.

NOTES AND REPLIES.

Salads.—I want to make a speciality of salads, and am hoping to hear of some little book which will tell me of the proper ingredients, and of the herbs, etc., which should be grown. Can you help me?—H. W. MAJENDIE.

[No doubt a book could be written about salads, as of many other things; but it is quite needless. Good cooks anywhere require but a good Lettuce and Olive oil. Very often they put in no other herb, but if another is used it is a little Chervil or chopped Chives. Most gardens have these things now. In the old days, when Lettuce was not much or well grown, people sought many other things, but they are now useless in view of good garden Lettuce. The *salade de legumes* much used in France is quite another thing—is, in fact, a dish of mixed cold vegetables.—ED.]

A substitute for Spinach.—Boiled Radish leaves make a very good substitute for Spinach. The leaves should be carefully washed and be boiled until tender in a good quantity of salted water. Pour into a colander and press out all the water with a saucer. Chop the leaves finely and return to a clean saucepan with a small piece of butter and serve piled on squares of buttered toast. Quite a quantity of Radish leaves can be cut from even a small bed. The roots are delicious boiled in salted water and served up either with plain dissolved butter poured over them or else with a little white sauce, after the method employed for young Turnips. The roots must be young and tender or the flavour will be coarse and unpleasant.—H. T. C.

OUTDOOR PLANTS.

GENTIANA PRZEWALSKII.

THE accompanying illustration shows well one of the most beautiful of the summer-flowering Gentians, the more valuable because preceding *G. semptemfida* and some others that are with it in time of flowering. A native of China and a vigorous plant withal, it produces a rosette of long, flat, strap-shaped leaves, very suggestive of the Himalayan *G. decumbens*, from which issue numerous decumbent stems bearing at their extremities clusters of large sky-blue flowers which render the species highly ornamental in its day. The habit of the plant and its free-flowering are so well shown in the figure that further remarks thereon would be superfluous. As among the most desirable, however, the attention of rock gardeners should be directed to it in the hope that by raising it freely from seeds effects of a more sumptuous nature, as opposed to the usual

mains in force. This temporary stoppage is rather a blow to a flourishing and steadily expanding business, but the department concerned (the Board of Trade) has personally assured us that it really is only for the period of the war, and made absolutely necessary by the shortage of shipping; and we sincerely trust that by this time next year matters may be entirely different, the shipping commandeered by the Government released, and the prohibition removed, when business will be resumed on its old footing, and we shall, of course, continue to post each catalogue directly it is printed, exactly as in the past.—R. SILBERRAD & SON.

PÆONY-FLOWERED, DECORATIVE, AND COLLARETTE DAHLIAS.

THE Dahlia, apart from its value for exhibition, has made wonderful strides in popularity during the last few years. Formerly the big, globular show and fancy

embracing the three types of Dahlia just enumerated. One of Mr. Jarrett's objects is to create a love for this flower by asking less fortunate growers in the more congested areas of the Metropolis to visit his garden in the flowering season. The

COLLARETTES were first inspected. Here was to be seen a fine lot of promising seedlings. Good things that Mr. Jarrett has raised are Rainbow, aptly described because of its varied colours, and a good type of the collarette. Biscuit is a beautiful biscuit-coloured sort, and a self. A promising seedling is Alfred Dennis, the colour deep chestnut-maroon, with a good collar. Of the popular up-to-date sorts, the more promising were Holyrood (ruby, tipped gold, with a yellow collar), Carron (bright scarlet, tipped gold, with a yellow collar), Eden (a pure white self), Abbe Hugonnard (purple, margined white, collar white), Henri Farman (yellow, blotched red, with a cream collar), Tuskar (rosy-crimson, tipped white), Grand Papa



Gentiana Przewalskii at Hillbrook Place.

isolated examples, might result. Fresh seeds usually vegetate freely, the seedlings if well grown flowering the third year. How long subsequently the species will continue to give a good account of itself is a question of cultivation. In a good depth of loam, leaf soil, sand, and a little manure the plant does well, remembering always that root disturbance is not appreciated and that seedling-raising constitutes by far the best method of increase.

E. H. JENKINS.

Bulbs from Holland.—The total prohibition placed by the Government on the importation of all bulbs, plants, etc., "for the period of the war" renders it utterly impossible for the usual supplies to be sent across from Holland and elsewhere this season, consequently the bulb catalogue of G. C. Van Tubergen (Haarlem, Holland) is not being printed or distributed. We are extremely sorry, but must, of course, abide loyally by the Government regulation so long as it re-

kinds predominated. Their popularity waned somewhat, however, with the advent of the Cactus Dahlia, which, because of the attractive manner in which the flowers were set up at the leading shows, induced flower-lovers to take up their culture. So many of the Cactus Dahlias, at least the earlier introductions, were of little value in the garden, as the flowers of most varieties were hidden away under the foliage. It is only recently that Cactus Dahlias better suited for garden embellishment have come into prominence, and a welcome will be given to the newer introductions, in which the flowers stand up well above the foliage.

Quite recently I visited the garden of Mr. J. A. Jarrett at Anerley, near to the Crystal Palace, who has devoted himself almost exclusively to the cultivation of the collarette, decorative, and Pæony-flowered types of the Dahlia. Here are to be seen at the present time not far short of a thousand plants blooming freely, and

Charmet (bright crimson, cream collar), Star of Montplaisir (old rose, collar pale rose, edged white), Countess Ivy Hardegg (maroon, tipped white, collar white), Gold Tip (scarlet-crimson, tipped gold, collar golden-yellow), and Scarlet Queen (scarlet with a beautiful golden collar). The better

PÆONY-FLOWERED KINDS were Geisha (scarlet and yellow), Aphrodite (a chaste white self), Eleanor (rose-pink), Mrs. J. C. Vaughan (a yellow self), Sheila (a lovely pale pink), John Green (a yellow and scarlet flower), Balak (rosy-crimson), Holman Hunt (dark crimson), Lord Milner (yellow, suffused crimson), Amber Queen (a lovely amber-coloured flower), Dormouse (a remarkable deep crimson sort), and Bayard (a bronzy-red flower). The

DECORATIVE SECTION represents blooms of diverse form and colour, the flowers varying from those of medium size to those of enormous proportions. Some of

these are very striking and the following were noteworthy. Reginald Cory (a variety with a dwarf, bushy habit, and blossoms of brilliant crimson, tipped white, very free flowering), Delice (rose-pink), Kaiserin A. Victoria (a white self), Mrs. J. Lang (bright red self), Papa Charmet (deep crimson self), Queen Mary (rose-pink), St. George (salmon-scarlet, tipped white), Amphion (pink, suffused heliotrope), Princess Juliana (creamy-white), Leviathan (terra-cotta, shaded bronzy-purple), Madonna (a pure white self, very large), Jeanne Charmet (white, edged pink), Warneford (a white self), and Alice Roosevelt (a beautiful rose-pink sort).

The foregoing are a few of the more attractive sorts out of a very large collection, and may be taken to represent the better sorts of the respective types. Mr. Jarrett thinks well of the new Star Dahlias, and of these he has Crawley Star (pink), White Star (white), and Yellow Star (one of the newest and best of this new type). I must confess to a distinct prejudice against the Dahlia in the past, but the display made by this enthusiastic amateur convinced me that the more modern introductions possessed a beauty and charm hitherto unrecognised by me. The dwarf, single-flowered sorts, used as an edging to a long, serpentine path, with plants of the Peony-flowered and Decorative sorts in borders rising gently on either side, created a picture which I shall not soon forget.

D. B. C.

DAFFODILS IN THE TURF.

For the spring garden the varied forms of Narcissi are invaluable, not alone for planting in the borders, but for naturalising in the Grass, the latter method, now so largely followed, not only creating a most pleasing effect, but also being, in many cases, better suited to the requirements of some varieties than culture in tilled ground. As an instance of this, two kinds may be specially cited—namely, the Tenby Daffodil (*Narcissus obvallaris*) and *N. pallidus præcox*, both of which succeed better in the Grass than in worked ground. Several of the smaller and less vigorous varieties are well adapted for the rock garden, such as the tiny *N. minimus*, the varied forms of the Hoop-petticoat Daffodil (*N. Corbularia*), golden, sulphur, and white, the variety of *N. triandrus* known as Angel's Tears, and *N. t. pulchellus*, though the last, being of stronger constitution, succeeds equally well in the border, as well as the quaintly-formed *N. cyclamineus*, which delights in a moist root-run. Many of the golden and bicolor varieties of the trumpet Daffodil are suited for naturalising in the Grass, such as the deep yellow Golden Spur, *N. maximus*, *N. Emperor*, and Queen of Spain, an attractive variety, bearing clear yellow flowers of peculiarly distinct form, the trumpets lacking the flanged rim possessed by all other varieties of this section. Of bicolors, *N. Horsfieldi*, *N. Empress*, and *N. Grandee* form a fine trio, and when planted in quantity have a striking effect. They are very similar in size and colour, and attaining perfection in the order in which they are named extend their display over a considerable period. The old double Daffodil also succeeds well in the Grass, though it lacks the grace of form of the single varieties. Sir Watkin is the most vigorous of the incomparabilis section, and is well fitted for naturalisation, while many of the numerous varieties of the same class, though of less robust growth, make themselves equally at home. The Star Daffodils (*N. Leedsi*) are particu-

larly graceful and delicate, with their narrow cream-white petals and slender, swaying stems, and never reveal their attractions so fully as when growing on a grassy slope, while the Poet's Narcissus, or Pheasant's-eye, when planted in thousands, creates one of the loveliest spring pictures imaginable.

VIOLETS.

In naturally cold soils I have found Violets do well on a bank at an angle of about 45 degs. and facing due south. The plants did not make very large leaves and the flowers were not large, but they were freely borne. All runners should be removed as they form, and thus avoid weakening the main crowns. This is very important, as Violets grow rapidly from the middle of August to the early part of October, and any undue crowding would have a bad effect, especially on plants that are to be lifted and forced, or grown in cold-frames. Some growers lift their plants early in September, but I know one very successful grower who does not lift till the end of the month or early in October because he is reluctant to disturb the plants while they are growing so freely. He continues to lift plants for frames till Christmas. I have never found it of much advantage to make up hot-beds in frames, old Cucumber and Melon beds being quite as good, or better. Level the surface of such and add more good compost so as to secure, at least, a bed of soil 1 foot deep. Old hot-beds do not sink, so that it will not be difficult to secure a surface 1 foot or so from the glass. Before lifting the plants thoroughly soak the soil, then a good quantity will adhere to the roots. The double-flowered varieties may be planted 7 inches apart each way, but such of the singles as Princess of Wales and La France need as much space again. Close the lights only when there is frost, fog, or very wet weather, otherwise ventilate freely. BOURNE VALE.

AMONG THE HARDY FLOWERS.

Is it more profitable to buy large than small bulbs when the latter are considerably cheaper? The small bulb is not so likely to please the eye, and the amateur will generally buy the large, solid bulb. It does not always follow that the big one is the better of the two, and I should like such experts as Mr. Jenkins to favour us with his experience and views. I know some men of long experience who invariably buy the smaller bulbs unless they want them for a special purpose to make a good display the first year, irrespective of their conduct afterwards. If we want a full display the first season, and do not mind about subsequent seasons, it will probably be better to buy big bulbs. On the contrary, I have learned that the big bulbs of different genera sometimes exhaust themselves the first year by flowering or by making offsets, and do not bloom so well for a season or two afterwards. I have in my mind's eye a lot of small bulbs purchased for the garden of a public institution. They were English grown, were bought as small bulbs, were very cheap, and were derided by people who had been in the habit of buying the biggest bulbs they could get. They bloomed wonderfully well the first season, and much better the next one. In the second season they made a better display than the large bulbs bought and planted at the same time. Daffodils, Snowdrops, Crocuses, Scillas, and Glories-of-the-Snow were included in this purchase.

TIGER LILIES.—The lateness of the Tiger Lilies is a great recommendation. We are told that in many gardens, especially

those in which there is much lime, the bulbs gradually dwindle away after reaching maturity. We see this Lily in all kinds of gardens, so that we can hardly realise the possibility of its failure. It is so cheap, too, that it may readily be tried by everyone. Whether the variety *splendens* or that known as *Fortunei* is the better of the two is a disputed point, but I like *Fortunei* better than *splendens*. The double variety is one of the few double Lilies worth growing, though I can hardly say that it is as pretty as the others. I plant these Lilies about 9 inches deep when in light soil, or about 6 inches in heavier ground.

NEW ENGLAND MICHAELMAS DAISIES.—The New England varieties, derived from *Aster Novæ Angliæ*, although on the tall side, are fine things for the back of a border and are capital for cutting—as, indeed, is all the family. I see the height of the tallest varieties stated in catalogues as 5 feet, but these are often taller, and I have seen them 6 feet or more when in good soil. For small gardens the dwarfier ones are better in most instances. Several of the new shades of colour are also lovely. I like *Ryecroft Purple* (good purple), *Ryecroft Pink* (soft rose-pink), *Feltham Blue* (fine bright blue), and *Lil Fardell* (rosy-pink). These are all about 1 foot less in height than the older varieties, and one called *Mrs. Mitchell* is said to be 18 inches less than the old *A. Novæ Angliæ* and its varieties *rosea* and *rubra*.

AN AMATEUR OF HARDY FLOWERS.

POLYANTHUSES: AUTUMN NOTES.

With the cooler nights both these and coloured Primroses will make more growth, especially in the case of seedlings. Where these were sown last autumn, in the open, or in warmth in the early part of the year, and have been given good culture, they are now large plants. Few things pay for liberal treatment more than these. Where so many fail is in starving them in boxes in their early stages, and relying on divided plants, which are often in poor health. When plants are in this state the best thing is to destroy them. True they give some flowers of a poor colour, and cannot be compared to young, vigorous seedlings.

If the best results are to be obtained from Polyanthuses the soil should be in good heart. Few things pay better for a liberal use of manure at planting time where the soil is light and poor. Good rotten dung should be worked deeply into the soil before they are planted. No hard and fast line can be laid down as to the time of planting. They may be lifted with large balls when coming into bloom and replanted. From a garden point of view no time is so good as from the middle of October till the end of the year. Spring planting can be recommended where the soil is of a heavy nature and early planting cannot be done. Light soil should be made firm before planting, and in such, a mulch in spring is helpful. Another important point in planting is to keep the plants low down in the soil.

Those left in the seed-bed, if carefully lifted and planted in their permanent places in October, will bloom well in spring. J. CROOK.

ERIGERON PHILADELPHICUS.—This is a fine plant for the border, ranging in height from 1 foot to 2 feet. The flowers are pink and purple, and useful for cutting. If the plants are prevented from ripening seed the flowering period is prolonged often as much as two months. *Erigerons* succeed in any good, rich garden soil, and should be given a sunny position.—E. T. ELLIS, *Wetwood, Ecclesall Sheffield*.

LAVATERA OLBIA.

It is very likely the handsomer plants of the Mallow tribe are not quite enough used in gardens. They are very showy and very easily grown, and often very good in colour. This I put in my Heath garden, where it looked uncommonly well just at a time when the Heaths began to be less attractive.

W.

NOTES AND REPLIES.

Eyebright (*Euphrasia officinalis*).—I am curious to know if anyone has found this medicinal herb have the same effect as *Primula obconica* has on some people. I collect herbs for a newly-started herb-collecting and growing association in my

it could be the Eyebright. The doctor came again on the fourth day, when it was beginning to get better, and said it undoubtedly was Eyebright that had caused it. Even now, on the fifth day, there is a good deal of irritation, though the extreme redness and swelling have disappeared.—BOSMERE.

Watering in the open air.—When watering is necessary it should be really well done, that is, sufficient should be given to moisten the soil to the full depth to which it was dug or trenched. One such watering in the driest weather is sufficient to serve a whole week, and will keep the plants in luxuriant growth; but daily surface dribbles have a contrary effect, for, naturally enough, the roots of the plants

also looks very neat, but under bright sunshine soon shrinks up and requires renewing. Well-rotted stable manure, broken up very fine, or also sifted, is another good material—too good in a certain sense for some kinds of plants; and, therefore, its use should be limited to those kinds only that delight in rich food, amongst which are all the sub-tropicals, Dahlias, Violas, Verbenas, and Calceolarias. It would be better that all plants requiring a liberal amount of manure should be given it directly in the soil when the beds are being prepared by digging or trenching.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 12TH, 1916.

THE exhibition held on this date was one of the most attractive and extensive for some time past. With the ordinary fortnightly meeting was associated the annual exhibition of the National Dahlia Society. The Dahlia, indeed, was holding high festival, albeit we inclined to the view that certain types—the Pæony-flowered among them—were somewhat rougher than usual. It is, however, a garden rather than an exhibition flower, and, as such, not to be judged at close quarters. The singles and Pompons were distinctly good, the latter, though models of formality, attracting many. The stands of "Show" and "Fancy" sorts appeared to fascinate nobody. Coming sections, doubtless, are the "Star" and "Collarette," and these, with the finer "Decorative" and "Pæony-flowered" sorts, did not lack admirers. The exhibition Cactus varieties shown on boards attracted much less than those on stands, and the fact should not be lost sight of by the society in question. Some eighteen varieties were granted Awards of Merit. Apart from these there were beautiful displays of fruit, Carnations, Orchids, hardy flowers, shrubs, alpines, and Ferns.

HARDY FLOWERS.

In all probability the choicest thing in this department was the brilliant golden-orange-flowered *Oxalis lobata* shown by Mr. Clarence Elliott. Only an inch or two high and flowering naturally now and through October, it is one of the choicest things a rock garden could contain at the present time. It requires sun and warmth, the shilling-large flowers in sharp contrast to the almost olive-green of its leaves. *Senecio pulcher* stood out from all else in a group shown by Mr. W. Wells, junr. It is not a novelty, rather in the nature of a rarity or one whose peculiarities are insufficiently understood. Its uncommon colouring—purplish-magenta—when other composites, chiefly yellow-flowered, are plentiful in the garden, makes its presence as welcome as it is distinct. Hence the great sheaf of it was effective. *Verbesina Purpusi* is a new yellow-flowered composite from Mexico we hope to refer to again. The new Italian Aster, King George, and a great array of Delphiniums as fine as these are in summer were other things in the same group. In a somewhat comprehensive gathering of the best Tufted Pansies from Messrs. Carter Page and Co. none stood out so conspicuous as the blue-flowered W. H. Woodgate, which, if not new, is highly meritorious. As companions *Kittie Bell* (mauve), *Crimson Bedder*, and *Peace* (white) are desirable. Indispensables like *Archie Grant* and *Maggie Mott* were also on view. In a collection of alpines and shrubs arranged by Mr. G. Reuthe there were many things of importance and a few novelties. Quite in the front rank of the latter was *Rhododendron primulinum*, best described, per-



Group, of *Lavatera Olbia* at Gravetye.

neighbourhood in Suffolk, and was told I could find this herb in a large disused chalk-pit. I had never seen the plant before, and certainly never picked it, but there it was in quantity, and I picked a large basket of it and took it straight to the oast-house used for drying the herbs. From the moment of picking it my face began to burn in an unaccountable way, but I concluded it was the sun, it being a hot day. The next day my face was scarlet with an irritating rash. That day I went to another chalk-pit and picked more, and next morning was so bad I sent for my doctor. He thought it was the sun, but the irritation was maddening, and on the third morning my face was much swollen. I had begun to wonder if

will go in search of moisture, and if this is superficial, the roots are formed on the surface only. A thorough watering, when the plants are first put out, to settle the soil to the roots is all that is necessary till new roots are established. Then, if the weather continues dry, a soaking once a week is all that is needed to keep the plants in perfect condition. The heavy waterings here advised render it necessary to stir the soil with a small hoe or pointed stick a day or two after watering, but this would be rarely required were mulching more general. If applied as soon as the plants are put out in May, mulching saves a lot of labour. Cocoa-fibre refuse is the neatest. The next best material is decayed vegetable or leaf-soil. This, sifted,

haps, as a soft yellow counterpart—though larger of flower—of *R. intricatum*. It is a new addition from China, and a lovely plant withal. Far more imposing was the handsome lot of *Eucryphia cordifolia*, with remarkable bunches of white, brown-anthered, cupped flowers at the summit of leafy stems. The flowers, too, emit a subtle fragrance of May blossom. *Clethra arborea* afforded large terminal clusters of pendent white flowers, the pinky buds and calyces adding to the good effect. The flowers emit a spicy fragrance. Among hardy Heaths two novelties, *Erica cinerea atrorubens* and *E. c. rosea*, were conspicuous for colour alone, though but few flowers remained. *E. vulgaris* fl.-pl. is a plant of great charm, too, but not new. The rarely seen *Stobæa purpurea* was also noted, and the lovely new *Gentiana calycosa* among many things. *Berberidopsis corallina* was brilliant, and, near by, a mass in bloom of *Cyclamen hederæfolium* was most effective.

ROSES.

A collection was shown by the Rev. J. H. Pemberton, who has for some time been devoting attention to the raising of new perpetual-flowering cluster sorts. *Callisto*, a novelty of the moment, soft yellow with apricot-coloured buds, is charming. *Clytemnestra*, with a more pinky effect than usual, was very beautiful. Moonlight (semi-double white), Queen Alexandra (cupped pink and white single), and Daybreak (yellow buds and creamy flowers) were some in a beautiful lot.

CARNATIONS.

Only one collection was displayed, that coming from Messrs. Allwood Brothers. Undoubtedly the gem of the lot was Bishton Wonder, a pink-flowered variety of exceptional colour and size, surpassing the old Clove in rich perfume. We know nothing like it in the perpetual-flowering set. It is quite new; its fragrance will make it popular. White May Day is also a novelty with all the good attributes of the original, while Wivelsfield White, the most prolific white, and Salmon Enchantress still hold their own.

FERNS.

Some good things in these came from Messrs. H. B. May and Sons, *Nephrolepis* being in strong force. Of first importance was *N. Whitmaniana* compacta, *N. gracillima* and *N. Marshalli* compacta being others of note. All are more or less of densely plumose character, if differing in outline and details, and are among the most serviceable of this large race. *Davallia Mooreana*, *Cheilanthes elegans*, and *Asplenium marginatum* are distinct. In shrubby *Veronieas*, of which also a collection was staged, *La Perle* (of reddish-carmine tone) and *Lavinia* (royal purple) were the more conspicuous.

ORCHIDS.

Cattleya Venus variety *Victrix*, shown by Mr. Pantia Ralli, Ashted Park, and *C. V. Golden Queen* by Messrs. Charlesworth, each gained an Award of Merit. Both have yellow sepals and petals, and richly-coloured lip. Other choice things from Messrs. Charlesworth included the "Flower of the Gods" (*Disa grandiflora*), the golden-flowered *Lælio-Cattleya Thyone*, and *Cattleya Gaskelliana* alba. His Grace the Duke of Marlborough sent *Cattleyas* and *Lælio-Cattleyas* in variety, *C. Woodon-aurea* being choice and good. The finest thing in a group from Messrs. J. and A. MacBean was the pure white *Dendrobium Sanderæ*. One plant had pseudo-bulbs each nearly 4 feet long

and carried about sixty flowers. A cultural commendation was given. *D. Dearei*, also pure white, was very fine. The most charming and distinct novelty shown by Messrs. Armstrong and Brown was *Brasso-Cattleya Mme. Hye*. The *Brasso-Cattleyas* have usually large flowers, the huge lip widely expanded and heavily fringed. In the plants under review a small, compact flower is seen, all the parts being modified, the delicate shades of mauve rendering it all but unique. *Cattleya Snowdon* is a chaste and lovely white, and so, too, *C. Clæsiana alba*. Among the finer examples from Messrs. Sauder and Sons, *Cattleya Magali Sander* (pure white) stood out prominently. *C. Aeis*, *C. Lord Rothschild*, *C. R. Prowe* (very pure and beautiful), and *Lælio-Cattleya Henry Greenwood*, whose long, narrow sepals and brilliant crimson-purple lip and snow-white throat gave it an air of distinction, were also noted.

DAHLIAS.

Exigencies of space preclude our referring to the exhibition of Dahlias in detail. Generally, however, the competition was not keen, that creating wide-spread interest being the Cory Challenge Cup class for a group of decorative garden Dahlias on a table space 25 feet by 3 feet. Three imposing collections were staged, the challenge cup (value seventy-five guineas) being awarded to Messrs. Carter Page and Co. for a particularly good lot, representative of several sections of the flower. The pure white *Aphrodite* and the pink-flowered *Delice* were very conspicuous. Surpassing these, both in interest and imposing display, was the Gold Medal group from Mr. Reginald Cory, Duffryn, Cardiff, the donor of the cup. The group occupied a table across the whole of the western end of the hall and consisted entirely of varieties raised by the exhibitor, who takes the keenest interest in all that pertains to the flower. Needless to say, many good things were shown, the whole constituting a great attraction.

FRUIT.

There were two novelties shown in this section, and both are full of promise. *Tomato Best of All* (new strain) is one of them. Exceptional firmness of flesh, uniform and rich colour of the fruits, larger clusters and shorter-jointed habit of growth are among the good points claimed for the new-comer. The habit is of considerable importance, as the variety will be much better suited to pot cultivation. A fine lot of solid fruits was shown by Messrs. Sutton and Sons. The other fruit novelty was *Daniel's September Black Currant*, which gained an Award of Merit. Of this, gathered fruits in bunches and fruiting sprays were shown, all from the open. Needless to say, a September-fruiting *Black Currant* should be in great demand. The fruits shown were about the size of those of *Lee's Prolific*. Mr. J. A. Nix, Tilgate, Crawley (gardener, Mr. E. Neal), showed a superb lot of fruit, the *Grapes* very fine. *Muscat of Alexandria*, *Muscat Hamburg*, *Gros Maroc*, and *Appley Towers* were among those staged. *Peaches* and *Nectarines* were first-rate, as also a large tray of fruits of *Pear Durondeau*. A collection of several dozen varieties of *Apples*, together with *Damsons*, *Bullaces*, and *Crabs*, came from Messrs. Spooner and Sons. *Jacob's Seedling* was particularly well coloured, as also was *Worcester Pearmain*. *Wealthy*, *Stirling Castle*, *Pott's Seedling*, and *Norfolk Beauty* were others of note.

A complete list of the plants certificated and medals for groups will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM SEPTEMBER 13TH.—*Ceanothus* (in variety), *Buddleias*, *Magnolia grandiflora*, *Rhus* (in variety), *Hardy Fuchsias* (in variety), *Clerodendron trichotomum*, *Hydrangea paniculata grandiflora*, *Veronicas* (in great variety), *Aloysia citriodora*, *Daphne Cneorum*, *Spartium junceum*, *Viburnum Tinus*, *Catalpa bignonioides*, *Clethras* (in variety), *Clematis* (many species and varieties), *Cistus* (in variety), *Helianthemums* (in variety), *Vaccinium Vitis-idaea*, *Oxalis floribunda*, *Omphalodes cappadocica*, *Mertensias*, *Linarias*, *Sedums*, *Androsacos* (in variety), *Dryas octopetala*, *Silenes*, *Gentiana asclepiadæa*, *Potentillas* (in variety), *Convolvulus mauritanicus*, *C. althoides*, *Nierembergia ricularis*, *Mesembryanthemums*, *Gypsophilas*, *Verbena venosa*, *Platystemon californicus*, *Pratia angulata*, *Scabiosa Parnassi*, *Plumbago Larpenzæ*, *Tufted Pansies* (in variety), *Antirrhinums* (in variety), *Pentstemons* (in great variety), *Calceolaria amplexicaulis*, *Cannas*, *Cosmos*, *Marguerites*, *Pelargoniums* (in variety), *Begonias*, *Verbenas*, *Petunias*, *Clarkias*, *Nemesias*, *Salpiglossis*, *Nigella*, *Lavateras*, *Hollyhocks*, *Salvias*, *Summer-flowering Chrysanthemums*, *Collinsias*, *Sweet Sultan*, *Scabious* (in variety), *Carnations* (in variety), *Herbaceous Phlox* (in variety), *Delphiniums*, *Montbretias* (in variety), *Liliums* (in variety), *Hyacinthus candicans*, *Gladiolus* (in variety), *Echinops*, *Bocconia cordata*, *Eryngiums*, *Helianthus*, *Erigerons*, *Achilleas*, *Sidalceas*, *Cimicifuga racemosa*, *Campanulas* (in variety), *Romneya Coulteri*, *Asters* (*Michaelmas Daisies*) (in great variety), *Tritomas* (in variety), *Dahlias* (in variety), *Acanthus Candelabrum*, *Chrysanthemum maximum* (in variety), *Agapanthus umbellatus*, *Thalictrums*, *Morina longifolia*, *Bergamot*, *Yuccas*, *Cyclamen hederæfolium*, *Colchicum autumnale*, *Ericas* (in variety), *Menziesias*, *Static* (in variety), *Astilbes* (in variety), *Lysimachia clethroides*, *Lythrum roseum*, *Epilobiums*, *Lobelia cardinalis*, *Pampas Grass*, *Nuphar*, *Water Lilies*, *Single Arrowhead*.

WORK OF THE WEEK.—Many varieties of Hybrid Tea Roses are again flowering freely. The ground about the plants is stirred as frequently as possible, not only to destroy weeds, but in order that the ground may become properly aerated. Rambling and climbing Roses, having practically finished flowering for the season, a general, almost final, pruning is being carried out, cutting out old wood with a free hand, relying on basal shoots solely where the wall or whatever the plants are trained to does not exceed in height what one may reasonably expect the young growths to cover in one season. Where walls, pillars, and pergolas are high a few two and three year old shoots are retained, cutting them back at irregular levels to a strong bud, thus encouraging the production of strong-flowering growths part of the way up, and which will eventually reach the summit. These, together with shoots from the base, will clothe the whole from bottom to top. I would emphasise the importance of pruning at the present time, for it not only relieves one from having to do it in the spring, but greatly assists in the ripening of the current year's growth by allowing free play for sunshine, light, and air, and thus to a certain extent ensuring plenty of bloom. A quantity of Darwin Tulips was planted during the week. Home-grown bulbs are first cleaned and sorted, rubbing off imperfect outer scales; these are planted rather closely together and about 4 inches deep. Cuttings of Pinks inserted in the summer are now well rooted, and will be transplanted to their flowering quarters forthwith. Pinks succeed best in a medium or light soil, and no rank manure should come into contact with the roots. The season has suited the hardy Fuchsias, and they are now a mass of bloom. Greater use might be made of these, as they grow well in almost any soil, and under all sorts of conditions. The plants may be increased by division, by root cuttings, and by cuttings.

F. W. GALLOP.

Lilford Hall, Oundle.

SOUTHERN COUNTIES.

Late Muscats.—In wet weather fire-heat is absolutely necessary, not only to maintain a suitable temperature but to allow for the admission of a certain amount of fresh air, or sufficient of it to prevent stagnation of the internal atmosphere and moisture condensing on the berries. As the berries are now colouring fast the observance of the foregoing simple, though important matters should have strict attention. Keeping the vinery clear of plants and covering open tanks for the time being, as well as watering the border when necessary on fine mornings, when full ventilation can be afforded, will also assist in simplifying matters in this direction. If the border is covered to a depth of 4 inches with dry litter it will serve to arrest moisture arising therefrom and prevent the atmosphere becoming charged with an undue degree of humidity. If the border is an outside one, or partly so, it should be covered with something of a waterproof nature to prevent its becoming saturated, as this is inimical to the long keeping of Muscats after they are ripe. Where the disease known as "spot" is troublesome the bunches should be scanned daily, cutting out all affected berries as soon as detected and burning them. This, if it does not act as a preventive, tends to keep contiguous berries from becoming affected.

Other late Grapes.—No effort should be spared in forwarding the ripening of late-keeping varieties of Grapes, such as Lady Downe's, Gros Colman, Mrs. Pince, Lady Hutt, etc., during the present month, particularly when the roots are in an outside border. In some localities such a border will, after the recent heavy rains, be quite moist enough for some time to come, and will therefore be best covered with something to shed off water and so avoid risk of the same becoming soddened. With an inside border the roots are more under control, and the colouring is not so liable to be arrested, as often occurs when the border is outside and the soil saturated by heavy autumnal rains. Fire-heat, as in the case of white Muscats, is very necessary, certainly at night if not by day, its employment in the last-named instance being governed, of course, by external weather conditions. Unless colouring is general stimulants may still be used when the border requires water.

General work in vineries.—The shortening hack to about half their length of laterals on Vines now clear of fruit, if not already done, should have immediate attention. Sub-laterals, if the premier leaves are still intact and in a healthy condition, should also be dispensed with. Where there has been an outbreak either of red-spider, mildew, or thrips, steps should be taken to effectually deal with such pests now that more drastic remedies can be employed. Another pest, and the worst of all to contend with, is "mealy-bug." This, too, can be dealt with in a more effectual manner after the Grapes are cut. Syringing with paraffin emulsion, and fuming the house two or three evenings in succession, are the means of killing off great numbers of the insects. Searching for and touching the insects with methylated spirit wherever they are found to be numerous or congregated together are, if tiresome, a very sure method of getting rid of them. Even if the Vines are clean a good syringing or hosing now and again is very beneficial. The adding to of borders in which Vines have been planted within the last two seasons can now be undertaken. In making these additions it is essential that the new portion be carefully connected with the old, which is best done by breaking down the face of the latter while the new portion is being built up.

Spring Cabbage.—The young plants raised from seed sown towards the latter end of August should, before they get too far advanced or drawn, be planted out. From the time of seed-sowing to the present, conditions have been favourable for free growth being made. Under existing circumstances planting out should be effected under advantageous conditions also, as the soil is thoroughly moist and warm. The plants should therefore get away quickly and become established before cold weather sets in. Varieties which form small hearts and turn in early, like Harbinger, may be planted from 1 foot to 15 inches apart each way. Larger-growing kinds need a

distance of 18 inches each way. If ground is not available for planting it is better to prick out the plants in rows 6 inches apart, with the rows standing 9 inches asunder, than for them to remain in the drills and become leggy. They can then be lifted with balls and planted later on when a plot has been got ready for them. In a general way spring Cabbage succeeds Strawberries, Onions, or Potatoes, but under existing conditions the work of preparation cannot always be undertaken when it should be. When planting does take place see that the surface is made firm and broken down to a fairly fine filth. In the case of pricked-out plants, planting should be done with a trowel.

Onions.—If by any chance there should not be a sufficiency of plants for setting out next spring, seed of such varieties as Lemon Rocca and White Leviathan may still be sown, doing so on a warm border. Exhibition varieties, such as Cranston's Excelsior and others, may also be raised outdoors now. This will obviate the necessity for doing so under glass next February. A. W.

MIDLAND COUNTIES.

Melons.—The latest batch has set a good crop of fruit. During sunny weather advantage is taken of the sun's heat to help the growth as much as possible by closing the house early in the afternoon with plenty of atmospheric moisture. Care must be exercised in the use of the syringe now that the days are shortening, and while having plenty of moisture in the house to counteract the effect of fire-heat, the foliage should be allowed to become dry before night. The roots require to be kept in a moist, but not sodden, condition.

Tomatoes.—Plants for fruiting in autumn and winter, and which were potted into 9-inch pots last month, have, at the base of the plants, set a quantity of fruit, which is swelling freely. Manure-water is afforded the plants once a week and the house ventilated by day and night. The plants are trained on the single-stem system, all lateral shoots being removed as soon as they appear. As soon as the top of the plant reaches its limit of space growth is stopped by pinching out the point. As the days will soon be short and dull it will be necessary to artificially fertilise the flowers or they will not set freely. A sharp tap on the trellis occasionally is usually sufficient to effect fertilisation, doing this when the sun is shining and the ventilators are open.

Begonia Gloire de Lorraine.—A batch of the more forward plants will now be allowed to bloom. As the flowers develop, overhead syringing is discontinued, but damping between the pots is done daily, as a dry atmosphere tends to encourage most pests. The house is ventilated freely on all favourable occasions, and when the plants are in full bloom a crack of air is left on all night to cause the air to circulate. The later-raised plants are kept growing freely, pinching out all bloom for the present in order that the plants may form a useful succession to the earlier batch. Very little shading will be required after this date. The house is closed early in the afternoon in order that the plants may get the benefit of the sun-heat.

Violets in frames.—These will now be transferred to their flowering quarters in order that they may become established before the winter sets in. Before lifting them see that they are thoroughly moist at the roots. The frames should face the south and be sheltered from east and north winds. The frames are partially filled with stable litter and leaves, treading the litter firmly or the plants will sink after they have been planted a few weeks. A layer of soil 8 inches to 9 inches deep is placed on the manure and leaves, and when the plants are in position they are just clear of the glass. A suitable compost consists of three parts good loam, one part leaf-soil, one part decayed manure, and a little silver sand. Allow ample room between the plants, and make them firm, keeping the crowns just above the level of the soil. For a time no water will be needed at the roots, but the foliage is sprayed on dry afternoons. The lights will be left off the frames for a few weeks if the weather is favourable.

Vegetables generally are very plentiful this year and of first-rate quality. Every precaution should be taken to guard the crops against early frosts, which may occur at any time now. Therefore, it is imperative to make the necessary provision for affording protection. French Beans which are bearing well should be protected in order that the crop, which might otherwise be lost in a single night, may be preserved for some considerable time to come. Cold frames containing Beans should now be kept closed, except in the hottest part of the day, when sufficient air should be admitted to keep the Beans from damping. Vegetable Marrows should also be protected.

Lettuces raised from seed sown in August are ready for transplanting into cold pits. The soil in these pits should be raised to within 15 inches of the glass and made moderately firm before the plants are put in. Where cold frames are available there need be little difficulty in maintaining a supply of salads throughout the greater part of the winter. Damping is most to be feared in Lettuces in pits during the winter, therefore sufficient space must be allowed between the plants. The lights should be left off the frames as long as the weather is favourable, but if wet weather occurs they should be replaced, allowing ventilation both at the top and bottom of the pit.

Endive should be planted in cold pits and treated in the same manner as recommended for Lettuce. The Batavian Endive is best for winter use, as it is not so readily affected by damp as the more tender sorts.

Herbs.—Where a constant supply of green herbs is required throughout the winter preparation must now be made to secure them. The best way is to set a pit, or part of one, aside for the purpose where fire-heat can be applied in cold weather. Mint, having been cut down a month ago in preparation for forcing, may now be lifted with a fork and the soil shaken from the roots. The plants should then be laid close together on a bed of leaves, over which has previously been placed a layer of leaf-soil, and covered to the depth of 2 inches with fine leaf-soil and well moistened with clear water applied at a temperature of 70 degs. to settle the soil amongst the roots. With a moderate bottom-heat young shoots will soon make their appearance, when abundance of air must be given to keep them from becoming drawn. Tarragon may be grown in the same pit. The plants should be cut over and placed in position without delay. This herb forces very easily, and a continuous supply can be easily maintained by placing a few clumps in moderate heat from time to time. Chives may be treated in the same way. If the plants have been cut over and placed on a gentle hotbed they will soon make fresh growth and continue to do so for some time. Further batches of roots may be placed in the bed as required throughout the winter. Marjoram may occupy one end of the same pit, but must be grown in pots and plenty of room given. Sweet Basil, the most tender of herbs, requires rather more heat, and should be grown in pots placed on a shelf near the glass in an atmospheric temperature of 65 degs. The last sowing of Chervil has been made under a south wall. This will keep its colour better during the winter than early-sown plants. F. W. G.

SCOTLAND.

Hardy-flower borders.—Anything which is noticeably shabby is slightly cut back, merely removing the flower-heads. A run through with the hoe disposes of seedling weeds, and does away with the necessity for hand-weeding when the dead stems are cut over in winter. The final display made by hardy plants is, in its way, the best of the year. Already the Kniphofias are on the point of blooming, large pieces of K. Uvaria carrying numerous spikes which are very telling. Daily additions are being made to the numbers of Asters in bloom, the latest noticed being A. Amellus bessarabicus, one of the best and most free-flowering, as well as one of the most attractive of the dwarf varieties. A border devoted prin-

cipally to blue flowers has been very good, and in spring seeds of *Nigella* Miss Jekyll were broadcasted through the intervals between the stools of the hardy plants. The season of the latter, with the exception of *Asters*, being practically over, the situation has been saved by the *Nigella*, which is now in full bloom, and which will endure until frost intervenes. *Pyrethrum uliginosum* (the Moon Daisy) is evidently earlier than usual, but this is not regretted, as in some years blooms are ruined by wet or cut over by frost. If any removals or alterations are proposed now is the time to take notes. It is a difficult matter to do this work satisfactorily when the plants have passed out of bloom.

Autumn-sown annuals.—Owing to the scarcity of certain kinds of bulbs, there will, no doubt, in many cases be a larger sowing than usual of hardy annuals in the course of the month. While annuals will do very well on even poor soil, yet, if an extra good display be wished for in spring, let the quarters be given a moderate dressing of well-rotted stable-manure and dug over. After allowing the ground to settle, and previous to sowing the seeds, it must be made firm by treading, rolling, or beating. To expect seedlings to survive a severe winter in loose soil is vain. A firm root-run makes the plants thrifty and short-jointed, and such plants may be relied upon to give a good account of themselves in spring. Seeds may be sown moderately thickly at this time, and when germination is fairly well advanced some thinning may be done. It is unwise, I think, to thin too severely in autumn. There are so many dangers of casualties among the seedlings during winter from frost, slugs, and vermin that the ultimate thinning may well be deferred until early spring. Properly treated, few things make such an excellent display as hardy annuals from September sowings, and while everyone has his particular favourites, yet a few which are especially valuable for this purpose may be named. These include *Saponaria calabrica*, *Silene pendula*, *Collinsia bicolor*, *Convolvulus minor* (especially the blue variety), *Lavatera trimestris*, *Candytuft* (white and pink), *Malope*, *Godetias*, *Clarkias*, and *Eschscholtzia californica*. *Mignonette*, unfortunately, cannot in every garden be relied upon from autumn sowings, and the same remark applies to *Poppies*.

Spring Onions raised in heat, having now completed their growth, have had their necks bent over to hasten the ripening. Without being in any way exceptional, the crop is a bulky one, the bulbs firm and hard, and likely to keep well. As there is yet growth in the case of sown-out Onions, they will be permitted to stand yet awhile.

Leeks.—The Leek quarter was cleaned and well hoed during the week, and afterwards some chemical manure was scattered along the lines and more soil drawn to the necks of the plants.

Celery.—A trench of red Celery which had become rather weedy was cleaned, the side growths removed from the plants, and a slight moulding up given. At the same time exhausted Lettuces and Turnips which were grown on the ridges of this particular trench were removed to the rot-heap.

Chervil.—This herb is not in great request during the winter, but to meet possible requirements a small sowing has been made in a warm and sheltered place, the position selected being close to a walk, so that the plants may be readily protected should severe weather follow.

Peas and Broad Beans are kept regularly picked. The yield of both has surpassed expectations, and the season will yet be prolonged for a time. French Beans, although later than usual in coming into use, are now bearing freely, the climbing varieties especially so.

Cabbages for spring cutting.—Seedlings from a recent sowing having now attained a suitable size, these have been pricked off into nursery beds. Plants from this sowing are generally of superior quality, and bolting is practically unknown. W. McCUFFOG.

Balmie Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Four good exhibition Roses (A Boy).—It is very difficult to confine oneself to such a small number, as there are so many good ones, the growth of which varies so throughout the country. The following are four good ones: A. K. Williams, Mrs. John Laing, Lady Ash-town, and Dean Hole.

Primulas unhealthy (Bournea).—The leaves of your Primulas have been attacked by red-spider and thrips caused by keeping the atmosphere and surroundings too hot and dry. The Chinese Primula dislikes a hot, dry atmosphere, and as soon as the plants are established in their flowering pots the best place for them is a cold frame, allowing them plenty of room, air, and light, with a slight shade during the hottest part of the day. An occasional syringing is very beneficial, this in the case of your plants being imperative so as to get rid of the thrips and red-spider. When the nights get cold they should be taken indoors, standing them on flower-pots and giving them a light position, keeping the surroundings cool by admitting fresh air when the weather outside warrants this.

FRUIT.

Pears cracked (Boyfield).—The cracked condition of the Pears you send is due to a fungus known as *Fusicladium prinum*. The remedy is to spray the tree with a wash containing sulphate of iron in addition to caustic soda, such as that designated Woburn wash. Do this as soon as the tree has been pruned and the soil beneath it cleared of rubbish. Then, before the buds burst, when the tree has flowered and the fruit has set, and again in from two to three weeks afterwards, spray with Woburn-Bordeaux mixture. Use both insecticides according to the directions sent with them.

VEGETABLES.

Indian Corn (A Boy).—If we could rely upon a very warm season, there would be but little difficulty in growing this. If given a little care at the start it can be had quite good even in our variable climate. In a favourable season it may be sown in the open, but better results are had by raising in a frame and planting out late in May. The best results are secured by sowing under glass in small pots, thinning to the strongest, and planting out in May in well-manured land, in shallow trenches. The Maize has to make its growth in a short season, hence the necessity of ample food and a liberal root-run. Few plants require more water at the roots in hot, dry weather. This can be given in the shape of liquid-manure, or, failing this, a

good plan is to mulch the plants liberally with rotten manure between the rows, watering freely when dry. Given an open, sunny position, growth will be rapid once the plants get a start.

SHORT REPLIES.

Thos. Burnett.—The reason of the failure of your plant to bloom is that the pot is too small for such a plant as you refer to. It ought to have a pot at the very least 8 inches in diameter. Had you given it some liquid-manure to assist the roots, which in the very small pot you mention are practically starved, we have no doubt that it would have flowered. —**D. G.**—The bulbs of Ailsa Craig Onion, if grown on deeply-trenched and well-manured ground, have, from a January sowing and end-of-April planting, been recorded as weighing over 3 lb. each. Any seedsman could supply seed of this variety of Onion. —**A. Raby.**—There is nothing wrong with the piece of Cactus you send. The rusty-looking appearance is, we think, due to the exposure in the open air. —**G. F. A.**—There is no need to use the two, one or the other only being necessary. Basic slag is suitable for all crops, except when grown on soils rich in lime. —**H. M. W.**—Your best plan will be to write to a seedsman and tell him the character of your soil, when he will send you the most suitable mixture.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**E. C.**—*Bocconia cordata.* —**Link.**—Clematis bloom very much knocked about, but seems to be *Nellie Moser.* —**E. Clarke.**—It is a wholly different species, the blue one being *Echinops Ritro.*

Names of fruits.—**C. W. H.**—Plums: 1, Denbigh or Cox's Emperor; 2, Is, we think, a small fruit of Belgian Purple.

CATALOGUES RECEIVED.

BARR AND SONS, King-street, Covent Garden.—*Gold Medal Daffodils, 1916; List of Hyacinths, Tulips, Gladioli, Irises, etc.*

DOBIE AND CO., Edinburgh.—*List of Hyacinths, Tulips, Sweet Peas, Carnations, etc.*

W. DRUMMOND AND SONS, LTD., 57 and 58, Dawson-street, Dublin.—*List of Bulbs, 1916.*

F. GIFFORD, Montague Nursery, Hornchurch, Essex.—*Special List of Newer Delphiniums, Phloxes, etc.*

JAMES CARTER & Co., Raynes Park, London, S.W.—*List of Bulbs, 1916.*

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BAD FLOWER GARDENING AT KEW.

I WENT to Kew early in September to see what the summer had left of the beauty of the flower garden, and saw a dismal sight. The large beds alongside the central walk showed some of the poorest and most ineffective plants in cultivation. Lantanas, dwarf, poorly-coloured Fuchsias, Ageratum without any sign of stem or leaf, Catmint of no beauty, and Pyrethrums. Far better have no beds along this central walk if so poorly filled as these, with plants of no grace or distinction. If there were a real flower garden in Kew there would be no need for flower beds here, and the kidney-shaped beds of shrubs might be enlarged and improved by the addition of the many noble plants that thrive best with shrubs.

Coming to the flower garden in between the Palm-house and pond the effect was wretched indeed, both in plants and general effect.

ERRORS AS TO PLANTS.—The aim seems to be the exclusion of every graceful or beautiful plant that does not conform to one mean standard—dwarfness. The whole thing is a survival of the worst time in flower gardening, the attempt to imitate a bad carpet of Victorian days, now abandoned by all with eyes for a real garden. Everything of the least distinction is ruled out, Delphiniums, long-blooming Roses, the Cardinal flowers of Eastern America, lovely tree Poppies of California, Clematis, Honeysuckle, and Jasmine. To attempt to make a flower garden by excluding all the most beautiful hardy flowers is an absurdity, and the failure complete.

ERRORS AS TO CLIMATE.—In our often cold summers the choice of a few South African plants to the exclusion of the really hardy and beautiful plants of the northern world is a disastrous mistake. The white Pelargoniums of the present flower garden at Kew are miserable, draggled things, no effect and no beauty close at hand. The first consideration in making a flower garden in our land would be the plants that enjoy the cool rains and storms, as many of the best plants do—not covering before the gales, as the tender plants do. Though the soil of Kew is warm and open, the very opposite of much of that north of London and in Sussex, it does not make much difference, the effect is wretched in cold summers.

WHAT TO DO FOR A REAL FLOWER GARDEN.—The whole of the space between the

Palm-house and the pond should be laid out as a real garden, with beds as simple as in a cottage garden. The present streaky beds are quite useless for growing or showing plants. There should be no Grass. Gravel or stone walks and stone edgings should be the rule. There is plenty of Grass in the place without using it in the flower garden. From the Palm-house towards the pond there should be a real pergola, giving shade in hot days. The pergola is one of the best things in the gardens of southern Europe, and even better for us because we can grow a greater variety of plants on it. It should be formed not by a gardener or a botanist, but by an architect, and built to last. There is no good example of a pergola at Kew. Throughout the country there are many wretched things made of wire and rustic sticks which begin to rot as soon as up. It would be a distinct gain to show a well-formed and well-covered pergola in the flower garden here.

A GREAT OMISSION.—The grace and beauty of water and waterside plants which might well be brought into the foreground are wanting almost wholly here. The best addition to our hardy plants ever made was the coloured hardy Water Lilies. The finest water one could desire for these is at Kew, in front of the flower garden. It is abandoned to the ducks, when it might be adorned with groups of every hardy water Lily. The ducks might well go to the Thames or to some other pool in the woods. This is a Royal botanic garden and not a place for waterfowl, which are the worst things one could have near plants. Kingfishers and other birds cross over my ponds without injuring the flowers, which, if left to the ducks, would vanish. It is most important on an island country to show all the beauty of the water and waterside plants that can reasonably be seen in a flower garden.

There is no example at Kew of a good mixed border with plants well chosen and artistically arranged, and such a border would help much as an example, but now almost every garden in the land is disfigured by ill-made mixed borders. The whole garden should be based not on the exclusion of every pretty plant as it is now, but it should show all the beautiful plants that flower in summer and early autumn.

CLIMBERS EXCLUDED.—To make a flower garden without climbers is absurd. All the noble climbers of the northern world

should be seen in this garden. The sombre Ivy forming a line all round the Palm-house should be replaced by the most beautiful of the evergreen and summer-leaving climbers of the north. Ivy being in every wood and on nearly every house is out of place here. In this way we might show the beauty of all climbing plants of the north. Dividing and shelter lines, too, rightly made in the flower garden itself, should show all the climbers that may grace a garden in our clime. W. R.

[No reflection is made in this article on the director or gardener. It is the system, stereotyped for long years, which is attacked. What we want is a director with courage to put a stop to this travesty of flower-gardening. Now, when there are fine examples of true flower-gardening, it is more than ever to be desired that the change should be effected.—Ed.]

NOTES OF THE WEEK.

Little Othello Dahlia.—A singularly bright plant and very effective. It is rather dwarfer in habit than most Dahlias, and worthy of extended use in the flower garden.

Delphinium grandiflorum and its varieties.—I have been much struck with the beauty of these of late. One, a very light and charming blue, pleased me much. A rich fine blue, it formed a most attractive bed at Kew in early September.—W.

Philesia buxifolia.—On June 1st nine flowers opened on one plant of Philesia buxifolia, and at the end of July there were seven more flowers on the same plant. I have grown the Philesia for at least sixteen years, and never before had a second lot of flowers. In 1912 I had more than twenty flowers in June.—E. CHARLES BUXTON, *Coed-Derw, Bettws-y-Coed.*

Thalictrum dipterocarpum.—I have seen many references to this plant of late. My experience of it may be of some use to your readers. I have grown it for four or five years in ordinary soil with indifferent success, the flower-spikes never reaching more than about 3½ feet in height. Last autumn I put a dozen roots in a clump about 3 feet in diameter in a border on the north side of a tall hedge. The soil had been made up for Ferns two or three years ago, and a quantity of rough forest peat dug in. The result has surprised me. This season the plants

have bloomed continuously for two months and have varied in height from 6 feet to 8 feet, the upper 3 feet or 4 feet being a mass of the beautiful and graceful flowers.—P. E. WALLIS, *East Grinstead*.

Caultheria trichophylla.—This has been a failure for the first time since 1898. There was a small crop of berries in June, but I felt certain of a good crop in August. Not half-a-dozen berries have ripened. There is still time for a third crop early in October, as was the case in 1913, but at present there are but few flowers.—E. CHARLES BUXTON, *Coed-Derw, Bettws-y-Coed*.

Bornmueller's Meadow Saffron.—I found a clump of *Colchicum Bornmuelleri* with some fully-open blooms in my garden on September 4th. It is one of the earliest and largest of the species, and has handsome Tulip-like flowers which open almost white and pass off to purple with a white zone at the base. *Colchicum Bornmuelleri* ranks practically with *C. speciosum* and *C. giganteum* in point of size, but is generally rather dwarfer.—DUMFRIES.

Prostanthera lasianthos, a native of Australia, is now at Rostrevor House some 13 feet high, and is a sheet of bloom. It is a handsome evergreen with sweet-smelling leaves, flowers, in closely-packed clusters, white, each the third of an inch across, with purple-marked throat. It was at first planted against a south wall, but it grew so vigorously that it was soon moved to a place under the shelter of some large Laurels, most of which have now been cut away, and those that remain serve to screen it from cold winds.—*Irish Gardening*.

Colchicum autumnale superbum.—Under this name a handsome Meadow Saffron was sent me from Holland some years ago to see if it was the same as one I grow as *C. veratrifolium*. It is not the same, but is a very ornamental *Colchicum*, superior in every way to the ordinary *C. autumnale*. The flowers are larger, of greater substance, and borne on much sturdier tubes. The colouring is also softer and more attractive, being a pretty pink with more delicate shading. It was first noted in flower this year on September 8th.—DUMFRIES.

Colchicum Bertoloni.—Under this name I have long had a small-flowered Meadow Saffron which blooms early. It comes nearer *C. autumnale*, the common Meadow Saffron, than any other I have, and does not appear to differ greatly from it. The flowers are a little bigger and appear some time before those of *C. autumnale*. This year, in a rather shaded position, *C. Bertoloni* opened a day or so after *C. Bornmuelleri*. The blooms are whitish with a tinge of purple. Its defect is its long tubes, which make the flowers liable to injury in bad weather.—S. ARNOTT.

Phloxes in a Scottish village.—There are few places in Scotland where gardening is more generally practised than in Moniaive, a charmingly situated village in Dumfriesshire and quite near the Maxwellton Braes of Robert Burns. A notable feature is the number of flowers grown in the front gardens. Some of these are mere fringes to the street, but the most is made of them. On a visit to Moniaive the other day I was struck with the extent to which the late-flowering Phloxes are grown in these front plots. Some of the best of the late Phloxes, though unnamed, appeared to be among them, and a good variety of colour was seen. A good white was frequently met with, these Phloxes helping greatly to give these street gardens brightness and interest.—S. ARNOTT.

Seedling Asters.—Another lesson as to the desirability of ruthlessly destroying seedling Michaelmas Daisies has just been learned. A few seedlings which escaped the hoe in the spring of last year were noticed when in bloom during the autumn. Certainly there was nothing new in the way of colour among them, but as they were of a neat, dwarf habit—about 15 inches or slightly less—it was thought that they might be useful in certain places where the taller Asters could not be accommodated. During the present season they have lost their dwarf habit, being between 3 feet and 4 feet in height, and they will, therefore, be discarded after they bloom.—W. McG., *Balmoe*.

The Ceanothus is one of the most beautiful of autumn-flowering shrubs. Specimens in these gardens that were flowering well in July are still objects of great beauty, and unless injured by frost will continue in bloom for some weeks to come. There are numerous varieties, of which *Gloire de Versailles* is still one of the best. This variety is quite hardy in this locality. In very cold districts it requires the shelter of a wall. This plant is seen at its best when grown in a group. Specimens grown in pots may be planted at almost any season, but the next few weeks are probably the best time of the whole year in which to plant. The ground should be well prepared by deep treuching and manuring.—F. W. GALLOP, *Lilford Hall, Oundle, Northants*.

Scabiosa pteroccephala.—This neat little rock plant is now (end of August) in full bloom, the pale mauve blossoms very pretty against the hoary foliage. It is of semi-prostrate habit and looks well in a sloping pocket in a sunny position on the rock garden, and is of quite easy cultivation in well-drained gritty soil. Its chief danger seems to be from winter wet, the unfavourable conditions of last winter proving too much for one or two of my plants. Most of them survived, and now look as healthy as ever. I think that in a London garden it is not only the damp that is harmful, but the soot clogs the pores of the leaves and does the mischief. It is a marvel to me how so many alpine plants seem indifferent to the uncongenial conditions of a London garden.—W. O.

Eucryphia pinnatifolia.—This beautiful shrub is described at p. 453 as "fairly hardy, though there are many places in the southern midlands where it grows well." It is, however, much hardier than this description might lead readers to suppose. The climate of Edinburgh is far from genial, but there is at present in the Royal Botanic Gardens there a fine group of half-a-dozen *Eucryphia* 7 feet or 8 feet high covered with blossom. Like so many southern Chilean shrubs, it relishes the humid atmosphere of our western seaboard, the finest specimens I have ever seen being at Pottaloch, in Argyllshire. *Eucryphia cordifolia* is less hardy than the other, but it is flowering well here in the open border, and has reached a height of 8 feet without any protection.—HERBERT MAXWELL, *Monreith*.

—This, which was recently referred to in GARDENING ILLUSTRATED as thriving so well in Kent, used to form a delightful feature on the basin-like slopes of the Coombe Wood nursery. One particularly fine specimen, raised, I believe, from seeds sent home by Richard Pearce, by whom it was introduced, was each season a mass of its charming blossoms. Its distinct character, as well as the fact that but few shrubs are in bloom when this is at its best, are great points in favour of this *Eucryphia*. True, in some districts it is

difficult to establish, but at Coombe Wood, where the first plants were raised in this country, it certainly gave one the impression of being quite at home. In its earlier stages this *Eucryphia* is benefited by a fair proportion of peat in the soil, while it very much resents lime in any form. It must not be allowed to get dry during the summer, and, in common with all Chilean shrubs, it appreciates a liberal amount of atmospheric moisture.—W. T.

The Cornish Heath (*Erica vagans*).—This is lovely in the rock garden now and is covered with flowers. It flourishes in my London garden in a bed made up of well-decayed leaf-mould with plenty of sand mixed with it and is very showy when in full bloom. Like most of the Heaths it can be easily propagated by pegging down the growths and sifting some sandy soil among them. After a few months the stems will be found to have emitted plenty of rootlets, and when these are sufficiently advanced the plants can readily be divided. As the rootlets are very fine care must be taken when moving that they do not suffer from being allowed to get dry.—W. O.

Pyrus Vilmorini.—This is one of the newer kinds of *Pyrus*, for it was only introduced to this country about eleven years ago, although it had been known in France some fifteen years before. Belonging to the *Sorbus*, or Mountain Ash, section of the genus, it is known as a small tree or sometimes as a bush with elegant pinnate leaves, peculiar by their winged mid-ribs and tiny, blue-green leaflets. The white flowers, borne in rather large heads in June, are succeeded by showy red fruits which ripen in August. Its native country is China, where it is said to grow up to 20 feet high. Here it is inclined to branch freely whilst small, and to form a bush rather than a tree, some attention to pruning being necessary in order to encourage it to add to its height. It might well be used as a lawn specimen in a position where a vigorous-growing subject would be out of place, and it is one of those species peculiarly adapted for small gardens. It should be given good loamy soil and be increased from seeds whenever possible. From its present appearance and behaviour it promises to be one of the most useful of the newer species of *Pyrus*.—D.

Tying up shoulders of Grape bunches.—The shouldering up of bunches of Grapes, referred to by "Kirk" on page 448, is often carried too far. No doubt by spreading out the bunches to their fullest extent they look much larger than they otherwise would do, but the bunches are far from pleasing when laid on the dish. I do not go so far as to say that no bunches should be shouldered, as in such varieties as *Barbarossa*, *Trebbiano*, and such-like shouldering must be practised if handsome bunches are to be obtained. Occasionally a few bunches of other kinds, such as *Muscat of Alexandria*, or extra large bunches of *Black Hamburgh* may be improved by a little judicious shouldering. What I like to see are nice tapering pyramidal bunches, all the ugly shoulders, if any, having been previously removed. It takes a lot of courage to remove portions of clusters of bunches, but growers who practise it never have any fear on this point, knowing full well that those portions which have been removed add neither to the symmetry of the bunches nor the look of the crop when finished. All the ugly shoulders should, of course, be removed just as the bunches are being formed, thereby throwing all the strength into the main bunch.—P. T.

TREES AND SHRUBS.

VIBURNUM DAVIDI.

This very distinct Viburnum was sent from China by Mr. E. H. Wilson about fourteen years ago. *Viburnum Davidi* will apparently never grow very tall, for, while increasing fairly rapidly in width, it grows slowly in height, some of the oldest plants in the country being at present less than 2 feet high. Its evergreen leaves are marked with three prominent veins, which run the whole length of the leaf. This distinct veining can be well seen in the accompanying illustration. The individual creamy-white flowers are small and borne in flattened heads, each about 3 inches across, during May and June, the inflorescences being very stiff and erect. They are followed by small fruits, which are blue when ripe. In China the fruits are said to be a very conspicuous feature, but so far, although borne regularly, they have not been seen



Part of a bush of Viburnum Davidi.

birds. It is very suitable for large and small gardens, and rarely fails to fruit freely.

CLOTHING BARE SURFACES UNDER TREES.

REPLY TO "ARBOR."

As regards the results obtainable from this kind of planting, a good deal depends upon the nature of the shade, its density, and duration—points which should be considered before deciding what to plant. In the case of evergreen trees it is of but little use to plant anything but Ivy to carpet the ground under them, and as much light and air as it is possible to secure should be allowed to reach it. In planting under deciduous trees there is much more prospect of securing satisfactory results, provided the branches do not come nearer than 6 feet to 8 feet of the ground. If they should come lower than that it is advisable to cut them off. Of all deciduous trees the Horse Chestnut is

the spring and summer receive as much water at the roots as will keep the soil about them moist. Where only one kind of plant is required there is nothing better than Box. Plants of this, about 2 feet high, that have been grown in an open position, are the best. They must be planted rather thickly, as they will not grow very fast. In such positions Box is more inclined to get bushy than to increase in height, unless drawn up by surrounding subjects. In most cases a mixture of evergreens will have the best effect. The following will succeed under trees as well as one could expect—viz., Aucuba, Euonymus, Laurustinus, Yew, Rhododendron ponticum, Berberis Aquifolium, Box, green Holly, Butcher's Broom, common Laurel, and Portugal Laurel. In order to secure a carpet of greenery under trees the St. John's Wort answers fairly well if the shade is not very dense. The most satisfactory plant for this purpose is the Irish Ivy. For this the ground should be prepared in the same manner as for evergreen shrubs; and, as growth is made, it should be pegged down until the surface is covered. Where it is not desirable to plant anything of an evergreen character under trees that stand in isolated positions on lawns the ground beneath them may be made to have a cheerful appearance in early spring, before the leaves expand, by planting the space with bulbs, such as the Winter Aconite, Snowdrop, and Crocus.

FRUIT.

WARTS ON VINE-LEAVES.

COMPLAINTS come frequently from those who have not had much experience in Grape culture about the prevalence of warty-like excrescences upon the under sides of the leaves. This is the effect of one of the errors—too much moisture—in the treatment of Vines which amateurs commit. Especially in the case of young Vines is it more noticeable. Vines which have their foliage covered on the under side with warts cannot perfect a crop of Grapes so well as those which have their leaves free of such unnatural excrescences. This defect in growth is the outcome of too much moisture upon the leaves and atmospherically. In the latter form the mischief is most generally committed, although in conjunction with an insufficient supply of fresh air. Amongst cultivators generally it is a rule to damp the surface of the borders, paths, walls, and stages, if there be any inside the house, twice daily, and in some instances oftener. This treatment is all very well when judiciously carried out—that is, when the days are bright, so that an abundance of air can be admitted to the house without unduly cooling the temperature; but loading the inside of the house with moisture when the outside elements do not admit of sufficient fresh air being admitted causes the formation of the warts. In the case of new vineries, or even old ones, where the Vines have just been planted, many persons make it the rule to thoroughly drench the foliage twice daily during the time growth is active. This treatment may be correct when the weather is hot and the outside atmosphere dry, but when the atmosphere is loaded with moisture, and but little of the sun's power felt, then the daily syringing twice, or even once, is a mistake. Grape-growers who are year after year successful, study the appearance of the weather daily before determining the treatment the Vines shall receive for that day, as upon this point depends much of their success. A superabundant quantity of atmospheric mois-

at their best here. It thrives in good loamy soil to which a little leaf-mould has been added, but should be given a position sheltered from cold winds. D.

The American Mountain Ash (*Pyrus americana*).—Lovers of trees that bear brightly-coloured fruits would do well to make a note of this species, for its fruits are in every way as ornamental as those of our native Rowan or Mountain Ash, and, if anything, they are borne in larger clusters. The tree is widely distributed in eastern North America, and was grown in the British Isles as long ago as 1782. It never grows into a large tree, for its average height in America is given as 15 feet to 25 feet, and in this country it does not attain the larger size very quickly. As a rule, it is more pyramidal and denser in habit than the British tree, whilst it has much larger buds, which have sticky scales. The white flowers are produced in dense heads in May, and the coral-red fruits are ripe in August, remaining on the trees for a considerable time if protected from

the most injurious to anything growing under it. The Beech, the Elm, and Sycamore do not seriously affect undergrowth more than might be expected from the dense canopy of foliage with which they are furnished in summer.

In dealing with spaces under deciduous trees which have attained a large size, and filled the soil, even to near the surface, with roots, it will be necessary to make the soil as suitable as possible for the reception of the plants to be put under them. It will do no injury to the trees if the surface is broken up from 4 inches to 6 inches deep. When this is done, some fresh earth should be mixed with the surface soil, for it is necessary to give the undergrowth a bit of good soil in which to start. The trees, too, will derive benefit from the new soil. Once the undergrowth gets hold of the soil it will take care of itself as well as the circumstances under which it is placed will allow. The best time to plant evergreens under trees is, doubtless, early in October; if the work is done later the plants should all through

ture inside anyinery must be avoided. Moisture is necessary for the life and success of the Vines in perfecting their crop of fruit, but it should be given in such a manner as to be easily balanced by a judicious supply of fresh air.

The first thing to do when Vine-leaves are affected with warts is to check the supply of moisture in the air by damping down the borders only when the weather is bright, and this but once daily, preferring the afternoon at the time of closing the house. Air should be admitted very early in the morning, when the temperature reaches 70 degs. When the temperature is allowed to rise to 80 degs. before any air is given, the air in the house becomes stagnant, and is not conducive to a healthy growth of the Vines. The pores of the leaves become so gorged with an excess of moisture that assimilation is hindered to a certain extent, the result being warty foliage. If the atmosphere outside is loaded with moisture it is the height of folly to do likewise in theinery. By equalising the supply of moisture and heat in theinery—both very necessary matters in Grape culture—Vines affected with warty foliage can be cleared of these excrescences in the future growth. It is not possible, perhaps, to rid the present leaves of the warts when once thoroughly affected, but the after growth can be made perfect by a judicious application of air to the house, aided by the proper regulation of moisture.

LIFTING PEACH-TREES.

REPLY TO "INQUIRER."

EARLY lifting of trees is not favoured by some, but it is useless to wait for the leaves to fall if the best results are expected next season. No matter how carefully one plants Peach or Nectarine trees, with good culture gross wood results, and this grossness is better counteracted by lifting than any other plan—that is, if due attention is paid to extension. In good loam the trees invariably run to wood, and as one is anxious to fill a large space as early as possible, a check during the growth of the trees is not given by stopping. In such cases lifting may be described as the remedy. By proceeding cautiously there need be no fear as to loss of crop, and the health of the tree will be assured for the next four or five years. If care is taken to preserve the fibrous roots no harm will follow. When lifting, care should be taken to keep at a good distance from the trees, and in the case of Peach-trees in early houses lifting should be done early in September. It is a very good plan to damp the lifted trees overhead in the evening, as this keeps the buds plump and enables forcing to be done more readily the next season. With large trees it is not necessary to remove every particle of soil. Allow that adhering to the fibrous roots to remain, provided the weight does not break the latter. The preservation of fibrous roots is an easy matter if room is allowed at the start to get round them. All large roots may be cut clean off at a fair distance from the tree, and if the roots are inclined to descend, planting higher is beneficial. Manures of any kind should be omitted, good turfy loam well rammed or trodden being essential, and in clayey soil some mortar, brick rubble, or road scrapings is a valuable addition.

By this early lifting, severe cutting back, often the cause of canker later on, is avoided, and the trees can be forced the next season if not subjected to excessive night temperatures at the start. In the case of trees on open walls and that are required to fill up gaps, early lifting is advisable, as by so doing the root action

continues so long as the leaves remain, if these are assisted by frequent dampings to preserve vitality and encourage new root growth. After lifting no tying should be done till the trees have well settled down.

NEGLECTED PEAR-TREES.

AGAINST the house are some large Pear-trees, none of which are less than twenty-five years old, and some are very much older. The judicious pruning of these has for years been neglected, in consequence of which they required a lot of hard pruning, especially so, one very old tree, which has not borne fruit for several years now. The fruit-bearing shoots from the main side branches of this tree had formed very large gnarled and knotted round ends, which gave innumerable small shoots bearing a lot of leaf, but no fruit or blossom. In February last I cut out some twenty of the largest of these knotted ends, leaving where I could an inch or two of the branches (which were here $\frac{3}{4}$ inch to 1 inch in diameter) where they joined on to the main side branches. In other instances I cut away these branches close to the branch from which it sprang. The other fruit-bearing shoots on the tree I also pruned back as much as I dared as I was afraid of doing too much in one year. Again, towards the end of July, I pruned back all the new shoots, leaving five leaves to each shoot, which will have to be pruned back eventually to two. My difficulty now is that the shoots which I have trimmed back to five leaves have shot out again in a wonderful manner, forming a new shoot from the topmost bud, and are now some 18 inches to 2 feet long (new since July) on top of the first shoots of this year. I should be much obliged if you would kindly let me know if I should now prune back the new shoots once more or should they be left till February again? If they are to be pruned once more, should I prune them right back to within two leaves of this year's first new growth (where eventually they will have to be pruned) or only prune a portion (if so, how much?) of this year's second growth, leaving the final pruning to within two leaves of this year's first growth till February next? The chief offender in the way of long shoots is the very old tree from which I cut such a number of big, round, gnarled clumps. I could have cut away as many more of such growths with advantage, but I was afraid of killing the tree if I did it all at once. Ought this to be treated the same way next year? From where I cut away each clump some five or six new shoots have sprung out, which are amongst those that have already been pruned back and require another pruning. They are thin growths, however, and several of them will have to be cut out next February so as only to leave two shoots, as the tree has gone very much to wood.—F. H. HANCOCK (Colouel).

[The secondary growths or the young shoots you refer to in your note should be cut back to one bud without further delay. The pruning away of the remaining portion, together with the piece of wood on the first growths, which are now spurs, below them, can then be done any time towards the end of October or early in November. This would be a far better course to pursue than waiting till February next, as not only will the wounds heal before winter sets in, but the lowermost buds, or some of them, will plump up considerably during the winter, and in course of time, say during next summer, will become transformed into flower-buds. We would also advise you to leave the spurs longer than you propose doing, as, seeing the trees make such vigorous growth, it is quite possible that both buds, if you do shorten them as intimated, will start into growth and jeopardise all possible chances there may be of obtaining a certain number of fruit-buds on the spurs next season. If you cut these spurs back to the fourth bud or leaf, as advised, you will find that one, or at the most two, only of the buds will start into growth next spring, while the remaining two below them will be gradually transformed, as has already been

mentioned, into flower-buds. Provided that summer and autumn pruning, especially the former, is conducted on the same principles next year, a good quantity of these same buds should result the following year. With regard to the groups of shoots produced as a result of shortening back of subsidiary branches, you may cut clean out all that are not required at once. If any of these are wanted for extension leave them, if not very vigorous, about one-third their total length when shortening them. You have acted quite right in not doing the requisite amount of branch-thinning in one season. This is best spread over two, and in the case of very neglected trees three, seasons.

When sending queries please write on one side of the paper only.]

Diseased Peach foliage (P.).—The Peach-leaves sent show evidence of a severe attack of red-spider, which has sucked the sap from the leaves, and left them in the condition yours are. Red-spider is a most minute insect, which fastens on the undersides of the leaves, and so exists on them. It is too late, we fear, to do much good now, except that you can give the trees a good washing with very strong soapy water. By forcing that on to the trees most of the brown leafage would fall. That should be at once gathered up and burnt. It would do your trees great good, no doubt, if you could, so soon as the leaves have fallen, take off all the soil down to the roots, replace it with some fresh, to which are added good loam, old mortar refuse, and a half-pint to 3 bushels of basic slag. That should cause the trees to make new surface roots, and if that were so, you would soon see the effect in more healthy growth. But as the wall and wood may still harbour the insects or eggs, you had better also, so soon as the soil renovation has been done, have the trees sprayed with the caustic soda and potash solution, giving them a second spraying in January. That should destroy all insect pests. It is very possible that the glass coping, which, we assume, projects somewhat, keeps the trees too dry. Better remove the glass coping entirely.

Renovation of Vine and Peach borders.

—This can now be undertaken in all cases where the crops have been cleared, and when such a measure is from any cause deemed necessary. Such operations require to be carried out with promptitude, therefore everything that will be wanted for the purpose should be in readiness beforehand. Whether the lifting is to be of a partial or total character the same care must be exercised in the preservation of the roots as they are laid bare and liberated from the soil. Damp Moss is as good as anything to cover them with when they are turned back and laid out in wet mats, and which should be occasionally sprinkled with water. Shading of the roof, both during and for a time after lifting has been completed, tends to prevent the foliage becoming too much distressed, while an occasional syringing of the latter will have the same effect. This, with keeping the structure partly closed for a few days, will help to tide the Vines or trees over such a trying ordeal, and at the same time induce the roots to quickly push out new fibres into the fresh compost. Top-dressing in connection with both inner and outer borders, where the trees or Vines, as the case may be, are resting, may now have attention. With the compost in readiness to put on, the work can be quickly accomplished, as it can be spread directly the old and inert surface soil has been removed to a depth of 2 inches or 3 inches, or as circumstances may demand.—G. P. K.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SILENE ALPESTRIS.

THE *Silenes* are a rather numerous lot, but the best of them, so far, is that shown here. It may be grown as an edging plant, and it is very free in all conditions, but I never saw it quite so happy as among the rocks at Friar Park, raised out of the way of competitors. Given the gritty soil it needs it is a bright rock plant.—W.

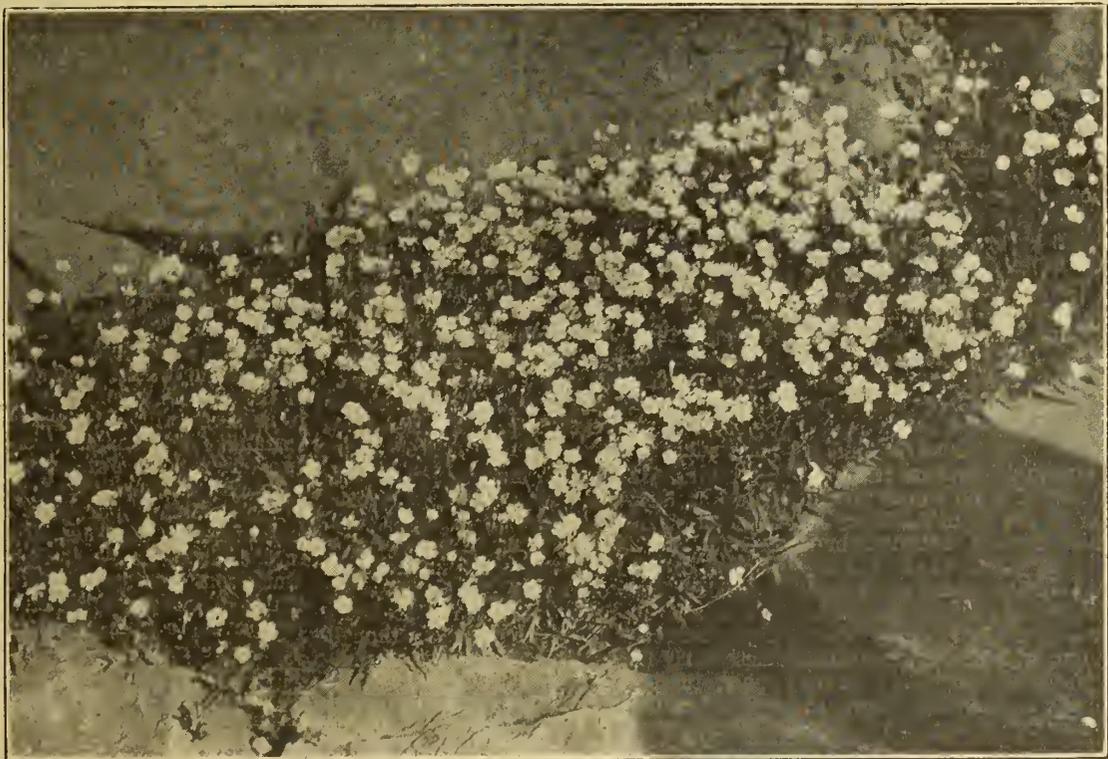
SAXIFRAGA OPPOSITIFOLIA.

It is curious and interesting that no two correspondents who have recently given their experience in reference to this valued group of alpiners agree as to their requirements, save, perhaps, in the matter of limestone, which may or may not be essential. The thing to do in such a case is to try and discover what suits

full exposure, while a combination of the two is almost sure to end in failure. Mr. Stuart Hogg pins not a little faith to the rock under which some of his plants root. Probably also the shade given by the rock assists not a little. His other group, flowering less freely, may, with mulching and moisture, give a far better account of itself, since all this tribe root in their onward course into cool or moist soils, and not less well into pure sand if moist and at, or below, ground level. This fact agrees with the view of Mr. Rogers that "it does not need lime." These notwithstanding, there is still the proof that lime is not distasteful to these plants.

Too frequently, perhaps, in recounting our failures and successes with plants, we are apt to regard them all too superficially, not taking into sufficient account the differences of locality, soils, altitude, rainfall, and other things which, unknown to us, must be playing a more or less important part one way or another. Surely something hinges even on the nature of

will be, for a further planting a little later. At Wisley, in the rock garden, there is a 6 feet long group a yard in width at the widest part. This is of the same mat-like growth and rooting as the group referred to above, and both are in a cool, sheltered position. Mr. Cornhill should see the Wisley example and note its position. The free-rooting and free extension of the rhizomes in this plant are proofs of its success, and as it invariably behaves thus when in cool or even moist surroundings there should be little difficulty in accommodating it. The example Mr. Cornhill "placed in a sunny position" was wrongly planted, and if dry also, as is the more likely, so much the worse. Why the "well-rooted pieces" also failed is not clear, and Mr. Cornhill gives no clue as to their subsequent treatment. Of this I am pretty certain, however, that had they been detached in September or thereabouts, firmly potted in sandy loam and leaf-mould, and given cold-frame treatment for a time, all would



Silene alpestris in the rock garden at Friar Park.

individual localities and then stick to it. The hundreds of plants in small pots that each spring are seen at Vincent-square would almost go to prove that frequent propagation—intensive propagation—plays an important part, since nothing could produce results more prodigal of flowering than these young plants. On the other hand Mr. Stuart Hogg and Mr. R. L. Reuth both get excellent results from examples not periodically divided, and certainly a 5-foot wide patch is something to boast of when in flower.

When growing quantities of the several varieties in pots in plunging beds it was frequently observed that the plants appeared to prefer the sand which constituted the plunging material to the soil in the pots, the escapes into the sand assuming a greater vigour and flowering in proportion. At the same time I know of instances where, in rather stiff, cool loam, on level ground over the red sandstone, the plant is a complete success. I prefer a cool rooting medium for the plants as opposed to one of dryness or

the water artificially applied, and which to some extent might be solved by the use of rain-water for some and the ordinary supply for others. The plant, happily, is not of an exacting nature, while its success in diverse localities and conditions should tempt many to grow it for its hardiness and abundant, as well as early, flowering. E. H. JENKINS.

NOTES AND REPLIES.

Ourisia coccinea.—In a note in a recent issue anent this fine plant I alluded to a planting I made of it a year ago, this comprising freshly-purchased stock in addition to that existing. That colony is now fully a yard square and so vigorous that, in the first week of September, it was flowering as freely almost as in June-July. Better still, and not content with matting the entire surface named, there were seen issuing on all sides numbers of the extending rhizomes bristling with root-fibres, each varying from 2 inches to 4 inches in length. Of such, a score or two might readily have been detached, and probably

have been well. Cool conditions at such a time are essential to success, the opposite invariably courting failure.—E. H. JENKINS.

The Mountain Avens (*Dryas octopetala*).—For continuous blooming this is hard to beat. It started to flower in May, and has gone on producing its lovely white Anemone-like blooms at intervals ever since. I think it is one of the choicest alpiners for the rock garden, its foliage, like little crinkled Oak leaves, being almost as charming as its flowers. It does quite well in a town garden.—N. L.

Silene sibirica.—Although only an annual, this species is very useful for the rock garden, as it sows itself about and comes up each year. I have one form with crimson flowers, and another with very pale pink, and both are beautiful. It only grows about 8 inches or 10 inches high, and is of quite neat habit, carrying its flowers in a close head.—W. O.

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CHRYSANTHEMUMS.

SEASONABLE NOTES.

Now that the buds have appeared freely every care must be taken that their development shall progress unhindered. A check of any kind at this time will manifest itself in irregular bud development, and this will be most pronounced when the florets unfold later on. The buds that have been developing for the past month or six weeks are known as crown-buds, which usually give the better and larger flowers, and for exhibition, blooms resulting from any other type of bud are of little value. Most of the blooms that one sees at the "National" and other large Chrysanthemum shows are produced from what are known as second crown-buds, which not only yield large, deeply-built flowers of even form and beautiful colour, but their quality generally is better than that of those resulting from a first crown bud selection. All too frequently first crown buds produce blooms that are rather coarse, and usually their colour leaves much to be desired. Readers who are unfamiliar with the character of growth of the Chrysanthemum would, therefore, be well advised to retain all buds as they are now developed. Crown buds vary somewhat in their character. First and second crown buds are formed individually in the points of the shoots, and they are surrounded by short, fresh, young growths. These young shoots are very brittle, and should be removed by breaking them out, leaving the bud quite alone at the apex of the shoot. The bud is then secured or retained. From this point plants that have their buds retained should be grown on without a check. During the next week or two plants that have not had their crown buds retained will be producing their

TERMINAL BUDS. This kind of bud is described as "terminal" because it marks the termination of the plant's growth, and from this point in the plant's history no further growth is made. Terminal buds are developed in clusters of varying density. Some clusters contain quite a number of buds, while others have comparatively few. Terminal buds, when partly thinned out, will produce beautiful blossoms in sprays, so useful for many forms of decoration. Rather more interesting and pleasing, however, are those sprays of blossoms that are the result of clusters of these terminal buds reduced to about three good plump buds on each spray. If the buds be removed so as to leave the three set well apart, the blooms will open in charming fashion and give sprays of the most beautiful character in the late autumn and early winter. Plants treated in this manner usually develop into large and handsome specimens that for conservatory decoration and providing cut flowers cannot be excelled. In some gardens there is a great desire to develop fairly large blooms even from terminal buds, and this can be very easily brought about by retaining the largest and best looking bud and removing all the others in the cluster. I have a great liking for the flowers produced in this way. As a rule, on well-grown plants it is possible to get from twelve to eighteen blooms, each some 6 inches or more in diameter, and such plants have their uses in the greenhouse or conservatory, and as cut flowers they are invaluable. Colour is usually of the best in flowers developed from terminal buds, and the form of the blooms is also good.

The moister weather of late has caused the buds to develop kindly. Usually at this period excessive heat has induced

many of the buds to fail or go blind, but no such trouble confronts the grower at the present time. Growers should without delay see to the shoots being securely tied to the stakes. Neglect of this will assuredly result in the loss of valuable shoots, and when one remembers how many blossoms a single shoot of a decorative variety may carry in embryo the importance of carefully staking and tying the plants should be obvious. The growths should be tied out in such a manner that both sun and air may exercise their ripening influences. Unripened growth seldom produces satisfactory flowers. Should the plants be crowded in their standing ground thin out the plants in the rows, as they will benefit immensely by so doing. Keep the standing ground free from weeds and also see that weeds are not allowed to develop in the surface soil of the pots. Feeding of the plants should be attended to, being careful that the liquid manure is not given too strong. E. G.

VEGETABLES.

THE AUTUMN VEGETABLE SUPPLY.

The month of September reminds us of the approach of autumn. In many gardens where a little forethought has not been brought to bear there is often a very serious falling off of seasonable vegetables at a time when they can ill be spared, and it is very difficult to keep up an ordinary supply without encroaching upon those reserved for the colder season. With a fine autumn some of the ordinary summer vegetables will keep a long time in good condition and prove very welcome. Amongst these serviceable late crops may be mentioned French and Runner Beans, Globe Artichokes, late Peas, Cauliflowers, and Vegetable Marrows. All these are useful autumn vegetables, and when they fail suddenly they are much missed. The

RUNNER BEAN is a most useful vegetable for autumn, and as long as frosts keep off, or can be kept off, a supply can be had. A slight covering thrown over a portion of the crop upon the likelihood of a sudden frost occurring may perhaps be the means of their being saved for perhaps three or four weeks longer. Although these early frosts often come upon us suddenly, there is generally sufficient warning to enable a covering to be placed over. A heavy covering is not needed, a piece of tiffany being sufficient to ward off a moderate frost. Certainly this may not occur until the end of the month, if even then, but it is always best to be prepared. In the case of

FRENCH BEANS, frames are the best protectors, as these are easily placed in position, and the glass covering affords additional warmth—that is, where the rows have been arranged for the purpose. Covering with mats, or even waterproof canvas, will ward off a lot of frost, and should certainly be practised where a supply has to be maintained as long as possible. With late French Beans it is also very advantageous if the earliest opportunity is taken to place small spray sticks along each side of the rows, so as to allow as much direct light and sunshine as possible. By doing this and keeping the pods closely picked a good supply may be maintained until comparatively late in the season. Very often the latter part of September and the early days of October are very warm and bright, but in the case of French Beans it is not safe to leave them uncovered after the end of the month, and very often they need it earlier.

VEGETABLE MARROWS succumb to even a moderate frost, and although it would be a difficult matter to protect plants

covering a large surface, it is often easy enough to protect the best part of a plant or two either by mats, to be kept off the tops with suitable supports, or, what is better, a spare frame. At any rate, it is much the wisest if it can be arranged to protect even a plant or two, so as to be prepared against an emergency. In many gardens, especially those of a small size, such crops as Runner and French Beans with Vegetable Marrows are about all there is to rely upon, so in these cases it will be most advantageous to have some means of protection, or, at any rate, to be prepared in case of a sudden visitation.

GLOBE ARTICHOKEs also well repay a little extra attention at this season. At this time there is generally a quantity of smaller late heads showing, besides those from this season's planted suckers. If these can be secured from injury they will be found very acceptable. All that is needed is to place a few strong sticks around those it is intended to protect, so that a mat can be thrown over them upon the likelihood of a frost occurring. Old heads and stems which are still attached to the plants should be removed, as these, if allowed to remain, only draw the support from the later and succession heads.

VEITCH'S AUTUMN BROCCOLI is generally tolerably safe up till the end of the month, but after that it is best either to draw the tops together and tie them with a piece of matting, or have leaves laid over them, at least those that are showing heads. This is generally sufficient to ward off a moderate frost.

NOTES AND REPLIES.

French Beans.—If these are required through the winter a start should be made at the present time. The number of pots to be sown will, of course, depend on the demand. If this is of a continuous nature two dozen pots sown every ten days or a fortnight will maintain a sufficient supply for all ordinary purposes. Pots 7 inches or 8 inches in diameter, filled with a mixture of loam, leaf-mould, and a little old Mushroom manure, should be filled to within 2 inches of the rim, and in them sow seven to nine seeds, the latter number if the seed is old. These, when they germinate, should be thinned down to five, leaving, as a matter of course, the strongest. For the present the plants may be raised in a slightly heated pit, but as autumn advances a warmer place must be found for them. To grow them successfully after this stage is reached French Beans must have a light position and a temperature ranging between 65 degs. and 70 degs.—M. B.

Cucumber Lockie's Perfection.—After having grown many sorts I have come to regard this as one of the best for private use. True, it is neither a long fruit nor a new kind. I am growing it in a frame on a bed of leaves. When planted there was only about a peck of soil to each plant to start it, and this was of a light sandy nature from a fowl-run. This was put on early in June, when annuals were taken out. During the cold time their progress was slow, but when the weather was warmer they were damped over daily. This is the only water they have had. Nice fruits were cut early in August, and now—the end of September—the plants are bearing freely.—DORSET.

Mustard and Cress are sown in boxes as required. It is advisable to sow Cress about forty-eight hours in advance of Mustard on each occasion, the seeds of the former taking longer to germinate.

Lettuce.—Continue to transplant seedlings as they become large enough, and later they will need to be again transplanted into frames for the winter. The final sowing of Lettuces will now be made.

OUTDOOR PLANTS.

HARTLAND'S GOAT'S RUE

(*GALEGA OFFICINALIS HARTLANDI*).

I HAVE long known and admired in a mild way the Goat's Rues, but never knew how fine this was until I put it in my mixed border, where I was delighted with its beautiful midsummer effect. The illustration gives no idea of its delicate colour and fine free habit. W.

PLANTS FOR THE FLOWER GARDEN.

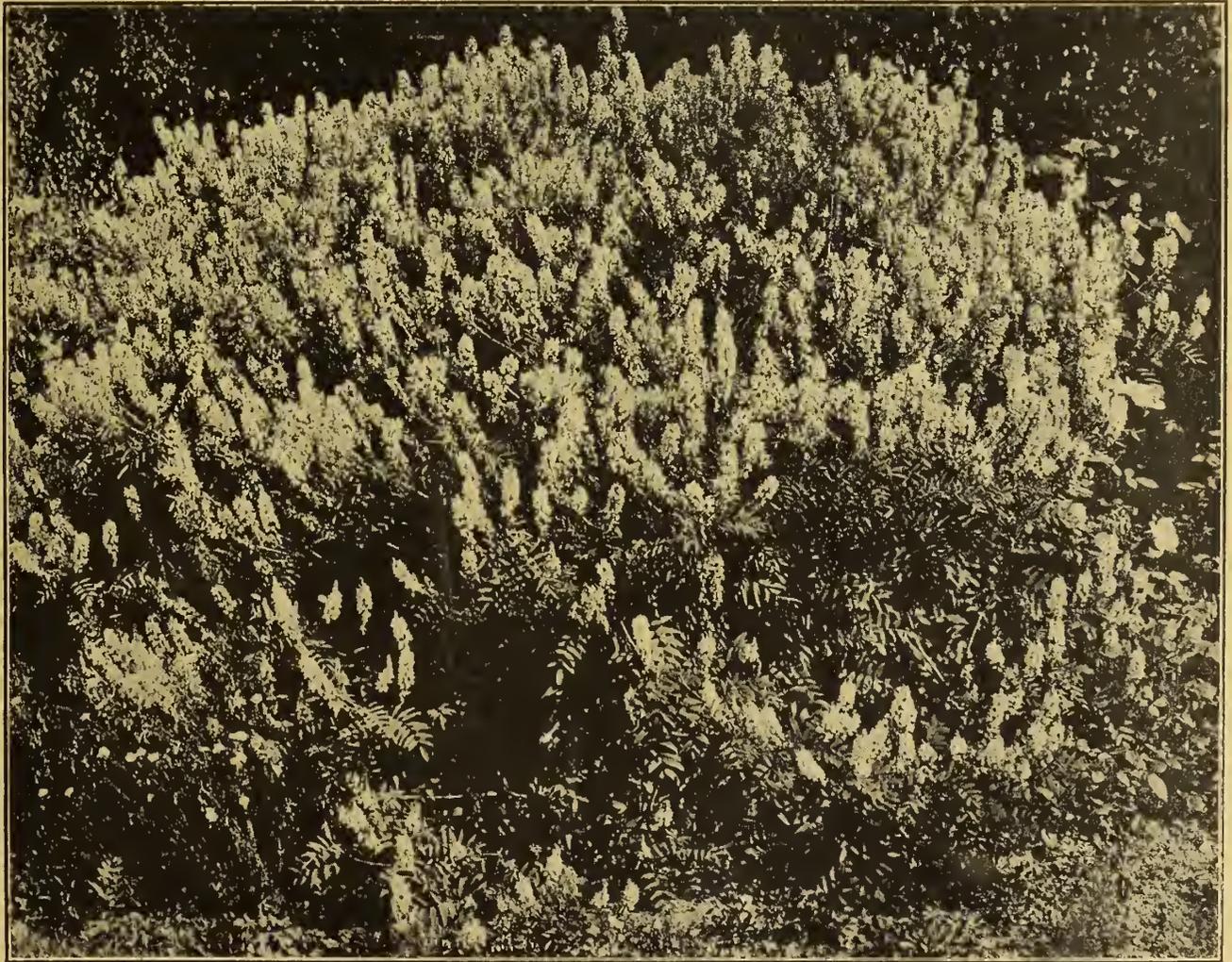
THE usual autumn work among the cuttings has, in the course of the week, claimed attention. It is not intended, during the present season, to put in such large quantities as has hitherto been the

tory from spring-sown seeds, so the practice of saving stock plants over winter has, for the present, been discontinued. Of course, the double Lobelia, Kathleen Mallard, cannot be propagated save by cuttings, so that a few plants of this variety must necessarily be kept. Although earlier than is absolutely necessary, in order to get the work finished, cuttings of the hardier things, like Tufted Pansies, Calceolarias, Pentstemons, and Marguerites, are being got in. These and such-like plants do quite well in beds in cold-frames, and may be put in comparatively thickly. KIRK.

LILIES IN 1916.

I KNOW not how Lily growers may have fared in Ireland this year, but in the

Sargentæ is following suit, and *L. Humboldti* has been overwhelmed; even the new and free-growing Lily, which I do not know whether to call *sutchucense*, *pseudotigrinum Biondi*, or *Wilmottæ*, has been overtaken just as the first blooms opened. Early-flowering species—namely, *L. umbellatum*, *L. pyrenaicum*, *L. Martagon*, *L. monadelphum*, and *L. pomponium*—escaped the contagion, though *L. Hansoni* suffered badly. *L. canadense* is perfectly healthy, but many groups of *pardalinum* have been affected. *L. testaceum* is good in parts, like the curate's egg, and so are its reputed parents, *L. candidum* and *L. chalconicum*. The excessive wet of last winter has destroyed many established bulbs. Gone is the peerless *L. Browni* from a bank which it graced for three



Galega officinalis Hartlandi at Gravetye; July.

case, but, at the same time, a sufficient number will be taken so that, if occasion arises, the stock may be increased by topping the plants in spring. Such things as Zonal Pelargoniums are put thickly into boxes which are made of a uniform size, so that when they are put into the pits in which they will be wintered no space will be wasted. Scented-leaved Pelargoniums are favourites, and are grown to some extent, so that, in the case of these, no diminution of numbers is practicable. For these, and similar cuttings, a light mixture is used, the soil is made fairly firm, and about 1/2 inch of sea-sand is placed on the surface. Meantime, the boxes are placed on a gravel walk in a well-exposed situation. Such things as *Ageratum* and *Lobelias*, which were at one time propagated from cuttings, are equally satisfac-

south of England and in the west of Scotland the present season has proved disastrous to their favourite genus. The summers of 1914 and 1915 were so favourable to the development of growth and blossom that we were deluded into the belief that means had been devised for averting or successfully combating the direst enemy of the race—*Botrytis cinerea*. But this year the most assiduous care has failed not only to prevent, but even to mitigate, the ravages of that fungus, and, most serious of all, species which we fondly imagined to be immune from its attacks have either succumbed or been badly disfigured. For instance, the splendid *Lilium regale*, after making excellent growth, and coming to the point of flowering, suddenly developed the fell blotches, and the blooms have been ruined. *L.*

consecutive seasons; *L. philadelphicum* has sent up but a few weakly, flowerless stems, and *L. auratum* has put in a very irregular appearance, except where the bulbs are protected by the roots of trees or shrubs.

It is a relief to turn from this dismal catalogue to contemplate the irrepressible vigour of *L. giganteum*, which only asks for liberal nourishment and cool quarters to defy disease and such enemies as mice and rabbits. The disappointment experienced by many persons in a first attempt to cultivate this—the easiest of all Lilies—arises from the dried-up condition in which purchased bulbs are generally received. No Lily is more easily transplanted when fresh, and the profusion with which the flowering bulb pro-

duces both seeds and offsets ought to ensure this fine species being grown far more commonly than it is.—HERBERT MAXWELL, in *Irish Gardening*.

SOME SUMMER-FLOWERING GENTIANAS.

G. ANDREWSII, a North American plant, remarkable for its blue flowers, which seldom open wide, produced in clusters on leafy stems about 18 inches high.

G. ASCLEPIADEA, one of the most robust, growing and flowering for many years, and forming large tufts. During the latter part of July and August the long, leafy stems, covered for the greater part of their length with beautiful blue flowers, reach a height of over 2 feet. If the ground is left undisturbed, self-sown seedlings come up freely round about the old plants, and soon a large colony is formed.

G. DECUMBENS forms rosettes of long, strap-shaped leaves, and produces decumbent branching stems 1 foot long, bearing at their tips clusters of blue flowers in July. The variety *mongolica* has mauve-coloured flowers. Both do well in deep rich loam in all but the hotter places in the rock garden.

G. FREYNIANA, a recent introduction, resembles the better-known *G. septemfida*, but is less erect in habit, and has larger flowers, more inflated towards the throat, while the fringed crest of the corolla is less prominent. The beautiful dark-blue flowers, with a paler throat, are produced in closely-packed clusters in July and August.

G. KURROO has the habit of *G. decumbens*, and is one of the most charming, its azure-blue flowers sprinkled with white spots near the throat developing in August and September. A sharp look-out must be kept in order to preserve it from slugs.

G. LAGODECHIANA, a recent introduction, grows in moist, stony soil at an elevation of over 7,000 feet near to the small town of Lagodechi, in the Eastern Caucasus. It is of prostrate habit, with ascending stems 6 inches or more long, each bearing from two to four short stalked, dark-blue spotted flowers in the axils of the upper leaves. They are nearly 2 inches across. The plant grows freely in well-drained, moist soil in a situation not too sunny.

G. ORNATA grows wild in the Himalayas and in Western China, and is extremely variable. The typical plant is of tufted habit, with narrow, fleshy leaves, many decumbent stems about 6 inches long, and each bears in September a solitary terminal flower of a charming turquoise-blue colour, marked on the outside with dull purple and buff-coloured stripes. It grows well in a cool, moist position.

G. PNEUMONANTHE is our little native Gentian, being found on boggy moorland in many parts of this country. It is about 6 inches high, bears deep-blue flowers in August, and is easy to grow in moist, well-drained soil.

G. PRZEWALSKII is a beautiful Chinese species in the way of *G. decumbens*, with more freely-branching stems bearing larger, lighter blue flowers in August.

G. SCABRA, a native of Japan and China, introduced about sixty years ago, has leafy stems, about 2 feet high, and is one of the latest to flower. Its flowers are dark blue with paler spots inside the tube.

G. SEPTEMFIDA is one of the earliest of this set, as it produces its bright blue flowers in June. It is variable, the stems ranging in height from a few inches up to 1 foot, with terminal clusters of lasting rich blue flowers.—*Field*.

CHRYSANTHEMUM FRUTESCENS.

(REPLY TO "PARIS DAISIES.")

Your experience as to the relative size of Paris Daisy blooms produced by plants grown in pots and in the open ground does not surprise me. The size of blooms produced by the London market growers in quite small pots would be a revelation to those who are only acquainted with this flower as grown in the ordinary way, either in pots or in the open ground. The market man brings his plants along quickly from autumn-struck cuttings, gets them into 6-inch pots in early spring, and as soon as the pots are full of roots and the buds are well formed starts feeding, so that the flowers are highly nourished from their infancy. When I first saw plants grown in this way I thought they were a new improved variety, for the blooms were quite the size of those of the Ox-eye Daisy of the meadows. Later on I found that I was mistaken, and that culture was responsible for the abnormal size of the flowers. I do not believe that it is possible to obtain blooms of such quality from plants in the open ground. I have just been looking at my plants. They are healthy and vigorous, but the flowers are only half the size that I have had them in pots.

The Paris Daisy is, naturally, very free of growth, and if the plants are well fed they make very rampant growth and in a damp time make foliage out of all proportion to the amount of flowers they produce. Your suggestion to sink plants in pots in the ground is, I should say, a very good one, and you would do well to give this plan a trial. I should not be surprised if you obtained blooms equal in quality to those furnished by plants in the Seakale-pots. I would try 6-inch or 7-inch pots as well as the larger receptacles. In the course of time roots will come out from the drainage-holes. The progress of these must be checked by twisting the pots round two or three times, otherwise they will begin to make rank growth. When *Etoile d'Or*, the yellow-flowered kind, came out some years ago I grew it in pots in a sunny greenhouse, and I have never seen such blooms since. I got the plants early in the year into 7-inch pots, and as soon as they became root-bound and flower-buds were forming freely I gave them weak guano-water frequently. Those plants were a mass of bloom. The colour of the flowers was very bright, and they were very large. One effect of so liberally feeding the mass of active fibres was that some of the blooms formed extra florets and became, to a certain extent, semi-double. I have often thought that I missed a chance then. I ought to have saved seeds from these blooms, and might have got a double yellow variety. As regards big specimens for exhibition some of the old plants could be kept and would probably do very well, but in the future I should propagate in early spring and grow the plants in the open air, picking off the flowers. They would come into 6-inch pots and would have a quantity of growths, and be in fine time for putting into 8-inch pots the following April. The leaves sent appear to be those of *C. frutescens*; the variety I have, under the name of *Halleri*, has narrower leaves, is more compact of growth, and produces more blooms in proportion to the size of the plants.

J. CORNHILL.

NOTES AND REPLIES.

Dividing-line in garden.—As a regular reader of your paper, I should be obliged if you would give me your advice. I have a very old Laurel hedge, about 7 feet high and about 4 feet wide, dividing flower garden from kitchen garden. It runs from north to south.

A narrow border, very damp and sour in winter, and very dry and caked in summer, getting very little sun, is on the east side of hedge. On west side, rows of Raspberry canes from north to south. The south end of border is much shaded by trees that cannot be removed. I am anxious to improve border, at least possible expense, and also to do away with the waste of room owing to width of hedge. Laurels are too old to be clipped back, as it would leave no green at all. Some shelter is necessary as well as screen between gardens. Would a strong Oak trellis, with posts, give sufficient shelter and support Roses and Clematis east side, and small cordon fruits or Loganberry on west side, or must I have palings? If the latter, where had I best procure them, and of what wood, and should they be creosoted all over, or will this harm plants?—*Mrs. A. L. PALMES.*

[*Get a woodman to cut down and burn the Evergreen Cherry (commonly and wrongly called the Laurel). Trench and well manure the ground, and plant a Holly hedge, using seedlings of the wild Holly. The Oak fence is a good idea, if Oak be plentiful in your district. Jarrah—an Australian wood—is said to make an enduring fence, but we have no experience of it. We prefer an Oak post and rail fence to the Oak palings, which are costly and not so fine in effect as the open trellis.*—*Ed.*]

Lilium Browni.—The illustration of this Lily in *GARDENING ILLUSTRATED* for August 19th shows what a fine plant it is when in a flourishing condition, but unfortunately it cannot always be depended upon. The plant shown is what must be regarded as *Lilium Browni* (true), that is to say the form so long grown in Holland under the above name. We are told by most authorities that *Lilium Browni* is a native of China, which may be correct, but at the same time the form so long known in cultivation does not appear to have been discovered by any of the recent collectors. Mr. Grove, in his book on Lilies, while giving the native country of *L. Browni* as Western China, states that *L. Browni* of gardens is not the same as the typical plant from Western China. Why this latter, of comparatively recent introduction, should be regarded as the type when *L. Browni* as grown in gardens made its appearance about 1830 I cannot understand. Undoubtedly there are several forms more or less closely resembling each other, and whose nomenclature is in a confused state. A. Grove, in *GARDENING ILLUSTRATED* (page 433), says that the true name of *L. odorum* is *L. japonicum colchesterense*. How this comes about I fail to see, for surely it is more nearly related to *L. Browni* or *longiflorum* than it is to *L. japonicum*, which is so generally known as *L. Krameri*. If priority of name stands for anything, *odorum* should be allowed to remain, for it is certainly far more widely removed from *L. japonicum* than is *L. rubellum*, which, on its introduction, was at once assigned specific rank. It may be said that the name of *odorum* is an inappropriate one, as there are many others equally fragrant, but the same argument might be brought forward for changing the name of *L. longiflorum*, which in length of flower is greatly surpassed by the more recently introduced *Lilium neilgherrense*.—*W. T.*

The Cup Plant (*Silphium perfoliatum*).—I saw a fine plant of this the other day in the interesting garden of Mr. J. A. Mather, Hastings Hall, Moniaive. Mrs. Mather is a devoted flower-lover, and, in consequence, many plants not met with every day are to be seen at Hastings Hall. *S. perfoliatum*, as seen there, was handsome, though, maybe, a little coarse. It

was fully the maximum height generally mentioned of 8 feet, and was a big bush bearing a number of its yellow Sunflower-like blooms on stout stems. *S. perfoliatum* is best in the wild garden or an odd corner where its bold habit will be seen to advantage.—S. ARNOTT.

GARDEN PATHS.

THERE is often something incongruous in the stiff Grass edgings of flower-garden paths, and this incongruity is specially emphasised by narrow strips of Grass which are intended to define a break between the garden path proper and any shrub plantations near. It is conceivable when a sharp rise in the ground behind necessitates a raised boundary of Grass to prevent soil being washed down over the path by rain-storms, but for no other reason ought Grass ribbons to be tolerated. They are obviously artificial; they do not improve surroundings; while

tration shows one of the many forms which may be adopted. When the path and steps were first made the edgings were formed by stiff, unnatural Grass lines, but now, by the introduction of various plants and the elimination of the Grass edging, a break has been obtained accompanied by fragrance and colour. It is also a curious fact that when plantations are carefully planned, in proper proportions to the surroundings, the result is never objectionable even when the plants are at rest. At their best they call for admiration; but when their beauty has faded they melt into the general surroundings of their environment.

Avenues and long walks are generally constructed in parallel straight lines of trees. Surely this method can be improved upon by means of breaks introduced by copying a natural design. Groups of the larger trees, not necessarily planted exactly so many feet from each other and from the edges of the avenue,

propagation and planting of the many different things to be found in hardy borders will rest with the demand. There are special favourites in most places both for the border display and for cutting, and these should be strengthened accordingly. If bulbs are grown on the general border it is not too late to suggest that their whereabouts should be marked with durable pegs before the autumnal alterations are put in hand. With the great wealth of hardy plants at our disposal we do not think, however, it is advisable to plant bulbs on the ordinary border, especially as there are few places where they cannot be naturalised on Grass either on a large or small scale.

The Basil-leaved Soapwort.—*Saponaria ocyroides* in autumn is always acceptable. The flowers vary much in colour from seed, but a deep rose-coloured form I have is again delightful, trailing over a sloping gravel bank and freely spangled with its bright flowers. *S. ocyroides* likes a dry position, and should not be too much exposed to cold winds in winter. I have frequently seen it go off in such places, but, happily, young seedlings often survive when older plants die, and in quite a number of gardens self-sown seedlings appear in considerable numbers.—S. ARNOTT.

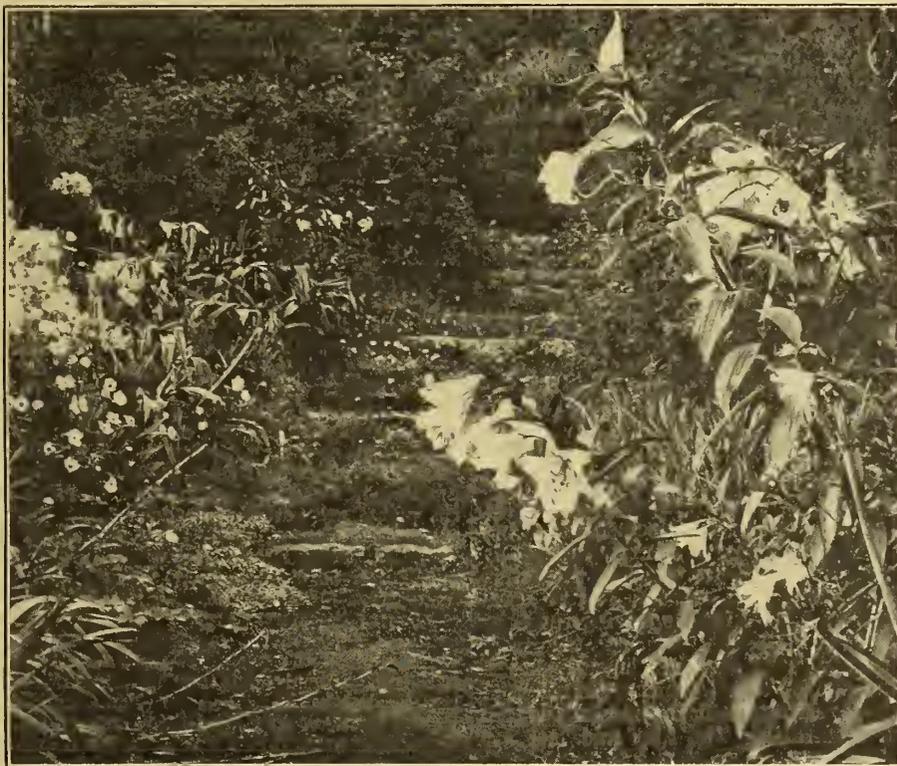
NATIONAL ROSE SOCIETY'S
AUTUMN SHOW.

SEPTEMBER 19TH, 1916.

THE holding of an autumn exhibition a year or two ago by the above-named Society obviously met a great want, and every year the event is marked by increased popularity. Before its coming the beauty of the Rose in autumn was lost to all but professional men and a few enthusiastic amateurs, the greater public knowing little about it. Its wealth and variety were, therefore, when seen, in the nature of a revelation, giving, as a result, a new impetus to the cultivation of the Rose. In this way the Society has done useful work, and gardens are richer and more beautiful because of it. The exhibition recently held, if not the best of the series so far—we thought that of last year of higher flower excellence—proved, to some extent, the exceeding wealth of the Rose at this season. Finer individual flowers, as just hinted, we have seen before, though never finer groups or banks. After all, the excellence or otherwise of an exhibition of this nature is very much at the mercy of the weather on the days—and nights—immediately preceding the show. These were, this season, by no means congenial to the development of the flower, hence such excellence as the show provided, and not a little its extent, came as a pleasant surprise.

The outstanding novelty of the occasion was the "Gold medal" "H.T." Christine shown by Messrs. S. MacGredy and Son, Portadown. Large and shapely, and of the richest orange-gold, it attracted everybody, its firm, glossy foliage and short-necked flowers being other points of importance. It is possessed of but a delicate tea perfume. Baldwin (H.T.), from the same source, is a smaller flower of deep apricot tone. It gained a certificate of merit. A like award was given Blush Queen "H.T.," shown by Messrs. Frank Cant and Co. It is of large size and very full. A single pink-flowered H.T., Mrs. Chas. E. Salmon, was also staged by Messrs. F. Cant and Co. It is attractive and free, but gained no award. Following are some particulars of the exhibits:—

Only one exhibitor, Messrs. D. Prior and Son, staged in the Nurserymen's Class for thirty-six distinct varieties. Of exhibition Roses such notables as William Shean, Lyon Rose, Candeur Lyonnaise (handsome white), Princess M. Mertchersky (a lovely pink selected for the silver medal), George



A garden path.

they only create unnecessary labour in mowing; as, in the majority of cases, these ribbons are made too narrow to admit of the use of a mowing-machine. In other words they constitute an objectionable feature and are a nuisance to the labourer who is supposed to keep them in order. Then, if paths are made sufficiently wide, in long paths at least 10 feet in breadth, the shrub or flower plantations which define them can form their own groups and curves, often erratic but always pleasing when the vegetation encroaches upon the sides of the path with reasonable irregularity thereby avoiding or breaking the two parallel lines formed by the Grass.

When observing long woodland paths we shall find that there is never any suggestion of regular parallel lines. On the contrary, they wander on sometimes broad and sometimes narrow, but always natural. Therefore the sides of our paths often require attention and thought, and their appearance can be easily modified and improved. The accompanying illus-

interspersed with smaller groups of shrubs planted irregularly, and not in circular beds, thereby defining shapes which should not be emphasised might be formed.

R. H. BEAMISH.

Hardy plants.—It is a good plan to note down in early autumn any alterations that are contemplated with hardy plants either on the mixed border or in separate beds. In the former case especially alterations are often necessary. The acquisition of superior varieties to those already in hand will lead to the removal of the one in favour of the other, whilst with new species mistakes are occasionally made in the positions originally assigned them in the matter of situation, in their relative heights in connection with other things, and the vigour of growth. The height can in many cases be regulated by stopping or pegging, but vigour is not to be denied, and strong-growing plants, if planted too closely to weaker brethren, are apt to interfere with the well-being of the latter. The question of increased

Dickson and Nerissa (cream) were remarked. The collection well merited and was awarded first prize. For eighteen blooms, like conditions, there were five exhibitors, the leading lot being presented by Mr. George Longley, whose H. V. Machin, Maman Cochet, and Charles J. Graham were good, the entire set very fresh-looking and clean. In the exhibition Tea and Noisette section Mr. Longley again took the premier award, five again staging collections. Alexander Hill Gray, W. R. Smith, and Mrs. Foley Hobbs (the last particularly good) were among the best. Messrs. Prior were second, the pick of their set being Mrs. Dudley Cross and Molly Sharman Crawford. In the class for twelve perpetual-flowering decorative Roses in vases the competition was keen, Mr. John Mattock taking first place and showing good-coloured flowers of Marquise de Sinety (golden-orange), Mrs. A. Hammond (pale pink), Ophelia (flesh and pink, shapely and very beautiful), and Mrs. G. Reid (cream and blush). Apart from good, well set-up flowers this exhibitor's produce appealed by reason of distinct naming, as great a help to visitors as to the Press, who usually have not too much time at disposal. Mr. George Longley was second, his vases of Alexander Hill Gray (cream-yellow) and Rayon d'Or being very fine. Mr. Elisha Hicks was third, his most notable variety, the single crimson Princess Mary, which is also delightfully fragrant. White Roses were chiefly shown in the single basket class for twelve blooms, one variety, these being Frau Karl Druschki and Candeur Lyonnaise, from Messrs. D. Prior and Son and Mr. Elisha Hicks, who took first and second prizes in that order. There was no competition in the class for nine baskets of Roses, which make so sumptuous a feast at the summer show, and only one exhibitor, Mr. Elisha J. Hicks, staged in that for five baskets. His lot comprised Joanna Bridge (a huge semi-double cream), Princess Mary (single crimson), Mrs. Dunlop Best (apricot), and those ever-popular varieties, Lady Hillingdon and Ophelia. The first prize was deservedly awarded.

The class for twenty-four distinct varieties of decorative Roses, not exceeding seven stems of each variety, brought two capital collections, the leading prize going to Mr. John Mattock for a most effective display. All were well set up in vases. Lady Pirrie (a lovely rose), Mrs. H. Stevens (a chaste and pure white), Old Gold, Trier (a cluster variety of great charm), Marquise de Sinety, Rayon d'Or (rich gold), and Louisa C. Breslau were some of the best examples. Messrs. F. Cant and Co., who were second, also showed Rayon d'Or, Lady Pirrie, and Old Gold, together with Carrie (a charming peach and cream combination), La Tosca, A. R. Goodwin, and Mrs. Alfred Tate.

GROUPS OF ROSES.

These were arranged on the floor at the western end of the Hall, and constituted a great attraction. Four exhibitors competed, the space allowed being 150 square feet. The first prize went to Messrs. George Paul and Son for an admirable lot in which many first-rate sorts were seen to advantage. Miss Alice de Rothschild (soft yellow), Ophelia, Lady Hillingdon, Mme. E. Herriot, Rayon d'Or (in splendid form), Mme. Jules Bouche (a creamy-white of exquisite form), Mrs. Edward Powell (rich scarlet, regarded as mildew-proof), Old Gold, Queen of the Musks (very pretty white), M. Jean Dupuy, and Constance (golden-yellow, an improved Rayon d'Or) were among those of outstanding merit. Messrs. Hobbies

were second, showing a considerable variety under a canopy of weeping standard Polyantha sorts. Mrs. Andrew Carnegie (very fine white), Pharisæer, Snow Queen, H. E. Richardson (rich red), Arthur Munt (ivory-white), and Lieutenant Chauré (very good red) were among many things. Mr. C. Turner, who was third, associated sprays of red-leaved Acers in vases with his flowers, the whole presenting a very pleasing effect. The representative groups of Roses arranged on tabling also constituted a good feature. In one of these (space allowed, 18 feet by 6 feet) three collections were staged, the Rev. J. H. Pemberton being placed first with an attractive exhibit, many of which were raised by him. Moonlight, Callisto, Danae, Clytemnestra, Daybreak (a pale Callisto), and Queen Alexandra (single white, which formed the centre) were the chief. Others included Comtesse du Cayla, Mme. Jules Bouche, Rayon d'Or, and Lady Pirrie. Messrs. W. and J. Brown were given second place, and we were not alone in the opinion that it was a long way first. In great variety and well displayed, it was decidedly the more "representative," a point upon which the schedule lays not a little stress. Prominent varieties in a large array included Lady Pirrie, Souvenir de G. Prat, Duchess of Wellington (rich yellow), the pure white Mrs. H. Stevens, and General MacArthur. As an exhibit of cut Roses it was the most representative in the whole show. On a space 20 feet by 4 feet there were also three exhibitors. In this class Messrs. B. R. Cant and Sons were well to the fore, staging such excellent sorts as Edu. Meyer, Harry Kirk, Lady Hillingdon, Irish Fireflame, General MacArthur, and Chrissie Mackellar. This firm alone staged in the class for thirty-six varieties, all classes of Roses being allowed. Here were seen such good sorts as Mrs. Foley Hobbs, Melody, British Queen (perhaps the finest white Rose grown), Lady Hillingdon, Earlate (a cluster sort of rich red colouring), Sunburst, and many others. Rose hips were a less attraction than we have seen on some former occasions, Mr. J. C. Allgrove having the finer exhibit and gaining first prize. The most meritorious were those having urn-shaped fruits, and of these, fruiting branches of Rosa Moyesi, R. setipoda, and R. Fargesii were remarked. The first and last are the most handsome, that last named the most brilliant in colour, the hips also freely spined. All are scarlet-fruited and distinct from each other. In the second prize lot, from Messrs. B. R. Cant, the variety Sheilagh Wilson, with big clusters of green hips was one of the most distinct.

LADIES' CLASSES.

The dinner-table decoration of cut Roses was a chief attraction, some ten tables being arranged with, for the most part, admirable taste and skill. The outstanding exhibit of them all, however, was that arranged by Mrs. L. Colston Hale, Warminster, who, with a delightful harmony in rose-pink and yellow—the former very sparsely employed—easily secured first prize. The varieties were Isobel (single rose-pink) and Golden Emblem, and we have but rarely seen anything so good or artistically done. Mrs. Tisdall, Woodford Green, with a handsome arrangement of Ophelia and sprays of Rosa rubrifolia, was second, and Mrs. A. C. Brown, Reigate, with a good table of Lady Hillingdon, third. An extra prize was awarded Mrs. Courtenay Page for her table, this lady securing first prize for a bowl of Roses, using Old Gold and foliage with considerable skill.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM SEPTEMBER 20TH.—*Abelia rupestris*, *Hardy Fuchsias* (in variety), *Magnolia grandiflora*, *Desmodium penduliflorum*, *Buddleia variabilis magnifica*, *Ceanothus* (in variety), *Calycanthus floridus*, *Wistarias*, *Clematises*, *Roses*, *Viburnum Tinus*, *V. coriaceum*, *Hydrangeas*, *Polygonums* (in variety), *Spartium junceum*, *Gyneriums* (Pampas Grass), *Veronicas* (in variety), *Astilbes*, *Hypericums*, *Rhus*, *Sambucus canadensis*, *Liliums*, *Tritomas* (in variety), *Gladiolus* (in variety), *Hyacinthus candicans*, *Asters* (*Michaelmas Daisies*) (in great variety), *Delphiniums*, *Enotheras* (in variety), *Helichrysums*, *Heleniums*, *Tree Lupins*, *Anemone japonica* (in variety), *Erigerons*, *Montbretias* (in variety), *Achilleas*, *Echinops*, *Lobelia cardinalis*, *Lavateras*, *Statice* (in variety), *Hollyhocks*, *Sidalceas*, *Linums*, *Coreopsis grandiflora*, *Dahlias*, *Thalictrums*, *Geums*, *Linarias*, *Verbena venosa*, *Francoas*, *Potentillas*, *Agapanthus umbellatus*, *Belladonna Lilies*, *Colchicum autumnale*, *Cyclamen hederifolium*, *Aquilegias*, *Pyrethrums*, *Pentstemons* (in variety), *East Lothian Stocks*, *Antirrhinums*, *Sweet Sultan*, *Nepeta Mussini*, *Salvias* (in variety), *Begonias*, *Cannas*, *Calceolaria amplexicaulis*, *Ageratums*, *Gazania splendens*, *Tufted Pansies* (in variety), *Carnations*, *Early-flowering Chrysanthemums*, *Annual Delphiniums*, *Scabious* (in variety), *Salpiglossis*, *Nigella*, *Anchusa Opal*, *Plumbago Larpentæ*, *Sedum spectabile*, *S. Sieboldi*, *Mesembryanthemums*, *Antirrhinum Asarina*, *Gysophylas*, *Tunica Saxifraga*, *Silenes* (in variety), *Clematis* (in variety), *Roses* (in variety), *Sweet Peas*, *Mignonette*, *Genista tinctoria*, *Clerodendron trichotomum*, *Cistus*, *Daphne Cneorum*, *Convulvulus mauritanicus*.

WORK OF THE WEEK.—A batch of the Poppy Anemone (*A. coronaria*) was planted during the week; another batch will be put in during October. By successive plantings the flowering season is considerably prolonged. The Poppy Anemone delights in a rich loam, with which has been intermixed well-rotted manure. If the soil is heavy, plenty of sharp sand should be mixed with it. *Belladonna Lilies* are now in their full beauty. Unfortunately, the plants are not perfectly hardy, but they succeed out-of-doors here at the foot of a warm wall. The bulbs resent frequent disturbance, but if it is required to increase the stock or make fresh plantings they may be taken up as soon as the flowers are over and replanted at about 1 foot apart (according to the size of the bulbs) in a rich, yet light sandy soil free from animal manures. Stimulants are best applied in the form of liquid-manure while the leaves and growth are active. The herbaceous borders now need a thorough overhauling, as a great many of the plants have finished flowering. All untidy flower-growths wherever possible should be removed. I do not advocate the too-early removal of all the old flowers, preferring to allow them to wither naturally. The rock garden requires frequent attention, cutting back any of the stronger-growing plants which have grown out of bounds, and top-dressing any that require it with suitable soil. F. W. GALLOR.

Lilford Hall Gardens, Oundle, Northants.

SOUTHERN COUNTIES.

Pot Strawberries.—As the pots are now full of roots, feeding with liquid manure or guano may be commenced. If judiciously applied, beneficial results in the shape of bold, strong crowns will follow. Runners and weeds must be persistently removed, and if the plants have a tendency to produce more than one crown, or a smaller one on either side of the main crown, these should be removed. When duplicate crowns are produced, as sometimes happens, take the weaker away. Rearrange and give the plants more space if necessary, and when heavy rains occur and the soil is moist enough, lay the pots on their sides till the weather clears. Evening syringing is now unnecessary, as the foliage invariably becomes abundantly bedewed during the night. On very hot days a good syringing about mid-day is beneficial.

Apricots.—The present is a good time to perform what pruning is necessary, instead of leaving it until winter. Spur-pruning may also be undertaken with far better results, as the pruner can see where the spurs are congested, and thinning is necessary more readily now when the trees are clothed with foliage than when bare. Another advantage gained is the fact that the wounds heal very quickly now, therefore gumming has not to be feared, as is the case when severe frost occurs directly after pruning in winter. In pruning, spurs which have grown out or project a long distance from the face of the wall should wherever they can be spared be removed first. After they are out of the way, the others can be more readily dealt with. The wood in spurs which are to be retained should, if crowded, be thinned out also. If given annual attention, the wood of Apricot trees can easily be kept close to the wall, and obtain the full benefit which the latter affords.

Apples and Pears.—The crops of both being anything but plentiful, the greatest care has now to be taken to preserve such fruits as the trees are carrying of maincrop and late varieties from birds. The "tit" family is the worst culprit in regard to Pears, but thrushes, starlings, and blackbirds work an incalculable amount of mischief amongst Apples when they begin to ripen and are full of juice, unless scared away by being shot at, etc., in all cases where it is impossible to enclose the tree with nets. Early maturing varieties of the codlin race of Apples may be kept for some little time after gathering if placed at the coolest end of the fruit-room. The same holds good with regard to Pears, such as Beurré Giffard, Beurré d'Amanlis, and Summer Beurré d'Arenberg. With regard to dessert Apples, Worcester Pearmain, though but second rate in regard to flavour, will in this season of scarcity prove valuable. This, fortunately, will keep in good condition for some time if not gathered before the fruits arrive at maturity. Nets should now be taken off Gooseberry and Currant quarters, dried, and if not further required folded up and stored away.

Indian Azaleas.—Should showery or very wet weather continue these will be the better for being taken in under cover, as too much moisture is injurious to the roots. A light, cool, and airy house must be accorded them if the flowering period has to be retarded as much as possible. In any case, it is best to place them in such a structure taking out the plants for forcing as wanted, beginning with the earliest varieties. Pick off dead leaves. Scrub the pots, and if there is the least suspicion of thrips on the foliage dip the plants in an insecticide, and syringe or dip them in clean water half an hour or so afterwards.

Camellias.—These, too, must be housed shortly. Although they do not suffer to the same extent from an excess of moisture as do Azaleas, too much of it might cause the buds to drop. If time admits, these should be well cleaned beforehand, especially if affected with white scale and smut on the foliage. A cool place is necessary for these; in fact, Camellias do very well in a structure facing north.

Chrysanthemums.—The earliest-flowering varieties should now be under cover and in many instances coming into bloom. The remainder—late-flowering kinds excepted—should now be taken in and arranged in Peach-houses and vineries when other and more suitable structures are non-existent, allowing as much space between the plants as is possible under the circumstances.

Schizanthus.—Seed of the varieties Wisetonensis and the large-flowered hybrids should be sown without delay, if the matter has not yet had attention. This sowing will supply plants for flowering in April and May next.

Bulbs for forcing.—Bulbs of such subjects as are under existing conditions obtainable should be potted or boxed in the usual way, and, after watering, plunged in Cocoa fibre or leaf-mould, where they should remain until they become well rooted. For early flowering, plunging in a frame or in a shed will expedite the rooting. The pots or boxes should in all cases be covered with at least 6 inches of the plunging material. A. W.

MIDLAND COUNTIES.

Fruit-trees in pots.—The present is a good time to look over pot fruit-trees. Any old unsatisfactory trees should be discarded. All pot-trees should be repotted annually. This necessitates a considerable reduction of the mass of soil and roots, so that they may be replaced in the same size pots, except in the case of young trees in small pots, which may have a size larger. Lime is a very necessary constituent in the culture of all stone fruits, so that a good percentage of old mortar-rubble should be mixed with the potting material, with a good sprinkling of wood-ashes, soot, and crushed bones. The trees must be placed in their new pots as quickly as possible after the roots have been disturbed. Pot firmly, taking care that the space between the ball and the side of the pot is quite filled with soil, using a very thin ramming-stick for this purpose. When potting is finished stand the trees, if possible, in a position sheltered from cutting winds. Thoroughly soak the soil with clear water, and syringe the trees two or three times a day during fine weather. Any pruning necessary should be done now, but if the trees have been attended to in the matter of disbudding and pinching during the summer, very little will be required.

Gathering fruits.—Most of the early varieties of Apples and Pears have been gathered. Later varieties are receiving attention as they become ready. Fine dry days are taken advantage of, as on no account must the fruits be gathered when damp. Every care should be taken not to bruise the fruits or gather them before they are ripe, or the colour and flavour will be impaired, and late varieties will not keep so well. Keep the fruit-room dark, opening the ventilators occasionally to carry off excessive moisture.

Pelargoniums of the show and fancy sections, cut back and started into growth as advised, are ready for shaking out and re-potting. Place them near the glass in a pit or frame, and keep close for a few days, shading from the sun if the growth flag. Scented-leaved varieties should now be housed, and, if not already done, put in cuttings to provide a stock of plants for next summer. Shoots of several of the varieties are useful for arranging with cut flowers.

Lilium auratum and L. speciosum are stood outside after flowering, allowing the stems to die down gradually and the bulbs to ripen, after which they will be potted up, using pots according to the size of the bulbs.

Late Peas.—The conditions at the time of writing promise a good supply of these for some time to come. The varieties Autocrat and Gladstone are doing remarkably well, and those in sheltered positions should continue to bear for several weeks. It is advisable to thin out the growths where they are very thick, and to pinch out the points of the leading shoots, while it will be of great assistance if the roots can be afforded copious supplies of liquid manure.

Cabbage.—Continue to plant as ground becomes vacant, and ply the hoe between those already planted.

Globe Artichokes should have all decayed leaves and old flower-stems removed and generally be made tidy. They frequently develop a good crop of their inflorescences during September, and these, provided they are uninjured by frost, are generally of excellent quality. The heads should be cut as soon as they are of a suitable size, whether required for immediate use or not. If the stalks are inserted in water and stood in a cool place, they will keep good for a considerable time. The finer varieties of Globe Artichokes are more tender than the coarser kinds, therefore from the best plants good suckers should be selected, at this season, potted up into 7-inch pots, and wintered in cold frames. If these are planted out early the following spring in rich soil they will produce a good crop of heads during the autumn.

Potatoes.—The whole of the Potato crop is now ready for lifting. Tubers intended for seed should be stored in trays in a cool, airy shed. Those intended for cooking will be placed in a pit after being well sorted. The

top of the pit should not be covered with soil for a week or two—till the surplus moisture has evaporated.

Cucumbers just beginning to bear will, under suitable conditions continue to give a supply to the end of the year. The growths must be well thinned out and only moderately cropped, removing each fruit as soon as it has reached a serviceable size. Be careful in the application of water to the roots and foliage of the plants. Another batch will now be planted to provide a crop for winter and spring supplies, using fresh turfy loam with a little leaf-mould and sand added. Allow the plants to grow well up the trellis before pinching or allowing fruits to form, after which they should be cropped lightly. Maintain a night temperature of 68 degs. to 70 degs., and a moist atmosphere. Syringe the foliage only on bright days. F. W. GALLOP.

SCOTLAND.

Potting having fallen somewhat into arrears was attended to in the early part of the week. A good batch of Gesneras, hitherto grown in 5-inch pots, three plants in a pot, were broken up and repotted singly into 5-inch pots. These will make serviceable stuff in December and January. The earliest batch is on the point of blooming—rather earlier than was desired, but they can be no longer delayed. *Libonia floribunda* has been moved from 5-inch to 7-inch pots. *Schizanthus Wisetonensis* for winter blooming is now in the flowering-pots, those 6 inches in diameter being quite large enough. Late-struck pieces of *Salvia rutilans* have gone into 5-inch pots. This variety is, I think, more useful in pots of this size than when grown in 10-inch pots. *Primula obconica*, *P. verticillata*, *P. einsensie*, and *P. malacoides* will bloom well in spring in 5-inch and 6-inch pots. So will *Alonsoa Wascowiczii* and *A. incisifolia*, the latter requiring some pinching to reduce the plants to a symmetrical shape. By way of a change, some plants of *Nicotiana glauca* will be grown. These are now in 5-inch pots, but will ultimately bloom in those 7 inches in diameter. I saw some plants of this last spring in 10-inch pots, and very handsome they were, being, however, two years old. I had not previously thought that the Tobacco plant would have succeeded for a second year, but the point is worth remembering. Arum Lilies were potted up. These, of course, may be had in bloom as desired, the time of blooming depending upon the temperature to which the plants are subjected. Herbaceous *Calceolarias* ought by this time to be in their store pots. Five-inch pots are quite suitable for these over the winter, and they should, if possible, be kept upon a shelf, well exposed to the light, and occasionally gently vaporised to keep aphid in check.

Greenhouses.—With the declining season the display is not so profuse, many subjects, although yet too good to be discarded, showing signs of exhaustion. If time permits, a weekly rearrangement will do much to increase the attractiveness of plant-houses. Dead or withered foliage and blooms should be removed at stated intervals—twice a week, if possible. If this detail is not attended to the spent blooms contaminate others, and are a fruitful source of damp, besides being a probable lurking place for insects.

Watering, especially in houses which are liable to damp, ought to be carefully done, and no more moisture than is absolutely necessary should be thrown about. Ventilate freely on all suitable occasions, shutting up at a fairly early hour in the afternoon. This conserves the solar heat, and although in the case of greenhouses fire-heat is not yet absolutely necessary, yet on especially cold nights or on unclouded days it is advisable to run a little heat through the pipes.

Stove.—Shading, if not already washed off by the action of the weather, should now be dispensed with. Plants ripening off should have their supplies of moisture gradually reduced until the maturing period is finished. Gesneras now begin to be useful, and fine-foliaged plants are always bright.

Hardy fruit is much later in ripening than usual, and Pears especially are not finishing so well as was at one time expected. Apples, too,

except on young trees, will be smaller individually, while Plums appear likely to be interfered with by the out-and-in weather which is preventing their ripening. Nets which have gone out of use were during the week taken off, dried, and labelled, and afterwards returned to store. It is always advisable to label nets at this time, as this practice, if followed, saves confusion when they are again needed. Each label is marked as to whether the net is in good repair or the contrary, so that if time allows during wintry weather they may be overhauled and repaired. The best pieces of old nets can be utilised for patching others of better quality, and it is a great advantage to have them ready for use when they are again required.

Vegetable garden.—In the course of the week Cauliflower seedlings were pricked off, while a number of seedling Brussels Sprouts was put out into a nursery bed. Spring-sown Onions are later than usual in maturing, but the ripening may be hastened by pulling the bulbs and spreading them out thinly in a sunny and well-exposed place, or, if a few cold frames are empty, if the Onions be laid out inside these they will ripen up more quickly. If labour is scarce the Onion bed, if dressed with soot and well hoed and raked, may carry a crop of Brassicas during next spring. Such things as Cabbages heart in more quickly if the ground is not too loose. Parsley seedlings, if a partially decayed hot-bed is available, will soon make way if put out thereon, and, while pickings may not be large from such plants during winter, there will be plenty of leaves in the early spring. Asparagus beds have received a final dressing of artificial manure. W. McGuffog.

Balmes Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Salvia patens (G. B.).—In warm, light soils, and where the local climate is not very severe, this plant may be safely left in the ground during the winter, taking the precaution, however, to place a good shovelful of ashes or Coconut-fibre over the crown on the approach of severe weather; otherwise it is safer to lift the roots carefully, pot or place them in boxes with some earth around them, and winter in a cool greenhouse.

Buddleias, increasing (T. Grace).—The best way is to take cuttings of the young wood with a heel attached, and insert them either in boxes, pans, or pots, and then in the following spring plant them outdoors in lines 2 feet apart, where they will make rapid growth. The following autumn cut them back to two or three eyes and plant them in their permanent position, which must be a sheltered one. The soil should be prepared for them, and if at all heavy plenty of leaf-soil added.

Spot on Rose leaves (Clare).—This is known as the Rose leaf black blotch. It is a very common fungus, and many growers treat it as of small account, except that it disfigures the plants. If you spray your plants next year with copper solution, you will be able to keep it in check. Gather up all the fallen leaves and burn them. The recipe for making the copper solution is as follows:—Carbonate of copper, 1 oz.; carbonate of ammonia, 5 oz. Mix these together in a quart of hot water, and then add 16 gallons of water. Apply at intervals of a few days until you are satisfied that the fungus has been checked.

Propagating Clematises (Link).—The Clematis does not readily strike from cuttings, the only way to increase it in this way being from the young shoots in early spring. The cuttings, however, need a good deal of care and attention. If a few shoots are conveniently situated you may layer them either in the border (if the plant is growing in one) or in a few pots placed conveniently for the purpose. The stem should be partially cut through near a joint, and the knife brought upward for an inch or so, exactly as the layer of a Carnation. It should be fixed at such a depth that the cut portion is a couple of inches below the surface of the soil, which must be kept at all times moderately moist.

VEGETABLES.

Mildew on Cucumber leaves (Herbert E. Price).—Sulphur, of course, is the best remedy for mildew, but in the case of the leaves sent, nothing you can do will be of any avail, and we should advise you to throw the plants on the fire-heap and have the house thoroughly cleaned. In all our experience we have never seen leaves so badly mildewed.

Lettuce plants starting to flower (R. H.).—It is not at all unusual for Lettuce plants to start off to flower rather than to heart in, but it usually arises from either sowing seeds so thickly that they become weak and drawn rather than stout and sturdy, or because of hot, dry weather and soil affecting them, or because the seed stocks were bad. We cannot, of course, tell which of these causes may have operated in your case, but we advise you to sow at once, and very thinly. Get the young plants dibbled out early, and keep them growing on without check, watering them freely in dry weather. Lettuces like highly enriched soil, as being essentially leaf producers, the more rapid the growth the better they are for eating.

MISCELLANEOUS.

Preparing ground for lawn (H. B. Spinks).—The first thing to do is to see that the ground is thoroughly well drained. Then, having made sure of this, have the ground well manured and trenched, burying at the same time all the rough Grass, surface weeds, and soil. Then let it lie for a time to settle. When this has been done it should be made very firm and level. Seeing you do not wish to use turf, your best plan will be to procure some good Grass seed—not that from a hayloft, which is full of weed seeds—and sow the lawn down.

SHORT REPLIES.

M. G. D.—Your best plan will be to get a copy of "The English Flower Garden," from this office, price 15s. 6d. post free, in which the whole question of hardy flower borders is dealt with and illustrations of the same given. —**R. F. H.**—Kindly send some of the Cyclamen corms you refer to, with some information as to their age and mode of culture. —**A. M. M.**—Impossible to say what is the cause of the failure, as you give us no idea as to how you have grown the plants. —**M. E. K.**—On no account use the sawdust manure for making up a Mushroom bed, as this will only breed fungi and ruin the Mushrooms. Far better try making the bed with leaves only. —**W. M. Crowfoot.**—1, Yes, it will be advisable to give the plant greenhouse treatment. In the west of England it would probably thrive in the open if given a warm wall. 2, Your best plan will be to forward a specimen to Kew; they may be able to help you. We cannot find such a name as you give.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**A. P. Farnham.**—The Thorn Apple (*Datura Stramonium*), a common roadside weed in southern Europe and all over the warmer parts of the globe. Found in the south of England, but can scarcely be considered as naturalised. —**Z. R.**—The common Golden Rod (*Solidago Virga-aurea*). —**W. S. S.**—1, *Abutilon vexillarum*; 2, *Justicia carnea*; 3, *Tradescantia zebrina*; 4, *Diplasia glutinosa*. —**F. R.**—1, *Saponaria officinalis* fl.-pl.; 2, *Centaurea suaveolens*; 3, *Thymus Serpyllum*; 4, *Polygonum cuspidatum*. —**C.**—1, *Calceolaria violacea*; 2, *Helenium pumilum*; 3, *Chelone barbata*; 4, *Campanula muralis*. —**Inquirer.**—1, *Senecio pulcher*; 2, *Francoa ramosa*; 3, *Hieracium aurantiacum*; 4, *Achillea ptarmica* The Pearl. —**B. W. J.**—1, *Hibiscus syriacus* var.; 2, *Sedum spectabile*; 3, *Malva moschata alba*; 4, *Chicory (Cichorium Intybus)*. —**H. D.**—1, *Aster Amellus*; 2, *Aster acris*; 3, *Euphorbia Lathyris*; 4, *Tradescantia virginiana*. —**R. C. B.**—1, *Veronica Andersoni*; 2, *Erigeron speciosus*; 3, *Hemerocallis fulva*; 4, *Nepeta Mussini*. —**H. C. Innes.**—*Leycesteria formosa*. —**Mrs. B. M. Durnford.**—Impossible to name from such specimens as you send us. —**Emily D. Prichard.**—Impossible to name without flowers.

Names of fruits.—**A. G.**—Apple Cellini.—**V.**—Apples: 1, Beauty of Bath; 2, Jacob's Seedling; 3, Early Julien; 4, Lord Suffield.—**E. N. J.**—Apples: 1, Kerry Pippin; 2, Mank's Codlin; 3, Margaret; 4, Duchess of Oldenburg.—**J. R. B.**—Apples: 1, Devonshire Quarrenden; 2, Irish Peach; 3, Stirling Castle; 4, Pear Williams' Bon Chrétien.—**J. C. B.**—Apple Worcester Pearmain.—**A. Y. L.**—Pear Beurré Superfin.

CATALOGUES RECEIVED.

E. P. DIXON AND SONS, LTD., Hull.—Catalogue of British Garden Bulbs and Nursery Stock.

G. W. MILLER, Clarkson Nurseries, Wisbech.—List of Alpine and Herbaceous Plants.

PHILIP LE CORNT, Queen's-road, Jersey.—List of Fruit-trees; List of Roses.

PREMIER SEED CO., LTD., 117, London-road, Brighton.—British and French Grown Bulbs and Seeds, 1916.

The National Sweet Pea Society proposes to hold the Novelty Trials of Sweet Peas as usual in 1917. The seeds for trial must be in the hands of the secretary not later than September 30th, 1916. For further particulars apply to the secretary, Mr. Henry D. Tigwell, Greenford, Middlesex.

OBITUARY.

MR. EDWARD MAWLEY.

WE regret to announce the death, on Friday, September 15th, at the age of 75, of Mr. Edward Mawley, who for thirty-seven years was the honorary secretary of the National Rose Society. On his resignation in 1914 he was elected president, which position he occupied at the time of his death. At one time, too, he was a prominent exhibitor and raiser of Dahlias. He was a member of the Floral Committee of the Royal Horticultural Society, and his opinion on any new Rose submitted to that body was always welcomed. He was also one of the recipients of the Victoria Medal of Honour. Mr. Mawley also devoted a great part of his time to meteorology, and his notes on the weather used to appear regularly in the gardening papers. The Rose, however, claimed most of his attention, and to him in great measure is due the success of the National Rose Society.

Parcels sent to our office insufficiently stamped will, in future, be refused.

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GARDENING ILLUSTRATED.

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THE STEMS OF THE PINE.

THIS season I have seen more country places and gardens than usual of recent years, and everywhere I see the ugly result of not considering the natural way of the Pine. Master and man may be heard deploring the health of trees that are merely following the natural way of throwing off the lower branches as a summer-leaving tree throws off its leaves in the fall. The columnar stem one may see in both natural and planted forests, the stems of many trees often quite bare, all the branches having been thrown off as a deer throws off its horns, leaving the top free to fight its way in the air. It is getting the nursery form of the Conifer into their heads that leads so many astray. True the young Pine tree in a wild state has a bushy start, but loses this as it grows up, whereas in our pleasure grounds a tree is wept over if it shows a sign of taking on its natural habit.

I fear I was under the same delusion that Conifers should be dressed in green crinolines before I woke one morning in the train crossing the Rocky Mountains and saw all round me stems of magnificent Pines, but no signs of the tops! The same fact may be noticed in the natural forests in France and Italy, where one can see these Pines with straight stems as free of branches as gun barrels. The first time I ever saw a Cedar with a tall stem was in a wood at Shrubland Park. Very seldom have I seen groups of such a noble tree as the Lebanon Cedar except once at Redleaf.

There is something in our mild climate which encourages the false growths from the trees, but in their native woods it is different, and one seldom sees anything of the kind in the woods of California. On the east side of the mountains, when we see the yellow Pine (*P. ponderosa*), we notice that it grows alone, still without its lower branches, having healthy plumes at the top. In pleasure grounds, where the trees are generally planted singly, the plan is against the natural form, and the absence of grouping in such cases is disastrous. There is evidence on all sides, both in large and small places, that a wrong way is followed.

Even at Kew many of the finest old Conifers there lose half their beauty by straggling branches coming down too near the ground. A tree so dressed all down is much more exposed to the danger of wind storms than one growing with much of its stem bare.

I have lately seen a little grove of the yellow Pine with fine healthy tops, but all the lower part sickly, and I appealed to the owner to take off the dead and half-dead lower branches and make the trees look better and healthier. Half the beauty of a Pinetum is lost by the worn-out and often useless branches being kept on long years after they had done their work.

The noble grace of form of many trees of the Pine tribe, such as the Nootka Sound Cypress, is often hidden by a half-useless mass of branches near the ground.

In many places much of the beauty of our noblest native evergreen, the Yew, is lost by old, worn-out branches hiding the finely-coloured stems. Removing these lessens danger in the storm and adds to the beauty of the scene.

Pine views to and from the house are often shut out from the mass of shoots of Pines near the ground. Removing these alone may open up good views. In the case of established trees no harm can arise from clearing the stems for 15 feet or so. A handy woodman does the work best.

In woods close planted, as all Pine woods should be, the trees get rid of their lower branches, and should be allowed to do so. It is a waste of labour to aid them in the task. Whether the fall of the branches is the work of the tree itself or that of the woodman, the question may arise what to do with the refuse, some taking the trouble to burn or otherwise get rid of it. On no account should that be done, but the whole allowed to decay on the ground, and help in forming a surface of leaf-mould. As Pine woods are often planted on thin or poor soils they will benefit by the decay of the branches and all brush.

W.

NOTES OF THE WEEK.

Solanum crispum.—I have had this for ten years doing well, and flowering annually and profusely on a north-west wall, where it never sees anything but the last rays of the setting sun. It is now 20 feet high. It should be spurred back to the old wood like a Vine in the spring.—L. H., *Nuneham Park, Oxford.*

Ononis rotundifolia.—The round-leaved Rest Harrow, mentioned on page 436, is, unfortunately, not too hardy, especially when the plants grow large. It frequently survives for a few years and then is killed in some severe winter. Happily, seedlings are easily raised, and self-sown ones fre-

quently appear. It likes a dryish position and plenty of sun. The large pink flowers are very beautiful against the pleasing foliage.—S. A.

Lilium speciosum Melpomene.—This is not only the most richly-coloured form of the whole of the speciosum group of Lilies, but one of the handsomest in the genus. Where a bold striking effect is desired in the garden or conservatory this Lily will prove invaluable. The flowers are of an intense blood-crimson, and, being large and freely produced, render it a striking object. Being of a vigorous constitution and perfectly hardy, it should be freely grown for autumn effect.

The Blue Rock Bindweed (*Couvolvulus uauritanicus*).—This is invaluable for the autumn rock garden, and is now (beginning of September), and has been for weeks past, covered with its elegant blue flowers. I grow it high up in a retaining wall with a south aspect, and in warm, sandy soil, where it is quite hardy and improves each year. It is supposed to be a little tender, but in a warm, dry position it will come through any ordinary winter. It is easily raised from seed.—N. L.

Rose Zephirin.—I have plants of this within view of my cottage window, on their own roots, growing and blooming well, the fine rose colour, with a tinge of orange it seems to have in it as the early sun strikes it in September, showing up well. I shorten the name to a single word, the right way for all Roses. Its growth from September cuttings is free and graceful. I have no reason to doubt its growing well on the Dog Briar, but if I had a light, dry soil I would only look for a good result with own-root plants. It has more than one name. I adopt the above as the best.—R. H. S.

Antirrhinums in the flower garden.—Recently, looking at the display of bloom at several stations on the Glasgow and South-Western Railway, I was struck by the freedom with which Antirrhinums have been used. At almost every station these have been planted in good masses, the display, on the whole, being most effective. The only point in which an improvement might be suggested is that more decided colours could very well be used, there being too many pale pinks and mediocre yellows. Speaking to one of the station-masters on the subject, he appeared to regret that he had not used Zonal Pelargoniums instead of Antirrhinums, but in such a wet season as this has been the latter must have been much more satis-

factory. The blooms of Pelargoniums soon succumb to damp, whereas those of Antirrhinums do not so readily affected by prolonged wet.—W. McG., *Balmæ*.

Erica vagans St. Keverne.—The new variety of *Erica vagans*, called St. Keverne, is an acquisition to the autumn-flowering Heaths. At this time of the year alpine flowers are generally scarce, and the Heaths, charming in themselves, are doubly useful. We owe St. Keverne to Mr. P. D. Williams, of Lanarth, and a charming variety it is. The colour is a clear pink, as nearly as one may describe it, the blooms being in neat heads.—S. ARNOTT.

Grouping plants.—Some of the finest effects in gardens are got in the simplest way. This is especially true in small gardens, where one thing only is grown, when it suits the soil, and so is grown well. Even in large gardens and parks the best effects are those gained by planting a mass of a good thing, such as Narcissi or Tulips, Pansies or Polyanthus, all of one kind, in bed or in border, or in groups on the Grass, as the case may be. To group different kinds of flowers together requires a good deal of artistic knowledge, and taking our parks and gardens generally we are quite as often offended as we are pleased with mixed planting. On the other hand, we are seldom offended by beds, borders, or masses of one plant if it be well grown.

Changing recognised botanical names.—It is a heavy task to commit so many names to memory, but it is far more difficult to unlearn what one has already learnt, and substitute other names for those that are so well known. I met with a case in point in the "Kew Hand-List of Tender Monocotyledons," which was published last year. The genus *Dracæna* has been long recognised in gardens, indeed the members of the allied genus, *Cordylina*, used to be referred to as *Dracænas*. With these eliminated there still remained a goodly list of what might be regarded as true *Dracænas*, but reference to the above list showed that, with the exception of *Dracæna Draco* and two or three doubtful species, the whole of them are now placed in the genus *Pleomele*. Thus such well-known kinds as *Dracæna fragrans*, *D. Godseffiana*, *D. Goldiana*, *D. Hookeriana*, *D. Sanderiana*, *D. sureulosa*, and others all disappear from that genus and crop up as *Pleomeles*. This chopping and changing of names lead one to ask the object of it all, unless it be the desire on the part of some recognised botanist to pose as the authority for a new name, which is, however, not likely to be generally recognised. K. R. W.

Viburnum lobophyllum.—Amongst the many new shrubs introduced from China during the present century are numerous species of *Viburnum*, some of which are of interest by reason of their evergreen leaves, others on account of attractive flowers, and others again by the showy character of their fruit. *V. lobophyllum* belongs to the last set and is, perhaps, the most effective species of all in autumn. It is a vigorous, rather loose-branched bush at least 8 feet or 10 feet high, with strong branches clothed with broadly-oval or rounded leaves. In May or early June large flat heads of white flowers are produced, these being followed by numerous fruits, which, when ripe in September, are of a rich, bright red hue. Like the majority of the stronger-growing *Viburnums* it succeeds in almost any kind of good garden soil and soon attains flowering size. For a sunny place in a shrubbery it is well adapted, whilst it would also make an excellent bush for planting in large groups in semi-wild positions. There are various other *Viburnums* that

are excellent fruiting plants, and it is only necessary to direct attention to the common *V. Opulus* in both its yellow and red-fruited forms and to *V. Lantana*, with its red and black fruits, to show what attractive fruiting shrubs the genus contains.—D.

Sweet Peas.—We welcome the improvements that have been made in Sweet Peas in recent years, but the naming is overdone. It tends to confusion and distracts attention from the sorts that have been well proved and are really good and distinct. Taking up a few seed catalogues there would not be the least difficulty in compiling a list of thirty or forty named varieties, all of which are claimed to be distinct, but which, when grown, are found to be very much alike. Anyone who has the space and the time may test this by growing a collection. A few good things may be discovered and also many that should never have been named at all. We are greatly indebted to those who have spent so much labour among Sweet Peas, but it is to the interest of all concerned that those sent out as new should be distinct, and only when this is the case can the interest and the popularity of the flower be extended and sustained.

Pentstemon heterophyllus.—"W.," in concluding a note on this unique species at Friar Park which, near the finish of its flowering, I had the privilege of seeing, says "it is well worth raising from seed." If the seed could always be depended upon there would be no doubt about it. Often, however, the mixtures one gets for it are of such a nature and the nondescript colour so inferior to that of the typical kind that only with knowledge of the way seeds were harvested would I recommend such a course. Only a few days since I pulled up a bed of it, in which a dozen pieces were as weedy and inferior, both in foliage and flower, as could be imagined. The true plant is so beautiful that it is worth a little care to retain, and a few cuttings inserted each year will do what is necessary to this end. By early removing a few of the flower-spikes cuttings of the right stamp will be forthcoming, and, when quite young and about 2 inches long, root quite freely with cold-frame treatment. Seeds saved from such a group as that referred to should, however, be reliable.—E. H. J.

Veronics in pots.—Those who saw the fine collection of these exhibited by Messrs. H. B. May and Sons at the Royal Horticultural Society's meeting on September 12 must have been impressed with their beauty when grown in pots. They, in 5-inch, 6-inch, and 7-inch pots, varied from 1 foot to 2 feet high, and as much across. These had foliage down to the pots, with many shoots literally covered with flowers. When grown in this way, few things are more useful for house furnishing, and far more enduring than many things grown in warm-houses. Such plants as shown can be obtained in this nice dwarf state by rooting the cuttings in autumn, keeping them in cold pits till spring, and then potting singly into 4-inch pots. When the pots are full of roots, repot into the blooming pots, plunging them all the summer in an open place, and pinching in the early stages to make them bushy. When full of roots, give manure-water frequently. These *Veronics* are excellent for the open garden in western districts, and are often seen in large bushes blooming the greater portion of the winter. The following are a few of the best sorts:—Attraction (rich violet), Diamant (fine crimson), Mont Blanc (the best white), Reine des Blanches (blush-white), La Perle (reddish-carmine), and Lavinia (royal purple).

VEGETABLES.

STORING POTATOES.

Those who have ample room in frost-proof cellars or sheds can do nothing better than transfer the tubers to these at once, taking care that they are not placed in heaps sufficiently big to set up heating, and also that they are not bruised by rough treatment in transit, this being especially necessary with tubers that have to be kept for many months. Provided the cellars or sheds are not cool, I strongly advise

CLAMPING in preference to such storage, which would be productive of evil in more than one form. Clamping is so simple that it would seem almost impossible to make a mistake in it. Still, mistakes are sometimes made, and the worst form of clamp is that in which a large square pit is dug for the reception of the tubers, as in such a place a large bulk of tubers would be certain to become overheated, while in wet weather they would get swamped. The better way is to select a cool, shaded, and well-drained position, and to mark out a portion of ground some 3 feet or 4 feet in width, and long enough to hold the bulk of the tubers when heaped on it in ridge fashion, making the ridge as high as possible without running beyond the allotted width at the base. When all are in position a thickness of from 6 inches to 12 inches of dry Bracken should cover the heap, and on this again some 6 inches of soil dug out from around the heap, thus forming a trench, which will keep the clamp high and dry. It is well not to be too sparing of the Bracken, or any substitute which may be used, as a good coating of this will keep out frost in the severest of winters. I prefer making one long clamp for the eating size rather than several smaller ones, as each variety can be separated from its neighbour by a division of Bracken, and they may be so arranged as to come in proper rotation for use, so that the clamp need only be opened at one end when tubers are wanted. By making the clamps no wider than I have recommended I find that the use of drain-pipes or any other method of admitting air at intervals along the heap may be dispensed with, no air being required to prevent overheating.

SEED POTATOES.—These should be selected at lifting time and placed by themselves at one end of the clamp, taking care to prevent them from getting mixed. I do not care for large seed potatoes. The present is by far the best time to buy in stock or to make exchanges of seed. Those who leave this important matter until the usual time for ordering other garden seeds will probably have them come to hand with many of their best shoots rubbed off, besides running the risk of their being frozen on the journey. At this time of the year there are no shoots to damage, and there is but little fear of any injury. T.

NOTES AND REPLIES.

Manuring kitchen garden.—I want to cultivate half an acre of garden without using animal manure. Please tell me how to proceed? Quite half the garden is still occupied with Beans, Artichokes, Beet-root, Cabbage, Broccoli, Brussels Sprouts, Salsafy, with Spinach and Lettuce just sown. Must I now sow all the vacant plots with Mustard seed and dig in the plants in March, or must I dig the vacant ground now roughly for the winter and sow Mustard in February, digging it in later when I want to sow the usual spring seeds? Is this method of manuring as satisfactory as using farmyard manure or artificials?—WOMAN GARDENER, Co. Durham.

[You can hardly look for the garden in

question to yield satisfactory crops year after year without returning to the soil something more than an annual crop of Mustard with which to maintain its fertility. The digging in of Mustard now and again would answer very well, but, if continued without a change, the soil will soon become Mustard "sick," which condition would soon be reflected in the unsatisfactory condition of the crops grown. Farmyard manure is the best fertilising agent for garden crops in general. Artificial manures can be used in lieu of it for a few seasons, but there comes a time even then when it is imperative to apply something of a more substantial nature; to wit, farmyard manure. Where the latter is usually employed for the garden it is a good plan to substitute now and again a good dressing of lime for it. This answers the same purpose as manure and sweetens the soil. Although rarely practised in gardens, the growing and digging in of a crop of Mustard would often prove beneficial, but

of this usually reliable vegetable is to be regretted, and I can only attribute it to the phenomenal weather which prevailed after planting time. It would be interesting to learn if Cauliflowers have behaved similarly in other districts.—W. McG., *Balmac, Kirkcudbright.*

TREES AND SHRUBS.

ESCALLONIAS.

THE Escallonias form an exceedingly ornamental class of flowering shrubs, natives for the most part of Chili and adjacent regions. Nearly the whole of them are evergreen, and their season of blooming extends over a lengthened period, from midsummer onwards. They are too tender for general cultivation in the open ground throughout the greater part of the country—indeed, to see them at their best one has to visit the extreme south and south-west of England, while

white, with a pinkish tinge, and a succession is kept up from July till autumn is well advanced. It is one of the hardiest of the evergreen kinds, and a free-growing shrub of graceful habit.

E. LANGLEYENSIS.—This is a cross between *E. macrantha* and *E. Philippiana*. The small, dark, shining green leaves show a good deal of the influence of *E. Philippiana*, while the flowers, which are borne in quantity, are of a pretty rosy-pink shade.

E. MACRANTHA.—One of the finest and most generally grown of all the Escallonias, being sometimes met with under the names of *E. Ingrami* and *E. rubra Ingrami*. It forms a large, bold-growing shrub, clothed with handsome, shining, dark-green leaves, so that even when out of bloom it is decidedly ornamental. The flowers, which are borne in terminal racemose clusters, are bright crimson in colour, and consequently make a goodly show. Under favourable conditions it will flower from July till stopped by the autumnal frosts. Its recuperative powers are so great that in many cases, even if severely cut by the winter, it quickly recovers. As a wall shrub it is a general favourite in many parts of England, as with this amount of protection it will stand most winters. We also know of some plants of this growing and flowering freely against a wall as far north as Aberdeen.

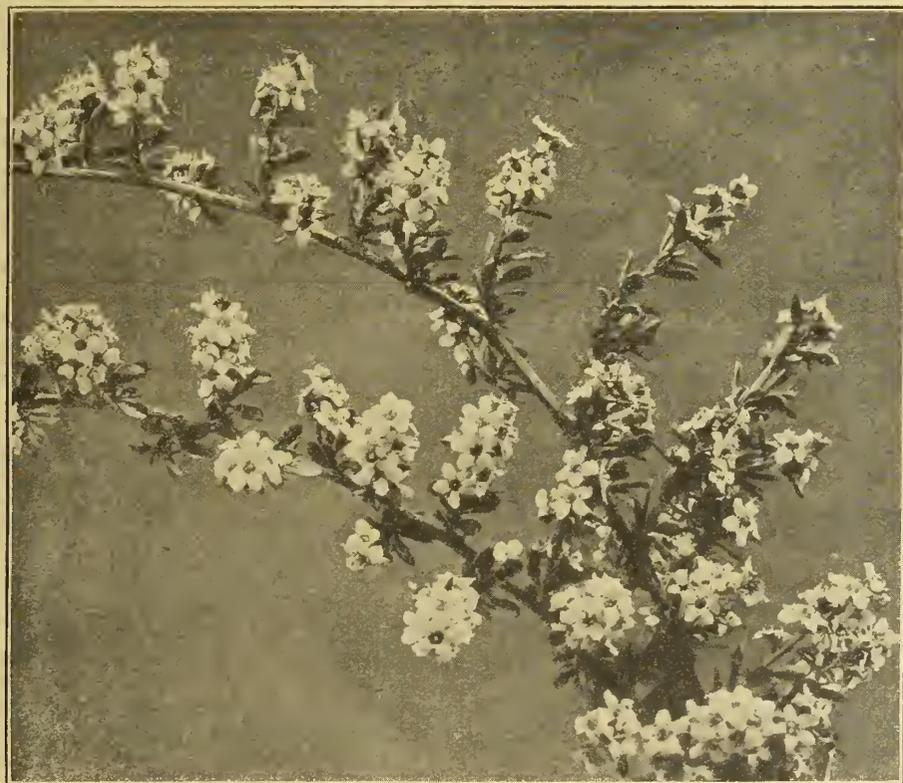
E. MONTEVIDENSIS.—By some authorities *E. floribunda* is considered to be the correct name of this, while by others the two are kept distinct. At all events, it is generally known as *E. montevidensis*. This is one of the most tender of the entire genus. It is a rather upright, bold-growing shrub, whose large terminal clusters of pure white flowers are borne during the latter part of the summer and well on into the autumn. In the favoured districts of Devon and Cornwall it is very handsome.

E. PHILIPPIANA.—This, a flowering shoot of which we figure to-day, is the hardiest of all, and differs markedly from the last in being almost, if not quite, deciduous. It forms a rather spreading shrub, whose long, arching branches are disposed in a very graceful fashion. The leaves are small and dark green in colour and serve admirably as a setting for the pretty star-shaped white blossoms, which are borne for a considerable distance along the shoots. From midsummer till well on into July it is one of the most charming of outdoor flowering shrubs. In the London district this is never injured by frost.

NOTES AND REPLIES.

The Sun Rose (*Helianthemum vulgare*).—This formed a feature of many gardens which I visited during my stay at Oxford in mid-June, and was used with wonderful effect as an edging plant to the herbaceous borders in St. John's College Garden, also as a rock plant in the same garden. The plants revel in the hot sandy soil which abounds in many districts near Oxford, and were a mass of bloom when I saw them. There are numerous double and single varieties and a magnificent range of colour.—E. T. ELLIS, *Wcctwood, Eccle-sall, Sheffield.*

The Tamarisk and Fuchsias.—There is a hedge in a village in south Hants formed of these two kinds of plants, and very beautiful it is. Attention may be drawn to the fact that the soil and position are very dry. Not far away we find the Tamarisk growing in a moist medium quite close to the tidal waters—in fact, in the spring the water frequently covers the roots and portions of the plants. Quite exposed to the sea breezes, Fuchsias this year growing and flowering more freely than in previous years, and neither flowers nor foliage seem to be seared in the least by this exposure.—G. G. B.



Flowering branches of Escallonia Philippiana. From a photograph at Hillbrook Place.

no gardener would dream of repeating it year after year with the idea of maintaining the soil in a high state of fertility. Half an acre of ground would not require such a great quantity of manure, and if you cannot obtain or afford to apply it annually, perhaps you could every other year. Mustard could then be used in the way you mention in alternate seasons, and lime once every five years.]

Cauliflowers.—Never in my experience have midseason Cauliflowers done so badly as during the present season. Planted out at the usual time, for a time the growth of the plants was all that could be desired. The inclement weather experienced during late June and early July appeared to act adversely upon them, and an inspection revealed that the hearts of the plants had, in many instances, perished. Of course, there was no suspicion of "blind" plants having been put out, nor is there any clubbing in these gardens; while no grubs or other pests are visible. The shortage

they thrive particularly well in many parts of Ireland. As with the majority of these South American shrubs, a humid atmosphere is favourable to their well doing, and they all flourish in proximity to the sea. Although, as above stated, they can be but little depended upon as open-air shrubs, except in the milder parts, they may be grown much farther north when trained to a wall, and in this way some of the species are very ornamental. They can be readily propagated by cuttings of the half-ripened shoots, taken in August and dibbled into sandy soil in a close frame. A well-drained, rather light sandy loam is the best for them, as in damp soils they are more liable to injury during the winter. A selection of the best and hardiest of the Escallonias would include the following:—

ESCALLONIA EXONIENSIS.—A hybrid, presumably between the deciduous *E. Philippiana* and one of the evergreen species. It is quite evergreen in character. The flowers, borne in terminal spikes, are

FRUIT.

WINTER SUBSTITUTES FOR APPLES.

I SHOULD strongly advise all growers to bottle as much of the small fruit in variety as they are likely to require through the winter, as there seems every probability of a very short Apple crop. Also, if opportunity offers, to pick Blackberries, which may be included, especially if they can be obtained from hedgerows away from the main road, where the berries are free from dust and the plants are growing in good, fairly heavy soil. Under such circumstances the fruit of the hedgerow will hold its own with the majority of the small cultivated fruits, and is in every way superior to that from a poor, light soil. Plums will also be available for a similar purpose—that is, in districts where they can be spared. It would seem from several notes that have appeared that the crop is not very plentiful. Here, however, in mid-Bucks, it may be described as a fair average, if in places a trifle under. For bottling, I prefer the small, rather round fruits of the type of the old Greengage, Early Prolific, and Reine Claude Violette. They should be good, sound fruit, and very nearly ripe. It is a mistake to suppose that indifferent fruit will come out satisfactorily, and if not fairly well advanced in the sugary stage before going into the bottles there will be a suspicion of bitterness that is decidedly objectionable.

The above provisions in the way of bottling spare fruit are the more advisable this year because, as above noted, there seems in the majority of districts a very short Apple crop, and consequently hardly any of that useful fruit available through the winter. This failure is somewhat unaccountable, because, at any rate so far as this neighbourhood was concerned, there was certainly not sufficient frost to injure the blossom at the time of its expansion, and as this was abundant the failure is more perplexing, and doubly so because wood and buds seemed to ripen satisfactorily in the summer and autumn of 1915. There was evidently some un congenial atmospheric influence at work that was not apparent during the flowering time. I find there is a light crop on some of the early kinds, but very few mid-season and late. This district is rather celebrated for its Blenheim, and in some seasons these provide the main supply for about three months of the year, but at the present time many large trees have scarcely an Apple. The best crop of late Apples I have seen is on some espalier Lane's Prince Albert, but apart from this the failure is apparent on all forms of trees, whether standard, bush, pyramid, espalier, or cordon.

Since writing the above I have read the article on page 384 of GARDENING ILLUSTRATED dealing with "Fruit Bottling for Small Holders." This is very interesting and explains the whole business from this point of view in a clear and concise manner, and is, I dare say, about the best mode of procedure for those who can afford the initial outlay. It strikes one, however, that an outfit that is to cost close on three pounds is more than the average cottager can afford, and, fortunately, the work can be carried out satisfactorily in a much less expensive manner. Place ordinary wide-mouthed sweet bottles filled with fruit in the oven, and after the fruit has been thoroughly warmed through without cracking fill the bottles with water that has been brought

nearly to the boil. Put on the stoppers and cover top of bottles with a starch plaster. The fruit will keep sound and good in this way for a couple of years.

Hardwick.

E. B. S.

NOTES AND REPLIES.

Treatment of Raspberries.—I planted a lot of autumn Raspberries (red) last Christmas. There are now either one or two fruiting-canes on each; in addition, a number of young canes without fruit have come up on each. Should these be left or should they be cut down in February? If left, would they bear next year?—AURELIUS, Co. Cork.

[The weakest of the non-fruiting canes should have been cut out as soon as it was seen they would be of no service. The others would have done more good than harm by allowing them to remain, as they encourage root-action and assist in the stools becoming firmly established. Cut all down close to the ground next February or March, and when new canes push up leave a sufficient number of the strongest, so that they will stand 9 inches apart when tied to the wires, cutting the remainder clean out. The canes in question would, if left, be of no service next year.]

Raspberries, autumn-fruiting.—How ought autumn-fruiting Raspberries to be treated to ensure their fruiting in time for the fruit to get ripe before the weather gets too cold? Mine did well the first year, but since then the fruit has not formed till so late that it never ripens.—K. M. B.

[The treatment of the autumn-fruiting kinds is quite different from that given to the summer fruiters. In the case of the autumn-fruiting kinds the canes should be cut close down to the ground in February or early in March, as it is on the young canes made in the current year that the fruit is borne. When growth commences, the canes should be well thinned and all superfluous growths cut away.]

Plums.—The weather of late has been the worst possible for the keeping of Plums after they are ripe, this being more apparent in the case of trees in the open than with those on walls. In the former case there is no help for it but to gather the fruit when it commences to split and utilise it for whatever purpose may be deemed best under the circumstances. On walls, especially where good copings exist, or where glazed copings are fixed, this difficulty has not to be contended with, as the fruit, both that which is ripe and ripening, is not so subjected to the baneful influence of rain and moisture. It is always a good plan when heavy crops set on trees of valuable late varieties, such as Coe's Golden Drop, Jefferson, Ickworth Imperatrice, Pond's Seedling, River's Late Black, Monarch, President, Coe's Violette, and Coe's Late Red, to let the coping boards remain over the trees instead of removing them at the latter end of May in all cases where the fixed copings are not of sufficient width to shed the rain clear of the trees. To protect the fruit from the ravages of birds, wasps, and flies, muslin or hexagon netting is the best material to employ. For birds alone, ½-inch netting suffices.

Strawberries—stacking pot plants.—Much has been written from time to time for and against this method of protecting Strawberries in pots through the winter. Those who have had to protect many hundreds of plants know the amount of space they need. This method when rightly used commends itself to those with limited space. It is not the plants that need protection, but the pots and the roots. Last February, when calling on a grower I have known for many years, I observed he had several hundred plants stacked one above another against a low wall with ashes between them. I looked at them to see if they were moist, and found them not in the least dry, the rain having gone through the whole. My friend said he had tried many methods, and found nothing to equal this.—DORSET.

GARDEN PESTS AND FRIENDS.

BLACKBIRDS IN THE GARDEN.

At the time of writing, when the drought adds much to the worries of the gardener, the blackbirds are a serious menace to the fruit crops. They are always more or less in evidence and ever ready to attack unprotected small fruits of all kinds. Now these are about cleared their attention is turned to Plums, both wall and bush grown, even quite green fruits being attacked. I do not usually find them attack Plums in a green state, yet their habits vary with the seasons. Sometimes I have found them take yellow Plums and leave the purple fruits. In other seasons the opposite has happened. While one has to report so badly of the blackbird, its ally, the thrush, though also fond of soft fruits, has disappeared from the garden, presumably into the woods, where there are loose leaves it can disturb readily in search of food. Blackbirds, on the other hand, seem to congregate in the garden from the field and woodland. Apples and Pears come within their scope, and they have a singular liking for early maturing sorts. I have had to clear what few Beauty of Bath and Irish Peach Apples there were, or in a day or two all would have disappeared. The blackbird is no doubt a fine summer songster, but the garden has to pay a heavy toll. Its natural food seems to be mainly worms, and in the search for these in manure and leaf beds it is usually regarded as a nuisance both in summer and winter. It is only by netting that one can save any kind of garden fruit, and in the case of large areas or large trees this is, of course, impossible, and it would seem that no form of scare is effective. Blackbirds are too wary to be trapped, and shooting is out of the question, as they appear in such numbers about the garden. This bird problem is really a serious one where fruit crops are so limited. Some profess that birds are made welcome to their garden crops, but I cannot agree with this.

W. STRUGNELL.

NOTES AND REPLIES.

Strawberry foliage injured.—Would you kindly tell me what ails this Strawberry leaf and whether it is contagious or likely to infect other plants, and how to treat it?—A. J. MACKAY.

[The Strawberry is attacked by the Strawberry leaf spot (*Sphaerella fragariae*), which causes a kind of mildew on the foliage, etc., and altogether does a good deal of harm. Now is the time to deal with it, but the treatment should not be delayed. With a scythe or hook cut off all the foliage over the bed, allow it to dry, and then set fire to it on the bed. This (unless the plants have recently made much young growth) will do no harm whatever, and will rid you of the trouble better than any spraying treatment you can give now or at any time.]

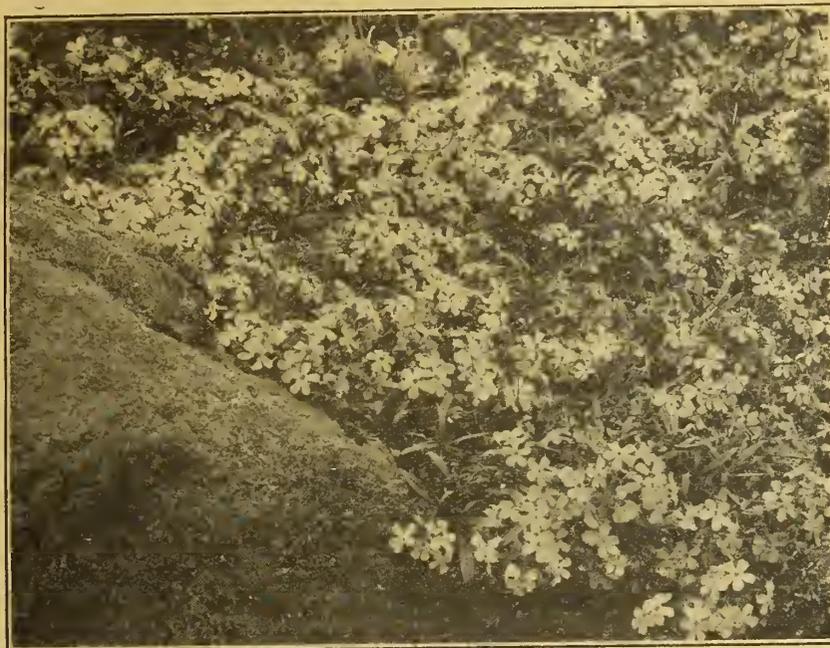
Injury to *Romneya Coulteri* (Mrs. Northey).—The caterpillar you send is either the Angleshades (*Phlogophora reticulosa*) or the common Turnip moth (*Mamestra brassicae*). It is not far enough developed to say yet, though we think it is the former, which is the common enemy of the *Romneya*. The best thing in any case, failing hand-picking, which is likely to be the most thorough remedy, is to spray the plant with lead arsenate, which you may buy in paste form of any horticultural sundriesman, and use according to the directions, beginning as soon as there is the least sign of attack, and repeating if necessary.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SAPONARIA BOISSIERI.

THE accompanying illustration gives a very clear idea of one of the most beauti-



Saponaria Boissieri at Friar Park.

ful and profuse of summer-flowering alpine, one whose wealth of rosy-pink blossoms suggests at sight a concentration in compact, almost tufted form of all that is best in a good *S. ocymoides*. The plant is a hybrid of garden origin and quite recent introduction, and I am not aware of its parentage. That, however, is of less import than the decorative value of a new-comer, and particularly of one so full of promise. Three inches or 4 inches high, it forms a spreading tuft of short-jointed, wiry stems from every leaf-axil of which the pretty 3/8-inch wide five-petaled flowers issue with the utmost profusion. By reason of its dwarfness it is essentially a plant for the rock garden, providing pretty effects during July and August, when the fuller wealth of choice subjects is on the wane. A sunny slope in gritty, well-drained loam suits it well, or it may be used with good effect crowning a rocky ledge.

E. H. JENKINS.

NOTES AND REPLIES.

Saxifraga oppositifolia.—The notes on this little alpine which appeared recently in GARDENING ILLUSTRATED are brimful of interest and are instructive, but I should like to have seen recorded the experience of some owners of Surrey gardens. I have seen plants in this district which were the picture of health. I have had them myself in the same condition, but the luxuriance did not bring with it free flowering. I fancy that there is something in the atmospheric conditions of some localities—it cannot be soil, as that is specially made to suit the various needs of alpine plants—which acts prejudicially on the formation of flower-buds. I will, however, act on the hints given by your correspondents, and hope I shall obtain what I have never had, that is, plants smothered with bloom. I have at various times bought this Saxifrage in and out of pots by the dozen,

sometimes in the blooming time, but although the plants were really good, there were very few blossoms on them. Not a single plant was in the condition described by Mr. Elliott.—BYFLEET.

Fuchsias in the rock garden.—The only two varieties of dwarf Fuchsias I have experimented with are *pumila* and *Tom Thumb*. Both are good, and when in full

flower make bright patches in the rock garden. With me *Tom Thumb* does not exceed 5 inches in height, while *pumila* is but a trifle taller. To make certain of their standing the winter they should either be taken up and potted, have a piece of glass placed over them, or the crowns be well covered with coarse sand. This prevents their rotting away, a danger to which small Fuchsias are very liable on heavy soils.—C. T.

AN INFORMAL BRIDGE.

IN order to obviate a formal bridge, irregular stones have been placed by



An informal bridge.

which to cross the little stream. The banks have been planted with *Primula rosea*, various small Grasses, Rushes, and other water-loving subjects. From Mrs. Greer's garden, Curragh Grange, Co. Kildare.

R. H. BEAMISH.

INDOOR PLANTS.

NOTES AND REPLIES.

Keeping Gloxinias.—How can I keep Gloxinia bulbs through the winter? I have kept them in dry litter indoors, and in dry earth in a damp greenhouse, but always lose 50 per cent. through what looks like rot.—J. S. T.

[Gradually diminish the water supply till the foliage dies down and the plants become quite dormant, when they should be kept dry. During the time the leaves are dying down let the plants have all the light possible. In the winter you may leave the corms in the pots or shake them out and lay them in boxes of dry sand. The temperature of the house in which the Gloxinia corms are kept during the winter should never fall below 45 degs. Repot early next March, being very careful as regards watering until you see that growth is on the move.]

Diplacus glutinosus.—Will you kindly let me know in your paper when to repot and soil to use for *Diplacus glutinosus*, just done flowering?—Geo. VICK.

[This will, in a greenhouse, flower throughout the summer months, while out-of-doors it is equally free-blooming. It should be given much the same treatment as a Fuchsia, for during the winter it needs protection from frost, and only just sufficient water to keep the soil slightly moist. Repotted in the spring in a mixture of loam and sand, with some rotten manure or leaf-soil, the young plants will grow away freely, and soon commence to flower. If given an occasional stimulant they will continue to bloom till the autumn. This *Diplacus* is readily increased by cuttings of the young growing shoots taken in spring and placed in a close propagating case. Good-sized specimens may often be seen planted out in the mixed flower beds, which are during the summer so much in vogue in many places. While the flowers of the typical *Diplacus glutinosus* are of a kind of buff tint, there are varieties known as *coccineus* and *Sunbeam* with flowers of a richer colour. When fully exposed to the sun the tint of these last two is particularly bright. *Diplacus glutinosus* is a native of California, and though hardy in especially favoured districts, it must in most parts of this country be regarded as a greenhouse plant.]

Trichinium Manglesi.—This is now very rarely seen outside of a botanic garden.

In its inflorescence it is very distinct. From the tuft of small narrow leaves, which lie almost flat on the soil, the flower-heads are pushed up. They are supported by thin, wiry stems, each from 6 inches to 8 inches long, but not suf-

ficiently strong to hold the cluster in an erect position. These clusters form an oval-shaped head, like a ball of fluffy cotton, from which the pretty pink petals protrude. These flower-heads retain their beauty for a considerable time. Some years ago I saw a specimen at Kew in a 5-inch pot with no less than 24 flower-heads. It is a native of sandy districts in Australia, and in this country needs a soil composed mainly of loam and sand with a little leaf-mould or thoroughly decayed cow-manure. Repotting should be done as soon as possible after the flowers are past. It can be propagated by root cuttings.—K. R. W.

Watering Chrysanthemums.—Just before the plants are housed the watering of Chrysanthemums occasionally takes up a good deal of time. More especially is this the case when, as often happens in mid-September, there is a period of bright, sunny weather, which may involve watering twice a day. At the present time, when labour is scarce, anything which may lessen this work ought to be considered. Plunging the pots, even if for only a few inches, conserves the moisture and makes the watering easier. If this cannot be done, considerable benefit may be found by placing spare boards in front of the rows of pots, this breaking the force of the rays of the sun. Spent hotbed manure packed among the pots is also serviceable. Any of the methods named is better than placing the pots under the shade of trees, for in such a position the wood cannot possibly ripen, and unripe wood will not produce good blooms—if, indeed, blooms are produced at all.—KIRK.

Cyclamens.—No further delay in sowing the seeds of Cyclamens is permissible. In sowing, let each seed be put in separately about, say, an inch apart. When time for transplanting arrives, seedlings grown in the manner recommended may be lifted without interference with the roots of each other. Plants which will be shortly in bloom may be lightly vaporised in order that stray thrips may be disposed of. If grown on a stage covered with gravel, crushed granite, or similar material, keep such material in a moist condition. I am no believer in shading Cyclamens at this period, as, if the plants have been grown coolly, the foliage will be sufficiently robust to endure the lessening rays of the sun with impunity. If stimulants be considered necessary, let them be of the weakest possible description. Indeed, where it is intended to save any of the corms for use during another season, I would prefer to withhold artificial aids, for it is certain that highly-fed corms will collapse when growth begins during the following season.—G.

Browallia speciosa.—I was pleased to see the note on this at page 450. I used to grow this largely for autumn decoration in the days before the Chrysanthemum was given so much attention. Needing a large lot of plants to keep a conservatory gay, and as the owner had no regard for Chrysanthemums, I used to sow seed of this Browallia in June, growing the plants on in the open till September. In my early days I used to grow this in a garden in Purbeck Isle, in the open, associated with *Schizostylis coccinea*. There being no frost till December, these kept on blooming till nearly that time.—J. CROOK.

Calanthe Veitchi and C. vestita are now finishing their growth, and in order to obtain strong flower-spikes and to secure clear, bright flowers the plants are placed near the roof-glass, giving every plant plenty of space, so that each may obtain its full share of sunlight. When the sun is very bright they require to be very thinly shaded during the middle of the day, to prevent scorching of the leaves. In the extra sunlight the plants dry up very quickly and require plenty of water at the roots. A little manure water may still be afforded them; but it must be discontinued after the flower-spikes have made some little progress.

GARDEN FOOD.

THE SWEET POTATO.

THERE comes to my mind a song which I used to hear "way down south in Dixie." It has to do with the statement that the greatest feast which "mammy" can put upon the board is incomplete without the sweet Potato! I can shut my eyes and go back to the old days—not "befo de wah," but to the days when we played about in the big kitchen porch and listened to the wonder tales of "old Aunt Lucy" as she hurried back and forth getting dinner. I can see the big checkered apron and the bandana kerchief round her head—and oh, the dinners! I can taste those delicious, baked sweet Potatoes yet!

The sweet Potato comes to us from the Malay Peninsula, and was known to Europeans before the white Potato—in fact, the latter takes this name from them—*batates*, the European corruption of the Eastern word. The white Potato soon supplanted the sweet in Europe, owing to the greater hardiness of the plant, and the sweet Potatoes became most popular where they could be grown with the best results; the semi-tropical sun gives extra sweetness to them, but the first touch of northern frost blights the crop. The difficulty in keeping the sweet Potato has also restricted its use, as it is not a good "keeper."

The greatest difference between the white and the sweet Potato lies in the carbo-hydrates, the latter containing a greater portion of sugar, part of which is cane sugar and part glucose. The starch varies according to climate—the food value of the tuber increasing in the warmer climates, and in the tropics the proportion of sugar and starch is almost equal. This large proportion of sugar is not so desirable, and the general market demand has led to the cultivation of those varieties which tend to store more starch.

The cooking of sweet Potatoes depends very greatly upon the variety. The dry starchy varieties must be boiled before they can be baked, while the sweet syrupy "yams"—as they are often *mis-called*—are delicious baked in the ashes or in the oven. Owing to the irregular shape of sweet Potatoes and the tough skin it is usually more convenient and less wasteful to cook them with their jackets on. Sweet Potatoes are wholesome, and are digested by the average person without difficulty. But while almost everybody eats the Irish Potato, there are many people who do not care for the sweet variety.—*Good Health*.

[The sweet Potato comes to our markets betimes, and, rightly treated, is a good winter food, but in our markets there is not so much choice as there is in American markets, and the quality is not always good.—ED.]

NOTES AND REPLIES.

Piccalilli.—I have a great many spare Cauliflowers this year. Can you give me a recipe for pickling same? Also for a good but inexpensive Piccalilli? I should be greatly obliged if you could. I have tried all ways, but cannot succeed in keeping them a good colour—they always turn black, both Onions and Cauliflower, and go rather soft.—OLD READER.

[Break the Cauliflowers into neat little flowerets, lay them in a dish (but do not wash them), and look them well over to be sure there are no insects. Get plenty of small, white-skinned Onions, French Beans, and Scarlet Runners, small Cucumbers, or large ones cut into nice thick pieces, Nasturtium seeds, a few Chillies, and some Cayenne pods, with a blade of Mace. On no account wash any of the vegetables. Have them gathered on a dry day, and wipe off any grit with a

dry cloth. Mix the vegetables and put them into glass bottles quite dry and clean. Put as much vinegar as you think you will want to quite cover the vegetables on to boil with a few Peppercorns, a few lumps of sugar, and a dozen cloves. Let this boil ten minutes, then mix $\frac{1}{2}$ lb. of flour of mustard with a little cold vinegar. Stir this into the boiling vinegar, let it just boil up, and pour it boiling over the vegetables in the bottles. Let stand until the next day covered close, then fill up the bottles with boiling vinegar. Tie down with well-cleansed bladder. If you prefer it you can omit the flour of mustard, using more Peppercorns. You can use as much Cauliflower as you like, but pickled alone it is very tasteless.]

Preserved Pears (Candied).—Secure some sound but scarcely-ripe Pears, plunge them into a stew-pan of boiling water for two minutes, cool them in cold water, and drain them. If small, peel each one neatly, and leave the stalk on; but if large, cut each one in half, and peel each one lengthwise, with only three cuts of the knife, if possible, putting them into bottles as they are peeled. Make a strong syrup, boiling 4 lb. of sugar with 1 pint of water until it is clear. Pour this over the Pears in the bottles, cork, and tie tightly down. Place the bottles in a pan of water, and boil for ten minutes; let cool in the water. Pears preserved in this manner will keep good for a long time.

A large puff-ball.—The fungus described by Mr. Phelps (p. 475) is the giant puff-ball (*Lycoperdon bovista*), and is the most delicious fungus known to me, provided it is cooked before the snowy-white interior assumes a yellowish tinge. The late Dr. M. C. Cooke, who devoted his life to the study of fungi, recommended that the giant puff-ball should be cut in slices a quarter of an inch thick, smeared with beaten egg, dusted with breadcrumbs, and fried in butter. It sometimes springs up in a bed in the kitchen garden, when it may be allowed to grow, slices being removed from it as they are required.—HERBERT MAXWELL, *Monreith*.

—Referring to the note, p. 475, these large puff-balls are by no means rare. I remember finding several as large as footballs in a Rhubarb bed in my garden in North London some years ago, and have several times come across them in the country. It is not generally known that they are edible; indeed, quite nice when young, cut into slices like bread and either fried with a little butter or toasted in front of the fire. I have many times eaten them for breakfast. There are several other edible fungi besides the ordinary Mushroom, but it needs some little expert knowledge to be sure of the species before experimenting. One such edible fungus, however, is easily recognised and is quite common in the country. It is known as the Parasol Mushroom (*Lepiota procera*). It has a long, slender stalk with a little frill about half-way up, and, when not fully grown, looks like a half-open parasol, opening quite flat when full-grown. A mature specimen will measure 9 inches across and cannot readily be mistaken for any other species. The gills are quite white and the skin is brown and rough. A young specimen cooked like an ordinary Mushroom has a very pleasant flavour and is quite wholesome.—N. L.

Salad of the week.—Where Lettuces get hard at this season a good salad is made of Tomatoes, fresh and of the best quality, and Cucumbers sliced thin. The Tomatoes are scalded to get off the skin and then sliced thin, only oil and a little Lemon-juice to be used if any acid is desired.

OUTDOOR PLANTS.

KNIPHOFIA NORTHIÆ.

This is the most stately of all the Red-hot Pokers, if not of all the Aloe-like plants that can be grown in the open-air north of London. A fine specimen of a good form of it will attain to about three times the size of *K. caulescens*, a great

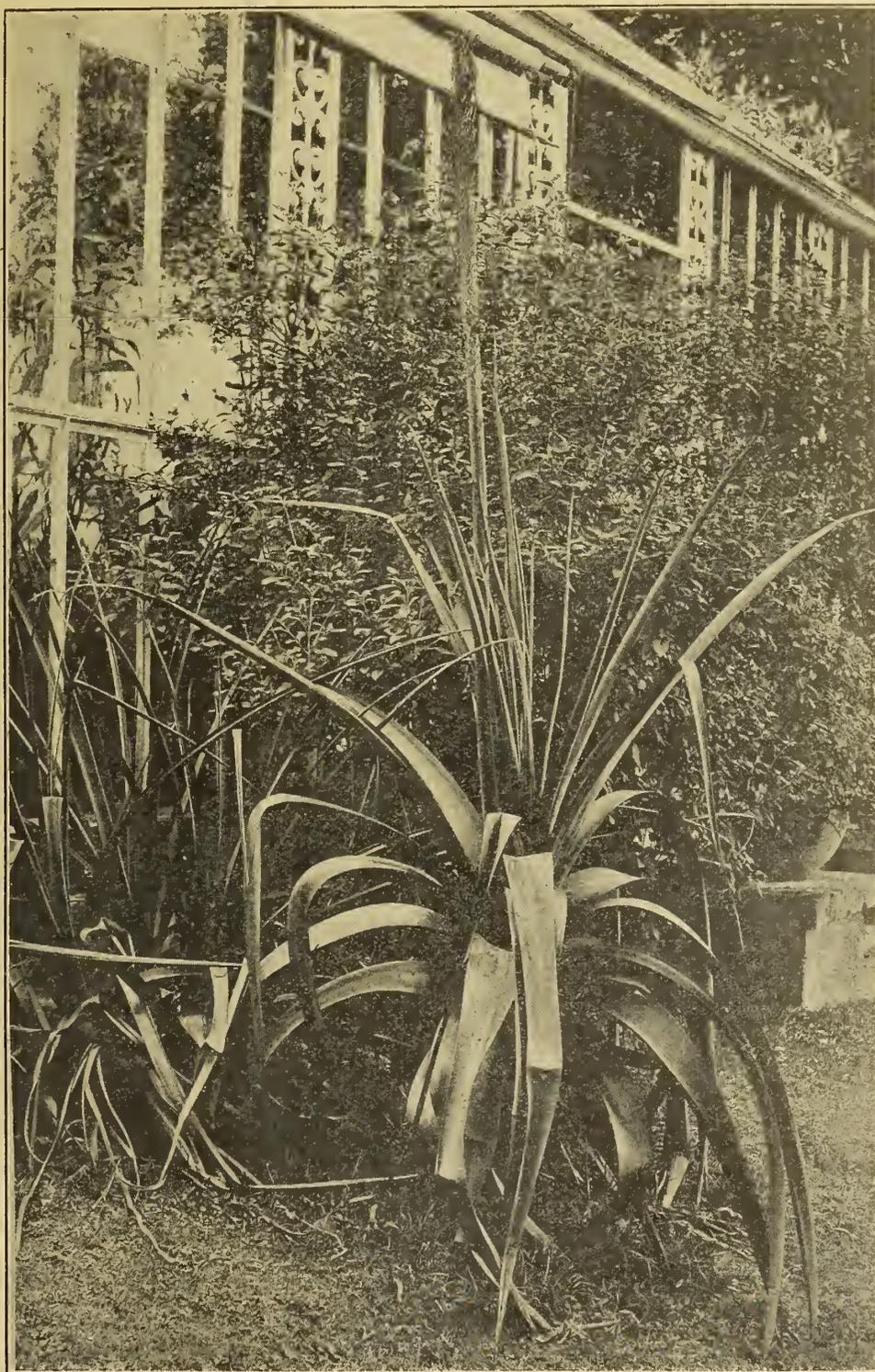
Mr. Beamish, and was gathered from the finest form of the species I have ever seen, in which the leaves are nearly as wide again as those of my larger form.

K. Northiæ is a native of Cape Colony and was found by Mr. W. Dugmore in the neighbourhood of Grahamstown, and was brought to Kew by Miss Marianne North in 1883. It flowered in the succulent-

flowers and their greyish-white extended anthers through the band of newly-opened blossoms of greenish-yellow tipped with orange to the coral-pink buds at the apex.

Unfortunately, this plant had been out of flower for some weeks when the photograph was taken. E. A. BOWLES.

The advent of the Starworts.—When the brightness is fast disappearing from



Kniphofia Northiæ at Myddelton House, Waltham Cross, N.

deal depending on the form grown. As may be seen in the accompanying illustration, the plant with three crowns to the left has much narrower leaves and a meaner habit than the flowering plant that occupies the centre of the picture. Both, however, were raised from one seed-pod, and, from their early youth, have shown their respective characteristic differences. The seed was given to me by

house in 1889 and was described by Mr. J. G. Baker and named after the lady who introduced it to Britain. There is a good portrait of it among her wonderful paintings in the North Gallery at Kew. The flowers are a trifle dull in colouring as compared with the many scarlet and orange *Kniphofias* now obtainable, but a spike in full flower is a fine sight as it shades upwards from the fully-expanded

our gardens, then come the Starworts with their cheery blossoms. Some of the earliest bloom in August, but it is in the latter part of September and October, when other things in the garden are beginning to have a worn-out look, that we appreciate them most. Few subjects in the garden reward the grower with a greater profusion of blossoms in comparison to the little trouble they need. That

they will grow in almost any kind of soil, and yield a fair return of bloom, many readers, especially those who live in towns, can testify; indeed, it is as town garden flowers that many who grow them know them best. In view of the season of blooming, I would suggest to those who have not taken much interest in them up to now the desirability of seeing, if possible, a collection in bloom. Late in the autumn, if the weather is mild, they may be shifted, but in March they may be removed without any fear, and, to obtain the best results, a well-manured soil is necessary. In an open autumn one may cut blossoms far on into November. Starworts, to give the best results, should be planted in bold masses, the varieties being selected with care. It is advisable to divide Starworts every two or three years at the latest, as the plants are apt to get ungainly, and the size of the flower is lessened.

MIGNONETTE.

I THINK it may be safely said that this is the most popular of all the annuals now in cultivation. Opinions differ as to the respective merits of flowers distinguished by their fragrance, but the sweet and delicate odour of the Mignonette is appreciated by all. It has but one defect in recent years, in that it has become liable to the attacks of a disease which, in some soils, renders its culture very uncertain. Thirty years ago I could grow Mignonette with the greatest ease; nowadays it is so extremely capricious. The collapse occurs just when the plants come into bloom, and they die off in two or three days. Why this occurs in some places is a mystery, and I do not know whether it is a fungoid disease or whether it is a form of canker, or whether there is something lacking in the soil which is absolutely needful for its well-being. If the evil were in the soil the remedy would be fairly easy. I mean to try what burnt refuse will do. This material, in a general way, exercises a very marked, and in some cases a magical, influence on vegetation. Where Mignonette is so uncertain it is advisable to sow several times at intervals of a fortnight from the beginning of April, as one of them may be successful. In the case of

POT CULTURE there is no difficulty whatever; anyway, I have never found any, and this is why I fancy that it is a matter of soil, as, when plants are grown in this way, the compost is carefully selected. Seeing how very popular this annual is I often wonder that window gardeners do not favour it more. The fragrance of Mignonette is so grateful that one cannot have it too near the dwelling, and if several sowings are made it can be enjoyed for several months in the year, and the culture is so simple. Fill $4\frac{1}{2}$ -pots with nice, free, loamy compost, with a little leaf-soil, sow a dozen seeds, and stand the pots in the open. The last sowing should be made in the latter end of August, as the seedlings will then be just strong enough to pass the winter and will be ready to respond to the influence of spring weather, and will come into bloom by the time plants are coming up in the open ground. The London market growers produce very fine samples of Mignonette early in spring from seeds sown as soon as the days begin to lengthen. The plants are grown along in gentle warmth without check, with a certain amount of atmospheric moisture. In former years the plants were plunged in fermenting material consisting of a mixture of dung and leaves, which gave out a mild and moist warmth. It was said in those days that Mignonette could only be grown to perfection early in the season

in that way, and it was also said that some growers allowed no drainage, the pots being made without it, and the plants, being plunged in damp material, no water was required during the period of growth. I cannot say if this was true, but very fine samples grown on gentle bottom-heat came from market growers in those days. Sown late in summer for spring blooming, water must be given very carefully during the dull months. A little excess in this way will cause the young plants to damp off, and they must have plenty of light, with a free admission of air in mild weather. In the dwelling the same rule applies. They must be wintered in a cool room, in the living-room they would become so drawn that they would have no power to bloom satisfactorily in spring.

TREE MIGNONETTE.—I wonder how many grow tree Mignonette nowadays. I have not seen any for many years, and have seen no mention made of it. In former years many amateurs prided themselves on possessing specimens some years old. It was simply the old variety grown in standard fashion, a straight stem being taken up and a head formed which became broader and the stem more woody each year. It is absolutely necessary that the seed-pods be picked off as soon as they form, and very great care must be taken in watering in the winter. BYFLEET.

AMONG THE HARDY FLOWERS.

ASTER ERICOIDES DELIGHT.—The ericoides varieties of the Starwort are all pretty, so much so, in fact, that it is difficult to make a selection. These ericoides varieties, with their Heath-like foliage, pretty habit, and multitude of small flowers, are exceedingly useful, especially as cut flowers. In the border they possibly have not the effect of the big-flowered varieties, but they are graceful and beautiful enough to win the heart of everyone who loves hardy flowers. The blooms of Delight are white, and sprays from the plant make a lovely decoration. These Heath-like Starworts receive too scant attention in most gardens, and are too frequently crowded up among other plants in a way which robs them of their character and much of their beauty.

ANTHOLYZA PANICULATA MAJOR.—Is not this an over-rated plant? It is, at all events, very disappointing even to those who know the ordinary Antholyza paniculata, which has a better colour than the variety major. The latter is a bolder grower, it is true, and when in leaf is handsome, with its long-ribbed or plaited leaves. The flowers are dull in colour. I may be called to account for "slating" this plant, but it is only fair to warn other amateurs that it is a disappointment, and inferior to the smaller-growing typical Antholyza. I have found both of these hardy if planted 5 inches or 6 inches deep when in light soil (about 4 inches in heavy loam), and covered with some litter or ashes the first season after planting. In subsequent years they are apparently hardy, especially if the old foliage is left on until all danger from severe frost is passed.

IS THERE A HARDY DAHLIA?—I am induced to ask this question through a very old gardener whom I knew assuring me that even in the north of England he had found the old Cactus Dahlia Juarezii stand most winters with a covering of ashes, and even without that in sheltered borders.

THE CROSSWORT (*Phujopsis stylosa*) (syn. *Crucianella stylosa*).—I always prefer to call this the Crosswort. It is quite a pretty plant and excellent for a rockery, but it has two faults which it may be as well to discuss before giving its good

qualities. One is that it is inclined to spread rapidly at the root when established. It is not very difficult to keep in bounds, but should, all the same, be kept away from tiny and choice plants. The other failing is its strong odour, which is most pronounced in the evening or after rain. I cannot, therefore, recommend this Crosswort for planting close to the house or by a much-frequented path. Still, it is not to be ruled out, as the trailing stems have pretty foliage like that of the common Woodroof, and the rounded heads of small pink flowers are quite pretty, the projecting styles, which give the plant its specific name, adding lightness and grace to the blooms.

MILDEW ON MULLEINS.—I wonder why mildew has been prevalent on some of my Verbascum and not on others! It disfigures the leaves very much, but it has not spread very greatly and most of my plants are free from it. It evidently attacks the white-leaved Verbascum worse than the green-leaved ones, as I have some plants of Verbascum phœniceum which are quite free from it. One plant of Verbascum Chaixi is badly affected, while another close by is free. Some plants of Verbascum olympicum are badly hit, but the majority are not touched. I am fond of these Mulleins and they seed freely, so that, although biennials, as a rule, they are as good as perennials. By the way, both V. Chaixi and V. phœniceum are perennial with me.

AN AMATEUR OF HARDY FLOWERS.

SOME UNRELIABLE LILIES.

LILIUM NEPALENSE is one of those tender Indian Lilies that cannot be depended upon in the open ground. Even if it be protected in winter it flowers, as a rule, so late that the cold nights check the development of the blossoms. From its distinct and striking appearance it is well worth the protection of a greenhouse, but even here it is difficult to establish it permanently. It is of tall, slender growth, the flowers, which reflex a good deal, like those of L. Martagon, being greenish-yellow or yellowish-green, with a purple base to the segments. The extent of the purple marking and the depth of colour vary a good deal in different individuals. The stock of this Lily has hitherto been kept up by annual importations, but it is probable that before many years it will almost die out, a fate which has befallen another Indian Lily.

L. NEILGHERRENSE, which in the 80's of the last century was sent here in considerable numbers and now seems to have quite disappeared, that is, so far as its culture in this country is concerned. This is a late-flowering species, its long trumpets being of various shades of pale yellow or primrose. A peculiarity of L. neilgherrense is that the stems, after they leave the bulb, often travel underground for some distance before they make their appearance. Another pretty Indian Lily now seldom seen is

L. LOWII, whose white thimble-shaped blossoms are spotted in the interior to a greater or less extent with purplish-crimson. It flowers, as a rule, in the summer. The hardiest and the most accommodating of these Indian Lilies is

L. SULPHUREUM, which was first distributed under the name of L. Wallichianum superbum. This, of which some near relatives have been found in China, has become established in the milder parts of the country. It is of tall growth, with narrow, densely-arranged leaves, and long, widely trumpet-shaped flowers of a yellowish tone. A marked peculiarity is the

presence in the axils of the leaves on the upper part of the stem of a number of comparatively large bulbils, which afford a ready means of increase. K. R. W.

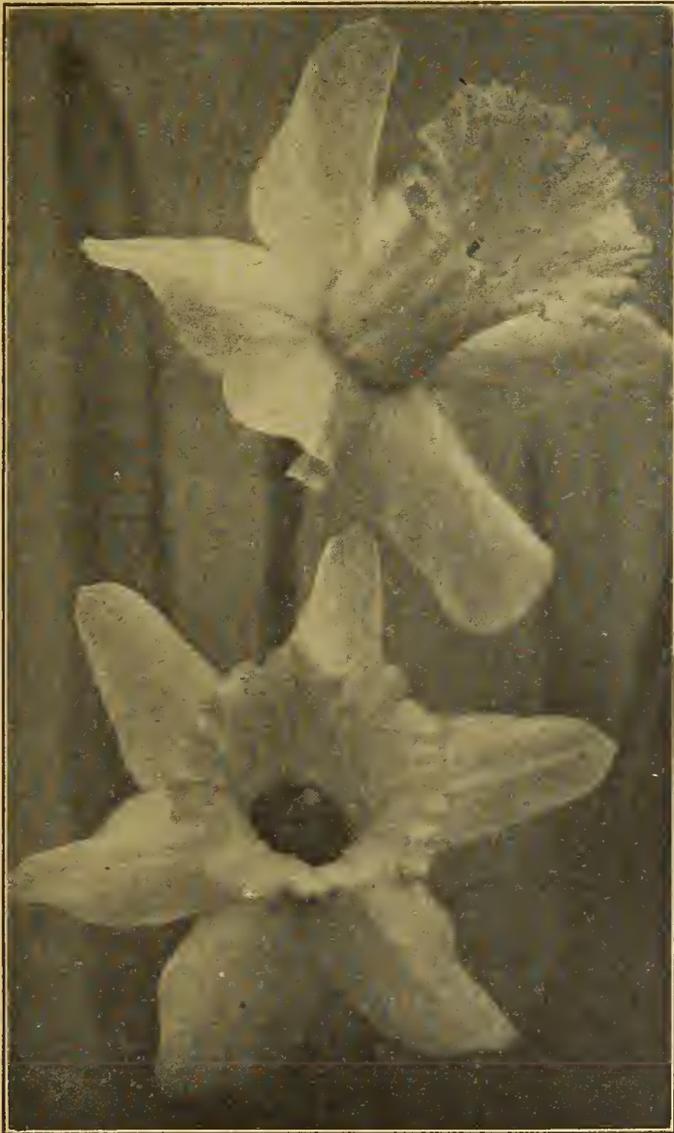
DAFFODIL, FLORENCE PEARSON.

This is a magnificent pale sulphur-coloured Daffodil, the result of a cross between Emperor and Mme. de Graaff. It has a creamy-white perianth of good texture and long, pale sulphur trumpet frilled at the edge. It is a vigorous grower, with foliage as large and strong as that of Emperor. F. W. G.

Potting Carnation layers.—I do not, as a rule, advise potting Carnation layers in

late the plants during the dull, dark days. Pot firmly, one plant in a pot, and plunge them to the rim in fine ashes or Cocoa-nut fibre in a drip-proof frame. If drip reaches the plants it will ruin them. Do not over-water them from November to February, and expose them to all the air possible, avoiding, of course, cutting winds, and cover the frame with mats in case of very severe frost. Plant out at the end of March.—T.

Ourisia coccinea.—I hope I did not misunderstand Mr. Jenkins in his note, page 387, the object of which was admirable. My idea in the last note was simply to express the opinion that your highly competent and experienced contributor's advice to divide and



Narcissus Florence Pearson.

autumn, with a view to planting them out in spring, as, provided the plants are strong and well rooted, they always give the best return when planted at the end of September or quite early in October. All the same, where the situation is low or the soil very cold and retentive, or if the layers are late and badly rooted, I pot them in October and give frame protection during winter. This, indeed, is the only way of succeeding with delicate varieties. Three-inch pots are best for potting them in, and care must be taken that the delicate rootlets do not suffer from exposure during the operation. Loam, pure and simple, with the addition of coarse sand or grit to keep it open, forms the best compost, as it is best not to stimu-

replant occasionally would not meet the difficulty. This is confirmed by the remarks of Mr. Cornhill on page 440. Readers interested in *Ourisia coccinea* will find there a confirmation of my own views and experience.—S. ARNOTT.

Colchicum variegatum.—The variegated Meadow Saffron is the cheapest and most reliable of the Colchicums, with distinctly marked chequering. It is not so soft in its colouring or so large as *C. Sibthorpi*, which is expensive and does not stand so well everywhere. *C. chionense*, or *Parkinsoni*, is finer than *C. variegatum* in many ways, but it is generally too late to give much satisfaction, except in favoured places. *C. variegatum* comes early. It has sharply pointed segments, which are light purple chequered with a deeper tone. The first flowers of *C. variegatum* appeared this year on September 6th.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 26TH, 1916.

THE meeting held on this date was materially augmented by the holding of the annual exhibition of vegetables in conjunction therewith. As usual, the vegetables showed high cultural excellence, and in not a few instances the competition was keen. In the flower section there was much to admire, the hardy flowers shown worthily demonstrating the best of such things at this season. Roses, too, from a variety of sources, showed much colour-richness, while affording proof of those varieties good in the autumn. Carnations, Dahlias, Michaelmas Daisies, Early Chrysanthemums, with shrubs valuable for distinctive leaf character or richly-coloured foliage, each contributed their quota. Some good novelties, referred to more fully elsewhere, were also on view.

HARDY FLOWERS.

These were worthily displayed by Mr. James Box, whose bank of them extended from the entrance to the fruit annexe. Rarely have these things been better shown, the liberal groups very suggestive of what is possible with them in the open ground. Backed throughout with Golden Rods, Miss Mellish Sunflower, and the finer Michaelmas Daisies, all else resolved itself into free massing. A good centre consisted of *Cimicifuga simplex* and *Scabiosa caucasica*, pure white and pale mauve-blue respectively. Even more conspicuous, by reason of colour, was the magnificent lot of *Aconitum Fischeri* and *A. Wilsoni* (dark and light blue respectively), and of much value, because of their long flowering. Two good varieties of the Italian Starwort, *Beauty of Rousdorf* and *Perry's Favourite* (the former large and of a good light violet-blue tone, the latter lilac-pink and rather pretty). *Helenium* in golden and crimson-brown, both forms of *H. grandicephalum*, were effectively shown. Scarlet Geums, richly-coloured Phloxes, and good *Delphiniums* (the sky-blue *D. Belladonna* fl.-pl. particularly good among them), and the crimson of *Lobelia Queen Victoria* were other telling bits of colour. *Lobelia Tupa* was also well shown, and in a group it at once commands attention. Some plants of interest were staged by Mr. G. Renthe, and here, of conspicuous beauty, was the pure white *Meadow Saffron* (*Colchicum speciosum album*). The big white flowers stand up boldly and are in sharp contrast with those of the red-purple form. *Escallonia oregana*, with rosy-red terminal trusses, is also excellent. *Berberidopsis corallina*, *Clethra arborea*, with white, fragrant bells in pyramidal panicles, and the Chilean Nut (*Guevina avellana*), with whitish flowers, were among other things shown. *Schizocodon ilicifolius*, *S. soldanelloides*, and *Astilbe simplicifolia* were among rare alpinas. A novelty of great charm from Mr. Clarence Elliott and which gained an Award of Merit was *Gentiana ornata* variety, a lovely thing from the Himalaya for which no praise is too great. The leaves are linear, firm, and almost fleshy, the solitary, erect, sky-blue flowers produced at the extremities of procumbent stems. Valuable at any time, it is doubly so in September, when choice rock plants are rare. Six inches or more high, it appears to be more robust than some other forms of this somewhat variable species. Messrs. Felton and Sons had a wondrous display of *Physalis Franchetti*, whose brilliantly-coloured calyces are just now very effective. With it sprays of the equally brilliant *Berberis Thunbergi* were associated. Michaelmas Daisies were well

shown by Messrs. H. J. Jones, Limited, a fine representative gathering including Mrs. S. T. Wright, Rycroft Pink, and a variety of the Italian Starwort (*Aster Amellus*). The best things from Mr. W. Wells, junr., who also showed freely of Delphiniums in variety, were *Aster Amellus* King George, the finest of the group, and *Helianthus sparsifolius*, a perennial Sunflower of fine presence and colour, and removed from the common-place. Messrs. W. Cutbush and Son showed *Aconitum Fischeri* and a large gathering of Michaelmas Daisies.

FLOWERING AND OTHER SHRUBS.

This department was rendered more than usually interesting by reason of the presence of more than one novelty. Prominent among them was *Pyrus Vilmorini*, a new Chinese species allied to the Mountain Ash section of the genus, having long, elegant, blue-green pinnate leaves, pale green below, and small clusters of fruits which in colour are not unlike the rose shades seen in *Pernettya*. It promises well. Even more charming was *Clematis Campanile*, a herbaceous kind 3 feet or so high, bearing pyramidal panicles of blue, white-anthered flowers. These are also fragrant. It is said to be a hybrid having *C. stans* and *C. grata* for its parents. It is quite beautiful and a welcome addition to its class. *Euonymus latifolius* was also shown in fruit, the red capsules, orange-coloured berries, and bronzing leafage giving a very pretty effect. Each of these gained an Award of Merit. They were presented by Messrs. George Paul and Son, from whom also came the most graceful and elegant Willow we have seen (*Salix pruinosa*), whose stems and branches are as white as in *Rubus lasiostylus*. Hence it is highly ornamental and distinct to boot. *Ailanthus Vilmorini*, with handsome yard-long pinnate leaves, was another notable shrub in a lot of things which included species of *Rhus* and *Hibiscus* of sorts. Messrs. J. Cheal and Sons also contributed shrubs in variety, *Fabiana imbricata*, *Euonymus latifolius*, *Veronica gracillima*, not unlike *V. salicifolia*, being remarked among many things. *Berberis Thunbergi* was richly coloured. Mr. L. R. Russell's chief contribution to this department was hardy Vines and *Crataegus*, *C. Pyracantha Lælandi* in particular bearing freely its scarlet fruit clusters. *Vitis Coignetæ*, *V. vinifera purpurea*, and *V. Thompsoni* were well shown.

CARNATIONS.

Messrs. Allwood Brothers showed these popular flowers, the display being of a sumptuous character. Among the varieties shown we noted the Clove-scented Bishton Wonder, which is of a new shade of lilac-pink. Mandarin (yellow-ground fancy), Wivelsfield White, Salmon Enchantress, Nora West (one of the most popular of pure pink shades), Mary Allwood, and Princess Dagmar (fine crimson) were some of the best. That last named is particularly rich in colour and of handsome proportions.

ROSES.

Nothing quite new was remarked among these, though the rich and varied displays from a variety of sources afforded proof of the value of the perpetual-flowering character in not a few varieties. In that from Mr. George Prince, Josephine Nicholson stood out prominently, a great stand of it demonstrating colour-beauty and freedom. The long, tapering, pure-white flowers of Mrs. Herbert Stevens, with a profusion of buds, were also noticeable. Hugh Dickson and Mme. E. Herriot were also noted, and a big lot of Snow Queen.

Rev. J. H. Pemberton again showed a set of his new Cluster Roses. In a gathering of twenty or thirty sorts from Mr. J. C. Allgrove, Rayon d'Or was very fine. Messrs. B. R. Cant and Sons also showed excellent stands of these flowers, Lady Hillingdon being especially rich in colour and in some quantity. Snow Queen, Hugh Dickson, Mme. E. Herriot, Lyon Rose, and Duchess of Wellington were remarked among many others.

DAILIAS.

The fact that sixteen novelties were granted certificates at this meeting alone would seem to imply a certain popularity for these flowers. They came from the chief raisers, Messrs. Stredwick, Cheal, Burrell, West, Dobbie and Co., and Mr. Reginald Cory each contributing. The largest collection was that from Messrs. Carter Page and Co. Messrs. Cheal and Son also had a good assortment, showing freely of the Star section, and securing an award for Autumn Star. Crawley Star and White Star are other good sorts.

FERNS.

A large table group of these from Messrs. H. B. May and Sons included several of the newer *Nephrolepis*, as *N. gracillima*, *N. Whitmani compacta*, *N. Willmottæ*, and others. *Pteris Summersi*, *Davallia gibberosa*, and *Adiantum Veitchi* (one of the most beautiful of its race) were noted. Quite a nice assortment of the hardy evergreen *Scolopendrium* was also shown.

ORCHIDS.

The outstanding Orchid novelty was *Sopho-Cattleya Sir Mervyn Buller*, with rosy-salmon sepals and petals and rich red-crimson lip. The *Cattleya* influence is strongly revealed (first-class certificate). *Lælio-Cattleya Lady Manningham Buller*, with soft yellow petals and glowing crimson lip gained an Award of Merit. Both were shown by Messrs. Armstrong and Brown. *Cattleya Rhoda* (Langley variety) has reddish sepals, salmon-coloured petals, and big, heavily-goffered lip of ruby crimson, with gold-coloured veins. It was from Messrs. Flory and Black. *Brasso-Cattleya Oberon*, var. *Majestic*, is a large-flowered variety of most delicate lilac-mauve colour throughout. It was shown by Messrs. Sander and Son. Each of the above gained an Award of Merit. Orchid groups were shown by Messrs. Sander and Son and Messrs. Charlesworth and Co.

FRUIT AND VEGETABLES.

Of fruit, the most attractive exhibit was that of two-year-old and three-year-old upright cordon trees of Apple Rev. W. Wilks from Mr. J. C. Allgrove. Lifted from the open quarter, the cordons, not exceeding 3½ feet high, were bearing in some instances as many as a dozen handsome fruits. The younger trees bore one—occasionally two—fruits of huge size. To demonstrate the development of the Runner Bean, Messrs. Sutton and Sons showed a series of pods on a board, starting from the old Scarlet Runner, with curved, thick-looking pods, and proceeding by way of Champion, Ne Plus Ultra, and others, till Prizewinner and Best of All, with pods nearly 18 inches long—young and succulent withal—are reached. Despite their length, these have pods about an inch wide. Quite a collection of French Beans and others having coloured pods was also on view.

Owing to lack of space we have been compelled to hold over till next issue our notes on the vegetable show. A complete list of plants certificated and medals will be found in our advertisement columns.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM SEPTEMBER 27TH.—*Clerodendron trichotomum*, *Buddleia variabilis magnifica*, *Ceanothus* (in variety), *Hardy Fuchsias* (in variety), *Wistarias*, *Solanum jasminoides*, *Myrtle*, *Clematis* (several varieties), *Polygonum baldschuanicum*, *Hydrangea paniculata grandiflora*, *Magnolia grandiflora*, *Calycanthus occidentalis*, *Genista hirsuta*, *Spartium junceum*, *Lavatera Olbia*, *Nandina domestica*, *Berberis nepalensis*, *Eupatorium Weinmannianum*, *Shrubby Veronicas* (in great variety), *Clethra alnifolia*, *Hypericums* (in variety), *Ericas* (in variety), *Roses* (in variety), *Caryopteris Mastocanthus*, *Artemisia lactiflora*, *Polygonums* (in variety), *Cyperus longus*, *Chrysozonum virginianum*, *Tritomas* (in variety), *Water Lilies*, *Lilium speciosum*, *Gladioli* (in variety), *Hyacinthus candicans*, *Belladonna Lilies*, *Montbretias* (in variety), *Anchusa Opal*, *Achilleas*, *Oenotheras* (in variety), *Pentstemons* (in variety), *Linum arboreum*, *Scabious* (in variety), *Statice* (in variety), *Anemone japonica* (in variety), *Lobelia cardinalis*, *Helianthus* (in variety), *Michaelmas Daisies* (in variety), *Erigerons* (in variety), *Heleniums*, *Rudbeckias*, *Salvias* (in variety), *East Lothian Stocks*, *Antirrhinums* (in variety), *Potentillas*, *Eupatoriums*, *Dahlias*, *Cosmos*, *Chrysanthemums* (in variety), *Gypsophilas*, *Perpetual-flowering Carnations*, *Leptosiphons*, *Cerastiums*, *Verbena venosa*, *Cannas*, *Tufted Pansies* (in variety), *Gazania splendens*, *Begonias*, *Petunias*, *Verbenas*, *Calceolaria amplexicaulis*, *Ageratum*, *Phloxes*, *Tropæolum speciosum*, *Mesembryanthemums*, *Sedum spectabile*, *S. Sieboldi*, *Oxalis*, *Myosotis*, *Omphalodes cappadocica*, *Linarias*, *Silenes*, *Androsaces* (in variety), *Hutchinsia alpina*, *Convulvulus mauritanicus*, *Tunica Saxifraga*, *Dwarf Campanulas* (in variety), *Plumbago Larpenæ*, *Pratia angulata*, *Dryas octopetala*, *Ethionemas*, *Vaccinium*, *Vitis idæa*, *Platystemon californicus*, *Agapanthus umbellatus*, *Cimicifuga racemosa*, *Sweet Sultan*, *Agathæa cælestis*, *Virginian Stock*, *Arabis*, *Cyclamen hederifolium*, *Colchicum autumnale*.

THE WEEK'S WORK.—There has been a good crop this year of seeds of flowers and shrubs, and close attention is still required to gather as they ripen such as are required for next season. A portion of Delphiniums and herbaceous Pæonies has been lifted carefully, divided, and replanted. They begin their growth quite early in the spring, and they rarely do well if removed late in the autumn. Pæonies especially are extremely impatient of removal. The ground for them should be deeply trenched, and a good supply of rotten manure dug into the bottom spit deep enough for the roots not to reach it when first put in. If the soil is heavy a little leaf-mould should be worked into the top spit and round the roots. Delphiniums can be planted with good effect almost anywhere—in beds, in clumps, in the shrubbery, in mixed borders, or by the banks of a lake or stream. Pæonies, also general favourites, will thrive almost anywhere in well-prepared soil, and are very attractive in the flower borders of the kitchen garden. A border devoted entirely to the different varieties of this flower is extremely effective, the plants lasting in bloom over a long period. There are many lovely varieties now to be obtained in all shades, from white to deep crimson. Polyanthuses and Primroses raised from seed sown in the spring and afterwards planted out into nursery beds are now being transferred to their permanent positions, adding plenty of leaf-mould and decayed manure to the soil. They bloom very early in the spring, and a succession of flowers is obtained over a long period by placing some in warm, sheltered positions and others in more exposed places. The layers of Carnations are now well rooted, and will be potted up into 4-inch pots, using a good compost and making very firm. The pots are then plunged to the rims in coal-ashes in a frame and the lights only placed on when it rains. The planting of Wallflowers, Myosotis, and other biennials has been commenced, and will be completed as soon as possible. Dry weather is preferable for this work, as treading on freshly-dug ground while in a wet,

sticky condition does a great deal of harm. Most of the Wallflowers look well edged with Forget-me-not, so that with these two species there need be no clashing or undesirable combinations. Canterbury Bells are also best planted in autumn, although early spring will give good results. This is a true biennial and few plants make a finer display in their season. They do admirably on a north border, and in this position their season of blooming is considerably prolonged.

F. W. GALLOR.

Lilford Hall Gardens, Oundle, Northants.

SOUTHERN COUNTIES.

Melons.—Plants to supply ripe fruit at the latter end of October and early in November will need every encouragement in the way of heat and stimulating at the roots, at the same time making use of every ray of sunshine to secure high temperatures, which are not only an economy but far more beneficial and of greater forcing value than artificial heat. The nature of the stimulants may be varied according to circumstances, but whatever they consist of they should be applied in a liquid state and in a tepid condition. Care has to be taken to see the soil does not become dry before supplying water, otherwise both roots and fruits will receive a check and the latter be liable to crack afterwards. As the fruits swell and increase in weight see that the supports are secure and that the trellis wires through contact will not damage them. Keep all lateral growths, so long as the main leaves are sound, closely pinched, and promote a humid atmosphere by the usual means of damping and syringing daily. In some seasons black-fly is apt to be very troublesome on Melons in the autumn. The best way of dealing with it is to vaporise the house directly its presence is detected. Melons now ripening should be kept warm and dry, but until properly finished the plants must not be altogether dried off at the roots. As soon as the crop is cleared the house should be washed down and got ready for winter Tomatoes, which, if already in pots, as they should be, have simply to be transferred from one house to another in cases where the former is unsuitable for the purpose later on and in the depth of winter.

Figs.—As the late houses are cleared of their crops, whatever may be necessary in regard to root-pruning, restriction of the roots by enclosing them within certain limits by means of 4½ inch brick walls built with cement, or adding to existing borders in the case of recently-planted trees, should be carried out. Where trees are grown in raised borders enclosed by walls, pigeon-holed on their fronts and sides for the purpose of admitting warmth when surrounded with a bed of leaves when forcing is commenced, the latter is now best taken away, when all roots which have escaped and penetrated the decayed leaves should be cut back to as far within the pigeon-holes as it is possible to do. The houses must be kept fully ventilated and the borders on the dry side, but not so dry as to cause a premature fall of the leaf. On fine days a copious washing of the foliage may still be indulged in.

Early Peach-house.—The foliage has ripened fast and will soon be dropping. As soon as all the leaves have fallen the trees should be overhauled and relieved of surplus wood, as well as any of the old bearing wood still present. This work can, if necessary, be postponed till a wet day occurs—i.e., if time cannot otherwise be spared. If any structural alterations or repairs are necessary they should be undertaken without further delay, and the same with regard to the painting of either the interior or exterior woodwork. If nothing but a general clean down of the house is required this can be held in reserve for wet weather. In that event the loosening of the trees from the trellis and the tying of the wood in bundles to facilitate the cleaning of the roof-glass should not be done until cleaning is commenced, as the buds in the interior of the bundled-up branches are apt to start prematurely if they remain so for any length of time. The rettying of the trees to the trellis can also be done on the same principle, so that labour shall not be absorbed when, so long as fine weather prevails, it is required elsewhere. The

trees should be dressed with an insecticide or sulphur before tying. See that the border is in a thoroughly moist state, ascertaining if such is the case by an actual test and not trusting to appearances.

Late Peach-house.—As soon as the fruit is gathered the trees should be looked over and relieved of the old bearing wood, and, as far as it can be done, of surplus current season's growths also. This thinning out allows sunlight and air more free play to ripen the wood. Such operations as adding to and top-dressing of borders, the lifting of roots to check undue growth where they have got out of bounds, or the trees are in ill-health as a result of the border being in an exhausted condition and a partial or total renewal of border has become imperative, should be undertaken now. The best loam obtainable is necessary for Peach-growing, and the more lime it naturally contains the better is it suited to the purpose. Where the lifting of a tree from the outside walls to make good a vacancy under glass is contemplated the hole for its reception should be made ready, new drainage put in if required, also the compost for enclosing the ball prepared, so that the lifting and transplanting of the tree itself can be carried out during the first half of next month.

Mustard and Cress.—The supply of both should be fully maintained by sowing every few days, the little-and-often principle being more satisfactory than sowing a greater quantity at less frequent intervals.

Watercress.—If the plants in the oldest beds have been cut over, when about to run to seed, close to the surface of the water, there will now be an abundance of young tops available for the salad-bowl. Beds which have been in bearing for some time past and now getting past their best should be cut down for the purpose of furnishing a good supply for the winter.

Beet.—The remaining roots in the bed of the earliest-raised Globe Beet should, if not too large, be pulled and stored for present use; the same with regard to the roots resulting from the second and third sowings, as they are now sufficiently large for table use.

Celery.—If not already done, the moulding up of the plants intended for the earliest supply should be completed at once. The heads will then be ready for digging in the early part of October.

East Lothian and other Stocks.—Where these are appreciated in early spring for greenhouse and conservatory decoration, it is necessary to now raise the plants. Unless an unusually large number of plants is required, a 7-inch pot of each of the varieties Scarlet and White Lothian, All the Year Round, Princess Alice, and Empress Elizabeth will furnish a sufficient number for all ordinary purposes. The best place to raise them is on a shelf in a greenhouse, keeping the seeds shaded until germination takes place.

A. W.

MIDLAND COUNTIES.

Peaches and Nectarines have done exceptionally well here this season, the fruits finishing well and of first-rate quality. With the exception of a few late varieties, the crop has been gathered. The trees will now be cleared of all wood that has carried the crop, and superfluous side growths shortened to the basal buds, afterwards giving the trees a thorough washing with an insecticide. All mulching materials will now be removed, so that the sun may the better warm the borders containing the roots. Point over the surface soil with a fork, and if too dry give a soaking of water, which will suffice for some time to come, as the days are getting shorter and the sun less powerful. It is of little use to fork these mulchings into the borders, for after the exposure and rains to which they have been subjected they contain but little nourishment. Most kinds of wall trees will soon be in a suitable condition for replanting, and advantage should be taken of fine weather to do any necessary transplanting or rearranging. All vacant places on walls should be furnished with young healthy trees. Before planting, the old soil should be removed and replaced with fresh turfy loam. If the soil is

of a clayey nature, very little, if any, manure should be added to it, but if it is sandy or gravelly, with a porous subsoil, then a moderate proportion of well-decayed manure may be mixed with it. When planting fruit-trees in heavy land it is advisable to plant on mounds, raising a heap of soil a little above the ordinary level, but when dealing with a gravelly staple, plant in a slight depression, so that the roots may obtain all the moisture possible. Fruit-trees growing in poor, hungry soils require liberal treatment to induce them to make moderate growth, but, as a rule, they fruit freely, the wood being usually well ripened, although the fruits are not as a rule large.

Vineries containing ripening Grapes now require careful ventilation or the shortening days and cold, damp nights will result in the berries being mildewed or rotting. As late Grapes are generally required to hang upon the Vines for some time, it is necessary that they should be thoroughly ripened. Encourage the ripening by a judicious use of fire-heat, and maintain a dry, warm atmosphere. On sunny days admit air freely, but if the weather is dull and damp open both top and side ventilators very slightly only and maintain sufficient heat in the pipes to keep the temperature about 60 degs. If a mulch of clean straw is applied to the border it will check evaporation, thus saving the necessity of frequent watering.

Chrysanthemums.—All must now be housed, except, perhaps, the very latest-flowering varieties. Before the plants are removed indoors clean the pots and spray the foliage with a solution of sulphide of potassium. Avoid overcrowding, as this always leads to disappointment. If the plants are overcrowded when removed to the houses the flowers are bound to suffer. For some time after the plants are removed indoors they should be given liberal ventilation by night as well as by day, taking care at the same time to prevent cold draughts. It is advisable to fumigate or vaporise the plants on two or three occasions at intervals of five days or six days to make certain that thrips or aphid will not disfigure the flowers. Watering must be carried out with care, and the strength of manure-water or other stimulants gradually decreased.

Lilium longiflorum giganteum.—The second batch of retarded bulbs was potted during the week, placing the largest bulbs in 32 size pots and the smaller ones in 48's. The compost used was good loam, leaf-mould, decayed cow-manure, coarse sand, and a little wood-ashes. Sufficient room is left in the pots for a top-dressing later on. The pots are afterwards stood in a cold-frame and covered with leaf-soil, this being removed as soon as the bulbs start into growth.

Cauliflowers.—Plants from the first autumn sowing will now be large enough for planting out in cold frames for the winter. If the plants show signs of flagging after planting, keep the frames rather close for a few days until the roots become active, after which air should be admitted freely, removing the lights in favourable weather throughout the winter.

Spinach.—The plants of the second sowing are ready for thinning, an operation that needs to be done before the plants become crowded and drawn. Overcrowding is liable to cause mildew, especially in low-lying districts. A distance of 2 inches should be allowed between the plants in the row. In order to promote the growth of large, healthy leaves give frequent light dustings of soot and hoe the ground between the rows as often as possible. The largest leaves should be gathered from the early-sown plants, whether required for cooking or not, to encourage the growth of young, fresh leaves. Old leaves that have lost their deep green colour are of no value whatever.

Seakale intended for early forcing should have all decaying foliage removed in order to expose the crowns to the weather.

Autumn-sown Onions.—The seedlings are appearing above the ground, and as soon as it is safe the Dutch hoe will be used between the rows and a light dusting of soot given.

Maincrop Onions.—Advantage will be taken of wet days to clean, sort, and rope Onions.

The loose outer skins should be removed and all roots showing the least sign of decay rejected. The bulbs should be kept distinct in respect to variety, and roped according to size, those with thick necks being put on one side for immediate use. The smallest of the bulbs may be used for pickling, although those of the Silverskin variety are usually preferred on account of their better appearance. The ropes of Onions should be suspended in the coolest shed available, an open shed answering for well-ripened bulbs, which merely require to be kept dry.

Winter salads.—Every available cold pit will now be filled with Lettuces and other salad plants, so that they may become established before winter. From seeds sown at the end of August plenty of strong plants suitable for planting in pits is available. The soil is raised to within 15 inches of the glass, and trodden firmly whilst moderately dry. A distance of 9 inches is allowed between the plants.

Parsley should not be allowed to become over-grown or the leaves will lose their colour. If the foliage is cut down now and a good watering given the new growth will be of a much better quality and the plants will withstand the winter better than if left uncut.

F. W. G.

SCOTLAND.

Onions.—These have now been harvested and laid out to ripen off in a well-exposed place at the foot of a south wall, the coping of which is of glass. In such a place, with anything like favourable weather, the drying off is not prolonged, and to hasten this the Onions are turned occasionally. The crop is a fairly heavy one, and with but routine attention several bulbs were noticed which were each nearly 3 lb. in weight. The bulk, however, would probably run from 1½ lb. to 2 lb. each—quite large enough. These, of course, were from planted-out seedlings raised in heat. Sown-out Onions are, by comparison, equally good. These were sown early, and finally thinned to 4 inches apart, so that the bulbs have attained to quite respectable dimensions. A cool, dry, frost-proof place is needed if Onions are to keep satisfactorily. If the atmosphere is damp, rotting is inevitable; while, if the temperature be too high, growth is prematurely excited and the bulbs become soft and useless. In the course of the week the Onion bed sown in August was hand-weeded, and the hoe was afterwards run between the lines. This cleaning, it is expected, will suffice until growth begins once again in spring. In the case of these Onions germination has been quite exceptionally good, and as the bed is under the lee of a Beech hedge it is anticipated that the seedlings will come through quite well even should the winter be severe.

Winter vegetables.—The growth of winter vegetables during the season has been somewhat erratic. Some things, such as Brussels Sprouts and Curly Kale, have grown remarkably well. On the other hand, Savoys, with the exception of Early Elm, have made, so far, but moderate progress. In view of this, a dressing of concentrated artificial manure was applied in the course of the week, and the hoe was rather deeply run through the quarter. Autumn Cauliflowers, upon which some reliance was placed, are not promising. Should frosts hold off there will be plenty of heads, but at a much later date than is customary. Cabbage planting was completed for the present during the week. The variety First and Best is a small one, therefore the plants were put out rather thickly—about 14 inches each way being allowed. A drill about 4 inches deep is taken out with the hoe in which the young Cabbages are planted. When growth is sufficiently advanced the soil is again hoed back into position, so that the base of the plant rests on the soil. In the case of these small early Cabbages this does away with the necessity of moulding up, which is not really necessary. Should slugs show signs of activity, a dressing of soot will be given.

Peas and Beans.—Continue to remove spent straw of Peas and Beans as soon after the crops are picked as may be possible. In the case of Pea straw this is worth emphasising,

for mildew may be present and the spores will readily affect other things. If sufficiently dry, the straw may be burned; if not, let it be removed to the rot-heap. An alternative way of disposing of the straw of Peas and of Beans is to bury it when trenching; but it is to be feared that in the majority of gardens trenching will not be so general as has hitherto been the case.

Late Potatoes.—The time is at hand when late Potatoes must be lifted. Fears are now entertained that disease may prove more prevalent than was at one time anticipated, so the lifting of the crop may be hastened by a week or so if the weather remains favourable.

Hardy wall fruit.—Picking is being attended to as becomes needful from day to day. Plums are now ripening freely, and, after all, are a fairly good crop. In the case of Coe's Golden Drop the yield is very heavy. This valuable dessert Plum, in a general way, ripens here in late September. It will be later this season, and in order to expose the fruit to the sun as far as possible obtrusive leaves have been removed. Pears, too, are now being picked. It may be interesting to note that Williams' Bon Chrétien is exactly a month later than was the case last year. Peaches, although hindered by lack of sun, have turned out fairly well, both as regards quantity and quality. Nectarines, always a more precarious crop on south walls, will, if sunshine continues, be fairly satisfactory, although Elruge is small.

Wallflower.—A bed of Asters having become rather shabby, these have been pulled up, and the bed, after being lightly manured and dug, will be refilled with Wallflowers. The varieties of Wallflower used this year are limited to Harbinger, Blood Red, and Belvoir Castle—three very useful and reliable sorts, if now rather old.

Salvias, etc., for winter flowering.—In order to encourage the formation of fibrous roots in the neighbourhood of the necks of the plants, the spade has been run round about a foot from the stem. This gives them a certain check for a short time, but they soon recover, and when lifted and potted up they suffer but very slightly. Among the subjects thus treated during the week may be mentioned *Salvia splendens*, *S. lactiflora*, *S. rutilans*, *S. Pride of Zurich*, *Eupatoriums* of kinds, and a considerable batch of late-struck *Chrysanthemums*. The last were struck in May, and planted out in mid-June. They are now fine healthy pieces, and can—most of them—be accommodated in 7-inch and 8-inch pots, which are sufficiently large for their requirements, and in which the plants are useful in many ways.

Berried plants.—A look round the shrubberies in the course of the week shows that the crop of winter berries will be but mediocre. Hollies in some exposures will bear fairly good crops, but there is a much larger proportion of barren trees than is usual. *Cotoneaster frigidus*, another favourite, is likely to carry a useful amount of its showy berries. Barberries of kinds were very heavily cropped, *B. Darwini* in particular, but birds are very partial to the fruits of these shrubs, and when they are ripe the berries are cleared off in a short time. Thorns, of course, are beginning to colour up their fruits, but, as in the case of the Barberries, birds take a heavy toll. Conspicuous are the hips of Sweet Brier, and especially so those of *Rosa rugosa*.

Under glass.—During the week the work has been entirely routine. The necessary watering is attended to early in the morning, and ventilation is afforded as the outside temperature warrants. Among greenhouse plants in bloom just at the present time may be mentioned some examples of *Nerines*—*N. Bowdeni* and *N. Fothergilli*. These are very bright and showy things, although they have a rather bare appearance owing to the fact that the flower-spike develops before the foliage. Nevertheless, they are worth attention, and they are very showy while in bloom. In the stove let the firing be as moderate as possible. No advantage is derived from an excessively high temperature; as a matter of fact, such a condition may lead to an outbreak of insects. W. McGurros.

Balmac Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Wintering Cannas (C. W.)—As soon as frost destroys the foliage take them up, cutting the stems down to within 4 inches of the soil. The small shoots may be left on them. Leave a portion of soil round the roots, and store them away in any cool place, where frost does not come, until May, or they may be buried in a frost-proof frame.

Treatment of Gloxinias (G. R.)—The bulbs will now be going to rest. As soon as the foliage begins to decay, gradually withhold water. When the leaves turn yellow shake out the bulbs and store away all together in sand in a warm house or room until April, or if only a cool house is available a month later will be time enough to repot.

Convolvulus, destroying (Aurelius)—The only true way of doing this will be to keep the tops cut off with the hoe immediately after they make their appearance—indeed, if the ground is kept constantly hoed the shoots will have no chance of appearing above ground and the roots will then in time die from the want of that support they can only obtain from leaves and shoots.

Rambler Roses (E. D. Prichard)—The only thing you can do is to cut out all the old and useless wood, retaining all the growths made this year. Then give the plants a thorough soaking of water and in the coming spring apply a heavy mulch of rotten manure, keeping this thoroughly soaked, so as to wash the goodness of the manure down to the roots of the plants. If this fails to benefit the plants, then it would be advisable to grub them, clear away the old soil, and replace with good loam. Plant strong, healthy specimens as soon as you can procure them in the autumn.

FRUIT.

Pruning Black and Red Currant bushes (M. W.)—These can be pruned as soon as the leaves fall off in the autumn. With regard to the row of Red Currants that has become too thick, it would be advisable to dig up every other plant in the row, and thus give the necessary room to the remaining ones, duly thinning out their branches at pruning time. If the trees that are removed are young, thrifty ones, and they are lifted carefully, they may be replanted elsewhere, if required, but if they are old ones then burn them out of the way.

Summer pruning of fruit-trees (A.)—If you wish to practise summer pruning on the breastwood of your well-trained Pears, cut at once all those shoots back to about five leaf-buds. It is doubtful whether, done then, the point-bud will push growth; but if it does, then pinch that secondary shoot after two leaves have been formed. No growth will follow that; but the back buds, while seemingly dormant, will undergo partial change by becoming fruit-buds, but would need all the following season's growth to become perfect ones. In the winter cut every one of these spurs back to two buds only.

VEGETABLES.

Tomatoes on open walls (Grower)—After this date it is doubtful if Tomatoes on outside walls will derive further benefit from being allowed to remain any longer in that position, the only exceptions being those which can be covered with glass lights by day and some additional covering by night. We should not recommend their being removed if the weather keeps fine and mild, but chilly nights, heavy fogs, and very slight touches of frost, even if not sufficient to blacken the foliage in the least degree, are not conducive to ripening, and, except under the most favourable conditions, we advise that the plants be first cleared of all fruits which are colouring, also of those too small to be of use, and then cut bodily off and hung up in a dry, light house where there is not much draught, or laid on a shelf in similar quarters. Here the fruits will colour up and be useful for cooking for many weeks to come, but not, of course, of the quality required for salads. The fruits already colouring will ripen up and be useful for either purpose.

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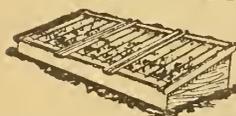
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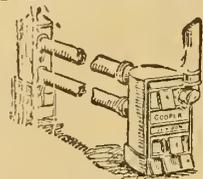


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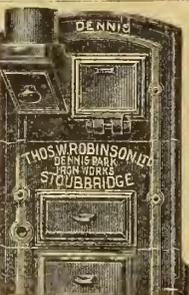
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OCTOBER 14, 1916.

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ROYAL HORTICULTURAL SOCIETY AND THE TEACHING AS TO PRUNING SHRUBS.

The number of flowering shrubs now in British gardens, both evergreen and summer-leaving, is so great that their treatment is of importance. A lecture on the subject has been given by Mr. E. Beckett, and we do not doubt that he is right as regards the general way of pruning shrubs in gardens, but the real question is the value of this treatment. There can be but one answer—ugliness and unnatural forms. Mr. Beckett again and again urges clipping the shrubs to a shape, and his idea of shape is not the natural or true form of the shrub. All round London—and, indeed, every city of England—there are examples of this false, inartistic treatment of shrubs naturally beautiful in form. There is hardly a shrub that escapes, from the Holly to the Rockspray. The round, lumpy form is that usually chosen in preference to the free, natural form.

HOLLY.—He tells us:—

"Most varieties of the Holly require some pruning to keep them shapely, and such pruning is best done about the middle of July."

Here we have a general idea of the way he would have us treat our most beautiful native evergreen. To suppose that by pruning we can get a better form than the natural form is an illusion. If anyone who considers these things will not accept the word of a nature-lover, let him ask the artist who has to deal with natural form for an opinion, and he will get only one answer. I have planted a few thousand Hollies and hope to plant more, and I would as soon allow an academy student to daub over a Fautin or a Corot as to attempt to improve the true form of a Holly-tree.

YEW.—Badly, however, as the Holly is treated by the advocates of pruning, the Yew is in much worse case in their hands. Again, to quote from the source above mentioned, at p. 33:

"Taxus baccata, the common Yew, as is generally known, responds splendidly to the knife, and may be cut to almost any shape required. Other varieties of this family may be pruned in as required."

This illustrates the unfortunate fact that the Yew-tree is mutilated out of all shape in gardens generally, and often, indeed, assuming fantastic and pantomimic shapes. Naturally a hungry forest tree, the Yew has no true place in the garden foreground at all, and if we put it there, we must cut it in to get it out of our way. The result of this mutilation is that to see the Yew in its true beauty is not easy except in a graveyard or here and there on the hills of Surrey or Kent. That is a great loss to us, because no conifer that comes to us from across the sea is more beautiful in form than the Yew.

Box.—Another native evergreen often grown in gardens, but usually pruned out of its natural form, is the Box. As confession is said to be good for the soul, I may say that after experience of the Box in many gardens, I never saw it in its full beauty until one day with Alfred Parsons, the landscape artist, I saw it on the hills where it grows on Box Hill. There I saw the plummy grace of the bush for the first time. To see the full beauty of this shrub we must let it alone, and not prune.

ELÆAGNUS.—Among the evergreens which are naturally charming in the winter, the Elæagnus is often the object of this disfiguration. If it is clipped into a mop-headed thing, we cannot see the silvery charm of the leaves when moved by the wind. Our land, more than any country in Europe, is rich in evergreens, and it should be the aim of the gardener to preserve their natural forms and not destroy them.

THE EVERGREEN CHERRY is among the shrubs which are disfigured by this false idea of pruning. There are acres of such plants round every suburb. The last time I was at Cliveden there were large areas of it under beautiful trees, all clipped to a hard line. In the county in which I write there is a garden set out with Portugal "Laurels" all on legs, which is not their natural habit, and with their heads all clipped in like a jail-bird's hair. This is one of the best of our beautiful evergreens, but never if out of its true form. The true Laurel—in our country called the

Bay—one often sees clipped in tubs, but its true beauty is never seen except with its natural toss and growth. It is quite hardy over a large area of our southern country, and there is no reason at all for distorting it.

LABOUR.—Consider only the question of labour. A garden full of such shrubs makes a heavy demand on labour, which is wasted in doing harm. The gardener has much work to do, and we ought to get the best out of him, but if months of his time are wasted in disfiguring beautiful things how can he attend to his true work?

More perhaps than any country of western Europe, these islands can grow beautiful evergreen shrubs. There are the Azalcas of Japan, the evergreen shrubs of California, and the fine evergreens of New Zealand, which charm us by their grace and freshness in winter. The Camellias are hardy over a large part of England and Ireland, and some of them are distinct and beautiful, although we have hardly touched as yet the best of them—that is, the bold single ones. Rhododendrons and Azaleas we have everywhere, and these take their own beautiful forms, and any attempt to make them take a boiled-pudding shape is fools' work. So with the Mountain Laurel (Kalmia), which is a lovely shrub. What we have now of these precious shrubs are not all that we shall have in the future, because many of the plants of those countries have not yet been introduced.

A serious consideration of this distortion is the effect on children and young gardeners, who get the idea from it that it is the right thing. Its effect on artists who love to see the play of light and shade and true form is repulsive. Mr. Mark Fisher, one of our best landscape painters, told me that when he was seeking a place in some quiet county to work in, he would not settle near any town because the hard look about most gentlemen's places, with their rigid lines, distorted forms, iron fences, gardens like bad carpets, made his work impossible, and so he went where the farmers have no time for such distortions. Any stereotyped way of this sort is difficult to get rid of, and even educated

people get possessed by it. There is no place where the practice can be seen more in evidence than in the drives to many country places. At Eastnor, when I was there, there was a dead dark line all along the drive, here and there blocking out beautiful views. It is not always done by design, because the men do it mechanically when trimming drives. The right thing is to tell them where to cut out so as to get back to a natural line.

Our country places often have beautiful landscape around them, and it is well that a foreground should not be disfigured by things false in form. The cutting of box and yew to form tracery gardens is another example of the evil work, as one sees at such gardens as Minley and Crewe Hall.

SHELTER.—Where our native or other evergreens are used for shelter, it is more than important that they should not be cut into hard lines. Where as at Abbotsbury, Batsford, and many other places, evergreens are used for shelter, it is better they should take their natural forms, which will sift and soften the storm better than any wall-like lines. If evergreens are put into wrong places at first, they must be cut out or cut in. The evil is partly caused by gardens being laid out by men who know nothing of the true size of things they plant, so that we see trees taking gouty growths and DISEASED forms, as we see in many streets in South London now and in French towns.

As to beauty, no grace of Parthenon marble, Rembrandt tree, or Corot landscape, can even suggest the charm of our native evergreen when tossed by the winds that play for ever over our islands.

NOTES OF THE WEEK.

Colchicum Bornmulleri.—The large, handsome flowers of this species, now brightening up the rock garden, look almost like Tulips instead of Crocus. My plants are very happy in a rather poor and very limy soil, and increase each year.—W. O.

The Shamrock Pea (*Parochetus communis*).—This usually begins to flower here about the middle of June; occasionally in May. On October 1st there were only two flowers. Two days later there were at least a hundred.—E. CHARLES BUXTON, *Coed-Derw, Bettws-y-Coed.*

Erinacea pungens, hardiness of.—The question of the hardiness of this distinct and attractive plant is raised in the note accompanying the excellent illustration on page 477. The plant is one of some importance. I have not seen it doing well in the south-west of Scotland, where the wet winters are apparently obnoxious to it, but in the east, south of the Tay, I have observed it doing well after having been planted for several years and left unprotected in winter.—S. ARNOTT.

Double-flowered perennial Asters.—It may be remembered that last year there were complaints that the new varieties of double-flowered Michaelmas Daisies were not fixed, and, as a fact, they were to a great extent disappointing. At the time, I expressed the opinion that the heat and drought were responsible for this reversion to the single forms, and I am confirmed in this belief by their appearance

at the present time. I see that the great majority of the flowers is opening double. We have, of course, to remember that these double varieties are in their infancy, and a certain amount of time must elapse before the tendency to reversion is completely eradicated.—J. CORNHILL.

Phyteuma Scheuzeri.—Most of the members of this family seem to be easy doers and free bloomers. Though not particularly striking, this species is useful for the rock garden, and has been full of its quaint blue flowers this year. There seems to be a good deal of similarity between the various species, but they are interesting and good for a small pocket in a sunny situation, where they are quite content to grow happily without intruding on their neighbours. Our native *P. orbiculare* is found on chalk downs, and the subject of this note also appreciates lime. It ripens plenty of seed, from which it is easily increased.—N. L.

The Whorl-flower (*Morina longifolia*).—Some seedlings of this are now (September 22) flowering well. The pink and white blooms in whorls along a stem over 2 feet in height are very pretty, and, I think, more appreciated at this time than those of older plants earlier in the season. The spiny Thistle-like foliage of the *Morina* gives off rather a pungent odour when bruised, although by some people that odour is appreciated. *M. longifolia* succeeds in any ordinary garden soil, and is not fastidious in respect of position. Here it does equally well in the somewhat light soil of a south border and in a more retentive situation facing the west. Self-sown seedlings are freely produced.—W. McG., *Balmae.*

Abelia grandiflora.—This is, perhaps, the best of the *Abelias* for general cultivation, for not only is it fairly hardy, but it is a good evergreen and flowers freely. It is of hybrid origin, its parents being the two Chinese species *A. chinensis* and *A. uniflora*. In gardens it may be grown in the south of England as a bush in the open or as a wall plant, whilst in numerous other places it can be grown successfully against walls. Growing 5 feet or 6 feet high, it forms a rather dense bush. The flowers, tubular, white, flushed with pink, are borne in large clusters from the ends of the shoots and from the upper leaf-axils, interspersed with leaf-like bracts, the flowering time lasting from July until the advent of frost or until late October. It grows well in soil that is warm and well drained. Regular pruning is unnecessary, and it is a mistake to prune wall-grown plants too severely. Rather fix the main branches to the wall so that the secondary shoots may develop freely. Cuttings inserted in light soil in a close frame in summer root quickly. In addition to the uses already mentioned it is also a valuable shrub for large pots or tubs, for standing on terraces during summer.—D.

Striking Calceolaria cuttings.—I was much surprised to read in the issue for September 9th that Mr. Gallop had been having *Calceolaria* cuttings put in the previous week. In my young days I was taught—and most gardeners teach the same to-day—that from the beginning to the middle of October is the ideal time for inserting *Calceolaria* cuttings. The first week I have chosen for some years. *Calceolarias* should not be encouraged to make roots and fresh foliage before winter sets in, which they will do when put in so early. All that is necessary is to get the cuttings callused over by the winter, and then they start away strongly in the New Year. Another plant, cuttings of which writers sometimes advise striking in gentle

heat, is the double white *Marguerite Mrs. Sanders*. The cuttings of this plant will strike far better if put into cold frames like the *Pentstemon*. True, they may take a little longer, but the result is better, being hardier and much less liable to attacks of green fly and maggot.—C. TURNER.

Tropæolum polyphyllum.—Complaints are sometimes made as to the shy blooming of this species, but in a general way the grower has himself to blame when flowers are scarce. In nine cases out of ten he has been too kind, there has been too much food, and the plants have run away to leaf instead of bloom. When this is the case plant in the most elevated, sun-baked position in the garden, in a rooting medium consisting of loam one half, with stones, mortar-rubble, or crushed brick. In this material the growth will be short and stout, and the shoots will be crowded with bloom. This *Tropæolum* is a valuable plant for poor, stony soils, which become very dry and parched in summer, but is quite out of place and disappointing when good culture is given.—J. C. B.

Kniphofia aloides.—During September the Torch Lilies are a feature of these gardens, the clumps being of considerable age and size, and annually bearing large quantities of spikes. Although, perhaps, not quite so numerous this year as is generally the case, yet the display is very fine. On one clump the number of perfect heads is eighty-seven, there being many with between fifty and sixty, with but few under the half-hundred. The effect of these at a little distance can be imagined. The *Kniphofias* are apt to exhaust the soil rather quickly, so that if the display is to be annually maintained a good allowance of liquid-manure must be given during the period of growth. During the present season much benefit has resulted from occasional applications of a fertiliser, which was well watered in.—W. McG., *Balmae, Kirkeudbright.*

Crinums.—One wonders why, in his note on these at page 468, "W. McG." cites "*C. capense* and *C. Moorei* as the best forms for outdoor cultivation" to the exclusion of *C. Powellii* and its varieties, which without doubt are the best for the purpose indicated. By comparison the first named is very inferior as regards beauty and vigour, though interesting enough to be included in a set of these plants. The great shafts produced by the *Powellii* varieties, towering often enough to 4 feet high, render them invaluable where such plants are grown, the warm rose tints of the typical kind, together with *blandum* and *intermedium*, having no parallel in the others named. They are hardy, too, hardier generally, so to speak, than *C. Moorei* and its white variety, though not quite equal to these in flower quality. Near the sea they are usually hardy enough in the open border. Further inland they are best given the protection of a dwelling or greenhouse wall, and with a depth of 2 feet or 3 feet of good soil to root into will surprise by their vigour and the imposing array of flowers. In any planting, however, I would keep the *Powellii* varieties apart. *C. capense* is dwarfier and should be seen alone.—E. H. JENKINS.

Pentstemon isophyllus.—Those who have not hitherto grown this graceful Mexican species should lose no time in making its acquaintance. As elegant as any of its race—not even excluding the very desirable *P. barbatus*—it is good enough for all who grow the best of hardy plants. It is alike good, too, and apparently equally happy given a medium or light, sandy soil to root into in rock

garden or border, in either of which its sheaves of elegantly-disposed flowers would be sure to attract attention. It has the merit, too, of complete hardiness so far as southern gardens are concerned, and, even if a little tender elsewhere, is so good and distinct—not to say free-flowering—as to be worth the trouble of striking a few cuttings each year to perpetuate youthful stock. Three feet or so high when fully grown, it forms a bush at three years old almost as much through, a group when in a good position being very telling. The flowers are somewhat tubular and have a scarlet exterior, the throat lighter and whitened to some extent. It has been grown in the open at Kew for some years with success, but is probably far from being in general cultivation, which it certainly merits.—E. H. JENKINS.

Paris Daisies (*Chrysanthemum frutescens*).—The interesting article on these (page 424) reminds one of the prominent position they now occupy in many gardens.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

GENTIANA ACAULIS.

As the season is at hand when this can be planted with hopes of success a word or two to those who have had difficulties with it may be helpful. One frequently hears amateurs say that, while they can grow *G. acaulis* into large clumps, they cannot induce it to flower satisfactorily. This, I believe, is largely a matter of soil and aspect. If the soil is inclined to be stiff and cold, or too rich, the plant may flourish, but blooms will be few. And, as to situation, this should be fully exposed to the noonday sun and not subject to the drip from trees or eaves. I have some large clumps of *G. acaulis* that thrive and blossom abundantly not only every spring, but often in the autumn as well, and they

pear and increase in number with each successive spring. The above suggestions apply equally well to *G. verna*.

North Wales.

A. T. JOHNSON.

COBWEB HOUSELEEKES IN POTS.

Those whose gardens are of limited extent will do well to keep in mind this remarkable section of Houseleeks, and grow them in pots, a method of cultivation for which they are eminently suited. Better still is it, where the aim of the grower is, as it should be, to bring out the best a plant is capable of giving, to grow them in fairly large pots or those half pots now the vogue for dwarf-growing subjects in the alpine-house. For the dwarfiest alpine vegetation there is a sense of proportion about these latter quite alien to pots of ordinary depth. These, indeed, to me appear out of scale—all pots and little plant, as it were. Perfectly drained pots, 6 inches or 7 inches across, filled to the brim with gritty loam, with which has been mixed plenty of old mortar rubbish, will suit them well, the single rosettes of the Houseleeks to be pricked out an inch apart over the whole area. With a season's growth, the surface of the pot will be covered, the cobweb effect being much enhanced when the pots are placed on a sunny window-ledge or like place too hot for ordinary things to succeed. On level ground and on rock-work in wrongly selected positions the effect is less pronounced, hence the window-ledge renders a dual service by bringing out what is best and maintaining it. Some plants so treated a year or two ago have remained effective since, and, moreover, are interesting in winter as well as in summer. Among many varieties, I find one I have as Hookeri to possess the whitest web, though *Sempervivum arachnoideum*, *S. a. rubrum*, *S. tomentosum*, and *S. Laggeri Housei* (the last very fine, but quite rare, I believe), may be accounted as indispensable.

E. H. JENKINS.

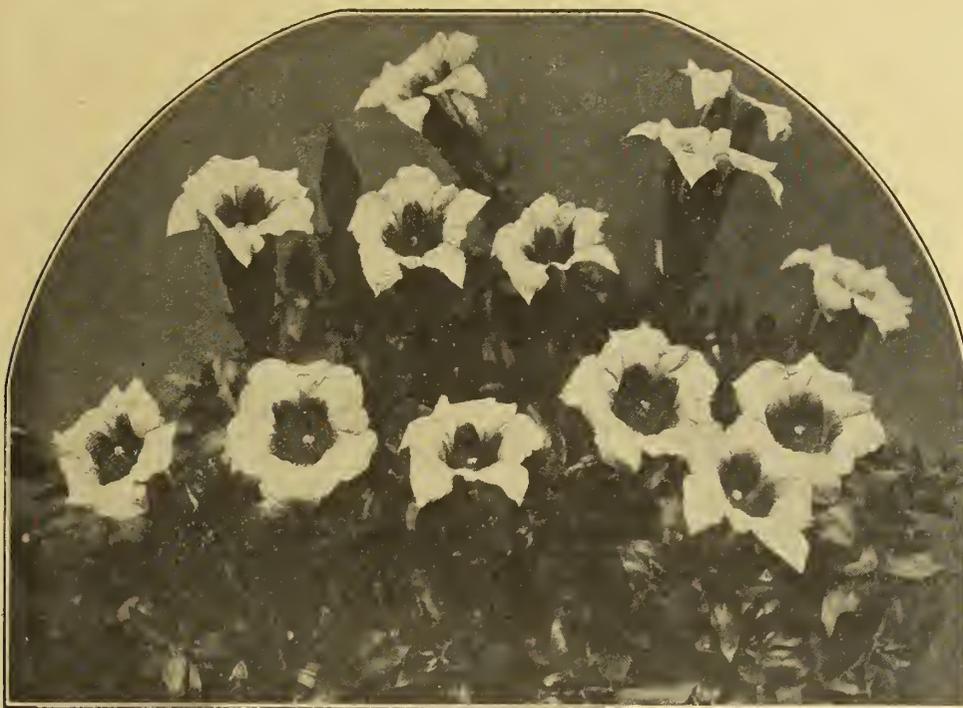
NOTES AND REPLIES.

The pale Toad-flax (*Linaria repens*).—This spreads very fast, its roots running about underground and coming up all over the place. For a rough bit of rockwork, or associated with other strong-growing things, it is valuable, as in the autumn it becomes a mass of little lilac "Snapdragon" flowers, borne on slender stems, and is very pretty. Many people will have nothing to do with it because of its aggressive habits, and unless one has lots of room, it is perhaps best avoided, but it is so charming when in bloom that if a good space can be allotted to it away from choicer subjects, it is well worth growing. There is a pure white variety, which is not quite so vigorous.—W. O.

Morisia hypogæa.—Considering the ease with which this species can be propagated, it seems surprising that it is not cheaper than it is. Nurserymen who price many of their alpine plants at 6d. or 4d. each, ask 1s. for this species. I put a dozen cuttings into pure sand in a frame in July, and every one rooted. It seems somewhat of a capricious species in some districts, as several of my friends tell me they find it difficult to grow.—N. L.

Potentilla nitida.—This has been very pretty in the rock garden during August, with its soft silvery foliage and charming little flowers of pink or white. I grow it in very gritty, limy soil in full sun, and it flowers freely, the soil being rather poor. It is quite one of the best of the rock *Potentillas*.—W. O.

Geranium Wallichianum.—This is still covered with flowers, those of Buxton's variety being the better, of a lovely deep blue shade. It is quite easy to grow in light, limy soil in a very shady place, and does very well in a retaining wall, where it spreads freely.—N. L.



Gentiana acaulis. From a photograph sent by Mr. A. T. Johnson, Ro Wen, Tal-y-Cafu, N. Wales.

They have long been favourites with the market grower, and enormous quantities are disposed of in Covent Garden during the season. The first one to market the flowers was the late Mr. Hermann Herbst, of Richmond. He obtained some plants of the typical *Chrysanthemum frutescens* quite early in the 70's of the last century, and grew them into large specimens. They flowered almost continuously, and when taken to Covent Garden Market the blossoms sold well. So remunerative a crop did these Marguerites prove that from occupying a small portion of a large Camellia-house they in time ousted the Camellias. Mr. Herbst never attempted to grow plants of this *Chrysanthemum* for sale, but as cut flowers they were for some years much appreciated. The typical *C. frutescens* cannot be cut with long stalks, but in those days practically all cut flowers were wired, so that was not so much a drawback as it would be now. Some of the present-day varieties have longer stems, and of these the double-flowered Mrs. F. Sander is particularly useful for cutting.—W. T.

are growing in the poor, shaley loam of a southern slope. The drainage is as good as can be at all seasons. No top-dressing or other attention—beyond, perhaps, a good dose of water occasionally in very dry weather—is given them, and there is no lime in the soil. Yet the results are, as I have stated, most satisfactory.

PROPAGATION.—It is a mistake to increase by lifting established plants and dividing them up, for they resent interference, and, after all, we can hardly have the clumps of so slow a grower too large. It is a quite simple matter to propagate at this time of year by offsets. These will usually be found round the margins of the clumps, and if they are carefully removed a few roots will usually be found attached to each. Plant these in a sunny pocket of stone chips, old mortar, a little mould, and plenty of sand, and they will rarely fail to prosper. The material should be well rammed down and the plant pressed firmly in. Blooms should not be expected the first year, but after that the wonderful dark blue trumpets with their iridescent throats of peacock-green will begin to ap-

CHRYSANTHEMUMS.

EARLY-FLOWERING CHRYSANTHEMUMS: DISBUDED OUTDOOR VARIETIES.

THERE has been a growing desire in more recent years to emulate the practice of a few of the larger market Chrysanthemum growers by cultivating a limited number of really first-class sorts on the disbudded principle. The plants are grown on until the time arrives for them to break out into branching growths. At this period, on those plants which it is intended shall produce about a dozen fairly large blooms of good quality, three or four good shoots are allowed to develop, these, in turn, each producing about three other shoots. From the four shoots first taken up, a dozen good, sturdy growths are developed. These same shoots are securely staked. One good, plump bud is retained at the apex of each shoot so soon as developed, and when the whole of the buds are secured the plants are carefully watered with occasional doses of weak liquid manure. Buds of this kind are developing very satisfactorily just now. Very handsome blooms are produced by this method of culture. I know of no other method that produces such splendid results with a minimum of trouble. Varieties that are doing well under this system of culture just now are the following:—Almirante (chestnut-crimson and gold), Cranford Yellow, Framfield Early White, Cranford Pink, Cranfordia (one of the largest and best yellows for October), Juliet (rosy-red and cinnamon), Mrs. Scott (white), Pink Princess, Crimson King, Mrs. Roots (a pretty incurved Japanese white dwarf), Phoebe (soft pink), Dolores (bronzy-terra-cotta), Golden Glow (canary-yellow), Hector (mauve-pink), J. Bannister (lemon-yellow, shaded copper), Perle Chatillionaise (creamy-white, shaded rosy-peach), Nina Blick (bronzy-crimson), Kathleen Thompson (chestnut), Caprice du Printemps (deep rosy-pink), Soleil d'Octobre (yellow), and Bronze Soleil d'Octobre. W. V. T.

CHRYSANTHEMUMS—WORK AMONG.

DURING the week top-dressing was completed. As has been previously indicated, almost all of these are grown in bush form, and up till now growth has been well maintained. For top-dressing, some good old loam with which was incorporated a little fertiliser, together with a small proportion of soot, was used. This will give a fillip to the plants and carry them on to the housing period without any further stimulant. Earwigs have been giving a little trouble, and these are being sought for, trapped, and destroyed. It is a curious fact that these pests are much more numerous in some seasons than in others. Watering is now attended to every day, whether bright or otherwise, as there is always a plant or two which may need moisture. The foliage is well hosed late in the afternoon when the sun has been strong. In a general way housing is practised about the 26th of September. Exhibitors find this date very suitable for the development of blooms for the early November shows, but with the leading Scottish show this year put off, if the weather remains open there is no pressing need to house the plants until early a October. Border Chrysanthemums are turning in at their correct time. It is, at times, aggravating to have these useful plants in full bloom at the end of August, but here, at all events, it was well into the third week of September before the display (except, of course, in the case of the

very early varieties) was general. Time ought to be spared to secure the heavily-budded shoots to the stakes, otherwise damage is sure to follow from heavy showers, the shoots being very brittle. Where possible to do so without unduly interfering with the plants, an occasional run through with the hoe is of service.

KIRK.

NOTES AND REPLIES.

Over-feeding Chrysanthemums.—There is a lot of sound advice given in the note on the above subject in GARDENING ILLUSTRATED, page 479, issue September 23rd. I lately paid a visit to a gardener who has this year grown exceptionally fine plants without the aid of any feeding or stimulating foods. He has not a single deformed bud. In past years he has grown many plants for the production of exhibition blooms, feeding very freely, and suffering much loss through bad buds. He thinks that over-feeding was the cause. Personally, I never did feed my own plants, and did not lose buds, nor blooms through damping, to any serious extent. Plants to bear blooms in December and at Christmas require less feeding.—G. G. B.

Early single Chrysanthemum Formidable.—This is an excellent early Chrysanthemum. The flowers, of moderate size, are crimson, with yellow centre. Much of its value lies in its sturdy stems, which make the flowers all the more valuable for cutting.—S. A.

OUTDOOR PLANTS.

CLEMATIS DISEASE.

IN M. Morel's letter on this subject, which appeared in the issue of September 23rd (p. 475), there are apparently one or two errors. M. Morel is made to say "A moment ou l'ouvait une plante flétrir," which, as far as I can see, has no significance. Evidently "l'ouvait" should be "l'on voit," that is to say, as soon as one sees a plant flag. On column 2 à peu près should surely be à peu près, meaning that the Viticella type is almost immune from disease. M. Morel appears to regard any attempt to combat the disease as hopeless, and is trusting solely to raising a new disease-proof race. He is relying on selection instead of hybridisation, and is, in his own words, trying to "enrich the colours and increase the size of the blooms without having recourse to C. patens and C. lauginosa." Working over a number of years, he has "formed a collection of fine, hardy varieties." Such a race of Clematis immune from the disease, which in some places renders the culture of this beautiful flower very uncertain and sometimes impossible, will undoubtedly be very valuable. M. Morel condemns the use of C. Vitalba as a stock for the big-flowered varieties, and I can well believe that many failures are due to the fact that our native species, vigorous and enduring though it may be when in natural conditions, is not happy in the majority of gardens. There are some native plants which flourish in any kind of soil, but there are others which will only live indefinitely under certain conditions. In my experience the Traveller's Joy is only found growing naturally on a chalk sub-soil, and the nearer the chalk to the surface the more luxuriant does it grow. Some ten miles from where I live it garlands the hedgerows, and the chalk comes within measurable distance of the surface. Although it was probably growing there when the pilgrims wended their way to Canterbury, it has never shown the least inclination to spread, and in an area of at least seven miles, although old hedgerows similar to those in which it grows so luxuriantly abound, I have never seen one single plant. So far as I am aware not a particle of chalk is to be found in that

area, the sub-soil is clay or gravel, frequently both.

As is well known, seeds are carried by the wind and birds, and young plants appear far removed from the parent plant. Why is it that this Clematis has obstinately refused to extend in the same manner? During all that time countless seeds must have been distributed by the same agencies. Have none of them germinated, or, finding conditions not to their liking, have the seedlings refused to take possession? Some years ago, on some clover being cut, numerous plants of Echinum vulgare and many Cornflowers appeared and bloomed freely. Neither of these plants is found growing naturally with us, but both are found where C. Vitalba grows, the seeds coming, undoubtedly, in the clover seeds, which were presumably harvested on the chalk. Innumerable seeds must have been formed, but the following year only a very few plants appeared, and after that none. The great demand for C. Jackmani and other varieties caused trade growers to seek for a quick and easy method of propagation, and they selected C. Vitalba as a stock, never giving a thought to the fact that it was not likely to be happy in the majority of soils. In the heyday of youth, and planted in well-enriched, freshly-stirred ground, the influence of this stock is often not much felt, but with age, and when so smothered with bloom that there is a heavy call on the nutritive functions, the malign influence of an unsuitable rooting medium makes itself felt and induces a certain amount of debility.

M. Morel has a good opinion of C. Viticella as a stock. Has he, I wonder, ever tried C. Viticella rubra grandiflora, which I take to be the most vigorous and reliable Clematis in existence? It flourishes in any soil and situation, is a very rapid grower, and, so far as I am aware, is free from disease. J. CORNHILL.

Byfleet, Surrey.

TUBEROUS BEGONIAS IN THE GARDEN.

I THINK "Kirk" (page 452) rather underestimates the value of tuberous Begonias for the flower garden, or they have received scant attention in some of the gardens he noticed, as given a little care there are few things among tender plants that give a brighter or more enduring display. They look quite gay after weather that will practically spoil things like Pelargoniums, Heliotropes, and Lobelias. They want a little extra attention in the way of soil—that is, a fairly liberal supply of very short manure if the ground is poor, and broken horse-droppings or leaf-soil if naturally heavy. As frequently recommended in GARDENING ILLUSTRATED, it is much better to plant varieties with erect flowers than those with extra large, drooping blooms, which are broken down with the first high wind or heavy rain unless considerable time can be spent in staking and tying. I saw a cottage flower garden the other day in which they were doing remarkably well. The owner winters his tubers in a cold frame, where he leaves the plants until he thinks it safe to transfer to the open ground. He is very proud of his plants and remarked that "They are a bit of extra trouble because it is no use sticking them in anyhow." Apart from the distinction between erect and drooping flowers, there are, of course, some varieties that adapt themselves much better than others to outside planting. As a rule, the scarlet and pink shades are the best, and the whites and yellows—especially the latter—the least satisfactory. A yellow known as Golden Ball was planted rather extensively in the

old "bedding-out" days. It was a heavy, finely-shaped flower, very satisfactory under glass, but decidedly too heavy for the outside. A rather better type for the outside was that represented by a variety known, I think, as Canary Bird, a small, very even flower. E. B. S.

Hardwick.

NOTES AND REPLIES.

Crocus candidus.—Few of us will not own to an ardent admiration for the glowing flowers of the Crocus, which in spring and in autumn make our gardens so bright. I add autumn advisedly, although, unfortunately, the autumnal Crocuses are not so well known as they ought to be. We might well add a greater variety even to our Crocuses of spring, and instead of contenting ourselves with the glorious Golden Yellow one and the Dutch varieties of *C. vernus*, unsurpassable though they are, we may wander a little into the bye-ways of Crocus cultivation and include in our gardens such flowers as those of some of the other species. That named *C. candidus* is one of these, and is a lovely little Crocus with white flowers in the interior and either wholly white on the outside of the segments or streaked or suffused with pale purple. It is not a common species, but is a very beautiful one and thrives with the same treatment as the common spring Crocuses. It flowers in March, as a rule, its charming white flowers all the more attractive by the orange anthers. Corms should be planted an inch deep in dryish soil in a sunny place.—S. ARNOTT.

The Kaffir Lily (*Schizostylis coccinea*).—Already (September 22nd) stray spikes of the Kaffir Lily begin to be noticed. Generally speaking, these are usually looked for a month after this time, the display lasting on throughout November. These are planted in a warm south border and increase rapidly, their vivid scarlet spikes, resembling to some extent miniature Gladioli, being very welcome in the dull days. *S. coccinea* makes an excellent cool-greenhouse plant, good pieces in 8-inch pots being very useful.—KIRK.

Birds and yellow Crocuses.—Much has been written as to what induces birds to destroy certain flowers, such as the ordinary yellow Crocus. Sparrows receive a good deal of blame for the destruction of these flowers, but they are not by any means the sole offenders. Some of the finches are very troublesome, and a great source of trouble in many places is the pheasant. I know a number of places where the purple and white Crocuses—varieties of *C. vernus*—are in millions and have been for many years, whereas there is not a yellow Crocus to be seen. This is caused by the pheasants, which are very destructive. They not only destroy the flowers, but also the bulbs, which they uproot and devour.—S. A.

Geranium sanguineum album.—The colour of the type is not a very pleasing one, but the white variety is a lovely plant for the rock garden and quite easy to grow, though perhaps not so vigorous as the type, as often seems to be the case with albino forms. *G. s. lancastriense*, too, is a beautiful form, its large, pale-pink blossoms, with deeper coloured veins, always pleasing. Both flower over a long period, and as they ripen plenty of seed are easily increased. A sandy soil in a sunny position suits them well.—W. O.

The yellow Fumitory (*Corydalis lutea*).—Though one of the commonest, I think this is one of the most beautiful of its family and indispensable for a shady retaining wall. It makes a big round clump of lovely green Maiden-hair-like foliage, and bears freely its clear, deep-yellow flowers in September and October. It seeds freely with me.—N. L.

The double Soapwort.—This is a valuable plant for autumn bloom, coming in at a time when other border perennials of its colour (rose) are scarce. It has a troublesome

habit of running at the roots, and has a tendency to spread over a border and of coming up here and there among other plants, a fault not always easily condoned.—S. ARNOTT.

YUCCA WHIPPLEI.

THE accompanying illustration of *Yucca Whipplei* directs attention to a very beautiful species which, unfortunately, is only hardy enough to succeed out of doors



Yucca Whipplei, in Messrs. R. Veitch and Sons' nursery at Exeter.

in the milder parts of the country. A native of California, it was first brought to notice in this country when a figure appeared in the "Botanical Magazine," t. 7662, in 1899. The plant from which the drawing was made was grown in the garden of Commendatore Hanbury at Ventimiglia, where it flowered in 1891. When not in bloom it appears as a dwarf plant with a prostrate or semi-prostrate stem and narrow, rather stiff, glaucous-green

leaves up to 20 inches or so long and scarcely $\frac{1}{2}$ inch wide. On the approach of flowering, however, it quite alters its appearance, for it produces an erect, stately inflorescence between 4 feet and 12 feet high, the upper half clothed with pretty cream-coloured flowers, each one 2 inches to 2 $\frac{1}{2}$ inches in diameter. A good idea of the beauty of the inflorescence may be gleaned from the accompanying illustration of a plant that flowered in Messrs. Veitch's nursery at Exeter. For the south-west counties and the Scilly and Channel Islands it is a plant well worthy of consideration, while it may also thrive in warm localities elsewhere. D.

GARDEN PESTS AND FRIENDS.

NOTES AND REPLIES.

Celery, fungus on.—I should be much obliged if you could tell me what is the matter with the enclosed Celery leaves, and whether there is any remedy.

[Your Celery has been attacked by the Celery-leaf-spot fungus, which has during the past few years caused much loss to growers. The fungus causes the leaves to wither and rot away, after which the stems decay, and finally the whole of the plant disappears. As the spores of the fungus infect the soil for some time afterwards, Celery should not be grown on the same plot of ground for several years to come. There is a possibility of arresting and finally subduing the attack if you spray the leaves at once with Bordeaux mixture, but if the whole of the leaves are in the same condition as those of the sample sent, spraying will be of no avail. After the Celery has been dug, give the soil a good dressing of quicklime, or disinfect it with one of the soil fumigants which are so frequently advertised in the pages of this journal. If next year you see any signs of the fungus, spray lightly with Bordeaux mixture, which any horticultural sundriesman can supply you with.]

Caterpillars injuring cuttings.—I enclose specimens of some grubs which I found recently attacking flower and shrub cuttings, also plants in the open garden. Will you kindly tell me its name and the best means of exterminating it or clearing it as far as possible?—Wm. C. IVES.

[The grubs you send are the larvæ of a Noctuid, which becomes fully fed in the autumn, produces a chestnut chrysalid in the soil, and emerges as a moth in late June or July. The best treatment for all caterpillars, where hand-picking is impossible, is spraying with Paris green or lead arsenate, unless the plants attacked are to be used as food. In some cases the pests may be captured by making a hole in the ground with a round piece of wood and placing a piece of some attractive bait, such as Lettuce-leaves, near or over the hole. Many of these Noctuids delight to hide during daylight, and the hole provides shelter, from which they may be extracted and killed by the usual pressure methods or by dropping into hot water.]

Antirrhinums, fungus on.—Would you please let me know the cause of the spots on the leaves and stems of the enclosed Antirrhinum? I have given the plants the same treatment for years, and this is the first time they failed.—J. McB.

[Your plants have been attacked by the fungus known as *Septoria antirrhini*. This disease spreads very rapidly when it once attacks the plants, and it is well to pull up and burn all the infected plants. Those not attacked may be syriaged with Bordeaux mixture or sulphide of potassium (fiver of sulphur) at the rate of $\frac{1}{2}$ oz. to a gallon of water. Do not plant any Antirrhinums in the place in which diseased plants have been growing.]

VEGETABLES.

VEGETABLES ALL THE YEAR ROUND.

I HAVE been a gardener now for eighteen months, with medium success. Could you give an article in GARDENING ILLUSTRATED on how to procure a good and varied supply of common vegetables all the year round in this bleak northern county? The gardening papers seem to cater for the south and favoured districts. April, May, and June were my difficult months. We had nine weeks snow and slush, and hail-storms from February to April this year. I have half an acre, seven people to provide vegetables for, and three hours per day to work in the garden. Can it be done?—WOMAN GARDENER, *Co. Durham.*

[There should be no difficulty in keeping up a regular supply of ordinary vegetables if those named by you in your other query can be grown. Naturally, the time and dates mentioned for the sowing and planting of crops in the south are not applicable to the county of Durham, but with regard to the crops usually raised in the former in autumn, such as Cabbage for spring cutting, Onions for spring and summer use, Spinach, Lettuces, and Turnips, the dates would be none too early, if early enough. Broccoli, we can imagine, would be a precarious crop with you, especially varieties which in more favoured localities turn in from the end of the year till the end of March. We therefore advise that the growing of these be omitted, but it would be worth while trying the late varieties, such as Model, Late Queen, Reading Giant, and Leamington, to see if they would not succeed, raising the plants early in May and planting at the end of June or early in July. The autumn varieties, such as Michaelmas White, Christmas White, Winter Mammoth, and Autumn Protecting, should do well with you. Raise the plants in April. Sprouting Broccoli, which is hardy and yields a great quantity of sprouts over a long period, should also be raised about the same time. Then there are the various kinds of Borecole or Kale of which the Tall and Dwarf Curled, Cottager's, and Scotch are very hardy and profitable, supplying a long succession of greens and sprouts from Christmas till April, and often later than this. Savoys, again, can be had over a long season by growing Dwarf Curled, Best of All, Drumhead, and Late Drumhead, sowing the seed of the first two in April and in May of the other two. Of Cabbages for summer and autumn cutting sow in April and May, two good kinds being Nonpareil and Enfield Market. A useful kind of Cabbage for autumn and early winter use is Rosette Colewort. From a May and June sowing, heads for cutting can be had from September, or earlier, till the end of the year. The plants can be set out 1 foot apart each way. For spring cutting Early April, Ellam's Early, and Flower of Spring should be suitable kinds to grow. Raise the plants in autumn, sowing not later than July 28th, and set them out as soon as ready. If you have not sown, obtain plants instead, and set them out 15 inches to 18 inches apart without further delay. Cauliflowers for early cutting must be protected with a frame during the winter. In this case seed must be sown about the middle of August, and the plants, when large enough, pricked off into the frame 4 inches to 5 inches apart and grown as hardy as possible. If this is impracticable you will have to rely on the April sowing, selecting varieties such as Early London, Walcheren, Magnum Bonum, and Autumn Giant, which will form a succession if planted as named.

Coming to Onions, those required for

spring, summer, and autumn requirements should be raised in autumn, sowing the seed about the second week in August. There would be a slight gain in point of time, *i.e.*, if Onions were required as soon as they can be had in late spring, if the plants are thinned to 6 inches apart in the drills in February or March next instead of drawing and transplanting the whole lot elsewhere. The thinnings in this case would, of course, be transplanted to about 9 inches apart to form a succession. The latter crop, if properly harvested, would keep up the supply till near the end of the year. Two first-rate sorts are Giant Lemon Rocca and Leviathan. If unable to sow in spring before April we think the better way would be to raise the requisite quantity of plants in autumn, sowing the seed at the same time as the foregoing and transplanting them in spring. Three good varieties are Ailsa Craig, Trebons, and Crauston's Excelsior. Not only would larger bulbs result, but they would mature in advance of spring-raised examples, a consideration, seeing your garden lies so far north.

ROOT CROPS, such as Carrots and Beet, should succeed if sown at the usual time. Parsnips should also do well if sown as early as weather conditions permit. Short-horn Carrots may be sown at three periods, *i.e.*, in April as early as circumstances allow, again in June, and towards the end of July. The bed in the latter case, if covered with litter during hard weather, can be drawn from throughout the winter. Turnips may be sown at intervals, varying the sowings according to the demand, from the middle of April till near the end of August. If the plants from the last sowing do not form serviceable roots they will, if left on the ground, yield a great quantity of tops or greens in spring. Hardy White and Brown Cos Lettuce raised from seed sown the third week in August would furnish a quantity of plants for planting at the foot of walls and in sheltered places in September. These would be ready for use in May. The plants not required could remain in the drills and be transplanted in spring. Another sowing made in September would furnish a succession. In spring sow as early as you can in April and at intervals till the first week in August. For winter use the July and August raised plants would have to be wintered in frames or pits. The best variety of Spinach for winter in your latitude would be the perpetual or Spinach Beet. This is very hardy and yields great quantities of leaves. Make a good sowing in July, another in August, and a final in early September. These three sowings would furnish a supply lasting from September till April and May. For summer use sow one of the smooth-leaved kinds from April till June, and the prickly-leaved sorts from then till the end of July. Vegetable Marrows you could raise under glass, or, failing the latter, under a hand-light on the bed made up for planting them on. The latter may be prepared by taking out a trench as for Celery, filling it with a mixture of litter, Grass collected by mowing-machines, long Grass, or anything that will generate some warmth, and cover all with the soil thrown out on either side. Planting or sowing, as the case may be, can be done at the latter end of May.

PEAS you can sow every fortnight from the beginning of April, or earlier if possible, until the end of June. Scarlet Runners should be raised under glass if you require them early, and be transplanted outdoors the end of May. If not, sow outdoors in the second week of May. French Beans may be sown in a warm spot

at the end of April, and during the three following months if a regular supply is required. You would find climbing French Beans very profitable, as they yield pods over a long season, and do away with the necessity for sowing so frequently as when ordinary French Beans are grown.

There are, of course, other vegetables which should be grown, but in a reply of this description exigencies of space will not allow of the subject being further enlarged upon. We have, however, touched upon the most important of them, and hope the advice tendered may prove useful.]

Endive.—This plays an important part in the making of salads through the autumn and winter, but to have it in perfect condition it must be well blanched. If used otherwise it is tough and unpalatable. The moss or green curled Endive can be quickly and effectually blanched either by covering the plants with saucers, slates, tiles, or even strips of boards 11 inches in width if heavy enough to press closely down on them so that light is excluded. If the plants are full-grown or nearly so the blanching will occupy about ten days. The broad-leaved or Batavian Endive is more satisfactory when tied up in the same way as Lettuces. A good few Lettuces should also be tied up weekly, as they will not now form well-blanching hearts unless tied.—G. P. K.

Onions.—All the spring-sown crops, whether in the open or raised in heat should now be lifted, or a second growth which will injure the keeping qualities of the bulbs may begin. All deformed bulbs should be placed by themselves and used first, only those which are likely to keep being stored for the winter. There are many methods of storing Onions, but I know of none equal to that of roping and hanging up in a cool place; the roping can be done under cover on wet days, and every care should be taken not to bruise the bulbs or they, especially the larger ones, will be sure to suffer.—G.

Celery.—The late plantations will now require earthing up. If the bed is dry, a good soaking of clear water should be applied a day or two before the earthing up is done. All side growths and rough leaves should be removed before the plants are tied. After the soil has been piled round the plants the ties can be removed. Frequent applications of soot will be found effectual in keeping off the Celery-fly. Late Celery whose stems have been exposed to the weather and become hard will take seven weeks or eight weeks to blanch. Too much soil should not be placed about the plants at one time, as this is apt to cause a check.—F. W. G.

Potatoes.—Should warm weather again set in Potatoes which are full grown will start growing again unless speedily lifted. This matter should therefore have attention in all cases where the tops have given indication, by dying down, that the crop has arrived at maturity. If there is not time to pick out the seed tubers from the ware now, they can be clamped or placed altogether in the Potato store, to be separated later on when the press of work is not so great.—A. W.

Leeks.—Taking advantage of the fine weather, a final clean down was given to the quarter devoted to Leeks. Previous to hoeing, a tankful of fairly strong liquid-manure was applied. To this had been added some soot-water, this giving the foliage of the Leeks an intense green colour. Afterwards some more soil was drawn up to the stems of the plants, and they will now need no further attention until required for use.—W. McG.

Cabbages have started nicely into growth. In the event of any gaps occurring through attacks of grub or from club-root or other causes, such gaps should be made good without delay. In removing a plant attacked by grub, search for the pest below the ground, following the stem of the plant. Loosen the surface-soil with the Dutch hoe at frequent intervals both at this season and early in the spring.—G.

TREES AND SHRUBS.

MAGNOLIA WATSONI.

This beautiful Magnolia is not at all common in gardens, and good examples are very rare. It was first shown at the Paris Exhibition in 1889. It comes near to *M. parviflora*, but has larger leaves and flowers, the leaves being each sometimes upwards of 6 inches long and from 4 inches to 5 inches wide, while the flowers are each from 5 inches to 6 inches in diameter. The colour is ivory-white on the inner segments, the outer ones flushed with rose, a conspicuous feature being a broad ring of crimson filaments that surround

that retain their leaves throughout winter. Varying a good deal in height, it may be found from a low bush 4 feet high to a large, wide-spreading shrub 12 feet or 15 feet high, and as far through. In the autumn large panicles of flowers appear from the points of the stronger branches, flowers and stalks being cream or white in colour. Black fruits resembling those of the Ivy are produced and plants are readily raised from seed.—D.

The Cornish Heath.—For autumn bloom, the Cornish Heath (*Erica vagans*) may well be associated with the varieties of our other native Heaths. There are several varieties, such as *alba*, *carnea*, *rubra* (a good red), *grandiflora* (with larger flowers), and the newer *St. Keverne* (a lovely form, with beautiful rose or pink flowers). I find that the Cornish

FRUIT.

APPLE CROP, 1916.

UNFORTUNATELY, climatic conditions in the early part of the year did not open favourably in most English orchards, as the blossom was patchy. In some places there was a good and regular show of blossom, but in most cases there were numerous blanks, some kinds flowering freely and others showing no blossom whatever. Certain Apples, such as Lord Suffield and Bramley's Seedling, in Devonshire are good, whilst others, including such favourites as Cox's Orange Pippin, Ribston Pippin, etc., are failures. Con-



Flower of Magnolia Watsoni.

the pistil. When first open the flowers are sweetly scented. It is quite hardy in this country and seems to do best in loamy soil to which has been added a little peat.

Fatsia japonica.—Under the names of *Aralia japonica* and *Aralia Sieboldi* this plant has long been an occupant of our gardens. In many places it is grown as a greenhouse plant rather than a hardy shrub, although it is hardy enough to withstand ordinary winters in many parts of the country. As an outdoor shrub it has much to commend it, for it can be allowed to grow to a great deal larger size out-of-doors than in a greenhouse, and the more generous treatment received by outdoor border culture results in correspondingly fine heads of foliage. Moreover, its large, glossy green, fan-shaped leaves are evergreen, and it forms a distinct feature amongst other shrubs

Heath and its varieties do well in loam, and this is important in view of the popular opinion that all Heaths require peat.—S. ARNOIT.

Veronica parviflora angustifolia.—Most of the shrubby Veronicas are of stiff habit, but this is a very graceful species, with long, narrow leaves, and slender spikes of whitish flowers. It blooms very freely in August and September, and does well in sandy soil. Cuttings taken off with a heel in the autumn root readily. It makes quite a nice little shrub for the rock garden.—N. L.

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ditions did not improve as the season advanced, as will be seen from the recent report of the Board of Agriculture, which reads as follows:—

Orchards are not in a healthy condition. Blight is frequently reported, and much damage has been done to the Apples by caterpillars. Apples, Pears, and Plums promise a very small yield.

In a later report the Board states "Apples will be from 40 per cent. to 50 per cent. of a crop in some districts, and only 25 per cent. in others, cooking varieties being much better than dessert." It is gratifying to know that there is an increase in orchards recorded in the returns just published by the Board of Agriculture of 2,490 acres, and that the total under cultivation is 251,320 acres. The import-

ance of good cultivation and spraying is again apparent. The scarcity of labour has undoubtedly resulted in neglected culture, and where caustic washes were applied in the winter, followed by spraying with arsenate of lead during the setting of the fruit, some excellent crops are to be seen.

The new war tax on cyder has created a great deal of feeling in Hereford, Devon, and other cyder-making counties. Dismal reports as to the effect on sales have appeared in the Press of the former county, where it is reported that the trade is being ruined. For this county Mr. G. Laubert asked the following question in the House of Commons, viz., If Mr. McKenna would consider the question of repealing or reducing the tax on cyder in view of the report made to him that sales had fallen 70 per cent. The Chancellor's reply was that no other such representation had been made to him, and, therefore, he could not see his way clear to take steps at present. H. WHITEWAY AND Co., LTD.

The Orchards, Whimple, Devon.

WHITE HEART CHERRY NOT FRUITING.

Why does my White Heart Cherry-tree not bear fruit? For three years, on a sunny, hot north wall, it grew well, and was always a mass of blossom, but the fruit always dropped off. It has for the last three years been growing on a south wall with no better results.—F. S. T.

[The fact of your Cherry-tree being unfruitful may arise from a variety of causes—such, for instance, as a too-dry condition of the soil about the roots, particularly that portion of the border nearest to the foot of the wall. It is astonishing the great amount of moisture the foundation and the portion of the wall buried in the soil above it will absorb, and many a case of fruit-trees failing to set fruit has been traced to this reason alone. Then, again, the roots may have descended into the crude, and, perhaps, in your case a cold and clay sub-soil. This would also account for the blossoms not setting, however freely they may be produced. The fact, too, of the past few seasons having been anything but congenial for the setting of Cherries must not be lost sight of. Then there is the possibility that the tree has become old and worn out, and, therefore, incapable of bearing.]

If, after perusing the foregoing, you give the matter careful consideration, you should be able to arrive at a conclusion as to which of the probable causes named the failure may be attributed. If on examination the border is found in a dry state, the remedy is obvious, and give unstinted supplies of water through the summer and autumn months. If the roots are out of hand, the only remedy is to lift them and lay them out horizontally, or nearly so, as near to the surface as circumstances permit. This, if found necessary, will enable you to afford the roots some fresh compost, consisting of good turfy loam, with a liberal dash of old plaster or lime-rubble mixed with it. This will induce the formation of fibrous roots in abundance if the roots are in a healthy condition, and, barring unfavourable climatic conditions, the fruits should then set freely. To carry out the lifting of the roots successfully you should open out the necessary trench not less than 8 feet distant from the stem, so that the operator will have ample space to work in, and be able to search for and trace the roots without mutilating them more than is absolutely necessary. We do not advise root-pruning in this case, neither would it pay to lift and transplant the tree elsewhere. If root-lifting has to be done, do

this as early in autumn after the fall of the leaf as may be convenient.

In regard to failure arising from adverse weather conditions, there is only one thing to be done in future if you are satisfied such has been the cause, and that is to protect the tree while in bloom. The most effective protection would be covers, long and wide enough to cover the whole of the tree when suspended above it. The covers should reach to the ground, or nearly so, on either side, and be kept clear of the tree by driving stakes into the ground some 18 inches from it, and distant about 3 feet from each other. The covers may be either of canvas or "frigidomo." Nets folded three or four times thick will ward off a good deal of frost.]

GRAPES MILDEWED.

I WOULD be greatly obliged if you could help me with regard to the treatment of a house of Grapes which are terribly mildewed and slightly split. Up to three or four years ago they had done splendidly, then mildew showed itself, and has increased each year. I cut down a large double-flowering Cherry-tree last year, as I was told the roots might have reached the Vine roots, and also might have shaded the Vine a little. The house is full of Grapes.—M. BALLANCE.

[Grapes in such a mildewed condition as those you send us should be cut off at once and burned. Nothing short of a thorough cleansing of both house and Vines will be of the slightest avail. After the Vine has been pruned free both stem and rods of loose bark, and then scrub them with warm water in which a little soap has been dissolved, being careful at the same time not to injure the buds with the scrubbing-brush. Then gather up the prunings, bark, dead leaves, etc., and burn the lot. This done, give the house a thorough scrubbing, using for the purpose a solution made as follows:—In the bottom of a bucket place a good handful of soft soap. Work this into a pasty-looking mixture by gradually pouring in $\frac{1}{2}$ pint of paraffin. When thoroughly amalgamated fill up the bucket with boiling water. Pour one-half of this into another bucket, and fill up both with hot water. Scrub every particle of woodwork and glass with this, and rinse down with clean water. Scrape the walls and lime-wash them, using fresh kiln or lump lime for the purpose. While this is slaking and boiling pour in $\frac{1}{2}$ pint of paraffin. When it has finished slaking add enough water to reduce the whole to the right consistency, and apply while hot. Then dress the Vine with Gishurst's compound, using the latter at the strength mentioned and as directed in the printed instructions to be found on the lid of the box. Keep a good look-out when the Vine makes new growth, and if mildew puts in an appearance dust the affected leaves immediately with flowers of sulphur. If dealt with promptly in this manner the attack can be stayed, but if it is allowed to develop before resorting to remedies it is then difficult to subdue, and oftentimes the crop is rendered useless, as in your case. A cold, close, stagnant atmosphere and cold draughts are generally the cause of mildew appearing in unheated houses, and very careful management is required to ward off an attack.]

NOTES AND REPLIES.

Mouldy Loganberries.—In a recent issue of your paper I noticed a paragraph about dry fruit rot and its prevalence among certain fruits. Among these, the Loganberry was not mentioned; but, as I have found a great many of these go off this year in a way which might answer to your description of the disease, I am anxious to know if it is the same thing with which I have been troubled. I enclose a few specimens, and shall be greatly obliged if

you can suggest anything which might help to prevent it in future years. We have had a rather wet, cold summer, which I was inclined to blame for the trouble, but, possibly, this may have nothing to do with it.—BONACCORD.

[The fungus affecting your Loganberries is not the same as that which causes brown rot of fruits like Plums and Apples, but is the very common mould, *Botrytis cinerea*, which attacks all sorts of fruits and all parts of plants when the conditions are favourable for it, a close, damp, and "muggy" atmosphere being what it likes best. The best way of avoiding it on the Loganberries in future will be to pick all fruit which is imperfectly formed, instead of leaving it to decay, and to give conditions as airy and open as possible.]

Figs in pots.—The Fig is particularly happy under the restriction of pot culture, and no more easily managed fruit can be found for a cool house. It is a common mistake to think that the Fig, coming from a hot climate, does not require much water; a glance at its luxuriant foliage should show it is a water-loving plant. A turfy loam with some mortar-rubble serves as a good potting soil, and rich manure should not be added unless the growth is poor. A hard, moderate growth is what is desired for fruit production, and a cool greenhouse where plenty of air can be given suits it admirably. Small, bushy plants are best for the beginner, but if the house is lofty, standards will be useful as a means of getting near to the glass. For a good all round fruit Brown Turkey still holds the first place. White Marseilles comes next in point of popularity, and is generally the first to ripen; though called white it is really pale green. The two Ischias, Black and White, should be included in every collection; "small but good" will be the verdict of those who try them. In my opinion there exist nothing more delicious among Figs, and as they are both prolific croppers they will supply all needs save those of the exhibition table, that altar on which so many good things are sacrificed. For two late varieties, Bourjasotte Grise, most delicious in flavour and medium in size, a regular and constant bearer, and Negro Largo, a fine large fruit which is almost black and of very rich flavour, will finish the season.—E. A. BUNYARD in *Garden*.

Cropping young Vines.—If Vines were not allowed to carry a single bunch during the first two years of their life a much greater weight of fruit could be taken from them in after years. The bearing powers of many Vines are undoubtedly wonderfully lowered by overcropping in the earlier stages of their existence. There is a natural desire on the part of amateurs to get a crop of fruit as soon as possible after planting, but it would be better if the first thought were given to securing strength and permanent fertility in the Vines. It would be interesting to note the difference of girth of stem in two sets of Vines, one of which had been cropped in the ordinary way from the first year after planting, the other not having been allowed to fruit during the first two seasons. It requires, however, more self-denial to wait until the third year from planting than most Vine growers are possessed of. Growers for profit are naturally anxious for a quick return on the outlay incurred in building and planting, the modern system being to crop heavily and feed liberally from the time the Vines come into bearing. Very few would care to wait a couple of years before taking a bunch of fruit from their Vines however great the advantages might be in the long run. Cropping very lightly for the first two years is, however, very different from tax-

ing the capacity of the Vine to its full extent. When Vines are cropped rather beyond their powers during the first two or three years they do not seem to be able to do themselves justice in after years.

ROOM AND WINDOW.

THE FENNEL-FLOWER (NIGELLA).

The Nigellas are all hardy border annuals. Some few have been in cultivation now for a number of years, and may, in fact, be classed amongst the oldest of our hardy border flowers. That they have so long found a place in our gardens need occasion no surprise when their singular-looking flowers and the cut foliage are taken into consideration, while the old-fashioned names of "Devil in a Bush" and "Love in a Mist," under which they had hitherto been known and grown, are likely to cling to them for years to come. Although some handsome varieties are to be found among the older introductions, none can approach

more effective can be imagined than this, seen in scattered groups on a mixed border or growing in a mass in a special corner of the garden. It requires a minimum of trouble, and after the first sowing it will continue to propagate itself by self-sown seeds. I have in mind a garden in which it has come up year after year for upwards of twenty years. For table decoration it is delightful, more especially in artificial light. I should advise all who have not grown it to give it a trial next year, and I am sure they will be more than pleased with the result.

NOTES AND REPLIES.

Cutting flowers.—It is a great mistake to allow flowers to fully expand before cutting them. For more than one reason it is better to cut the blooms when about two-thirds expanded. In the first place they last much longer. When they open fully in water they come larger, and in the case of continuous flowering things,



The Fennel Flower (*Nigella hispanica*).

the new one, named Miss Jekyll, either for its habit of growth or for the beauty of its flowers. No other variety has such lovely blue flowers as this, and, having the further advantage of being borne on long stalks, the blossoms are well poised amongst the elegant slender foliage, and are seen to great advantage. It is also an exceedingly free-flowering variety, lasting for a long time in good condition, and when grown in groups, as it should be, forms a singularly beautiful object in the mixed flower border.

Seed may be sown in the autumn if an early display of bloom is required. On the other hand, if it is preferred that the plants should flower in the late summer or early autumn the first or second week in April is quite early enough to sow the seed.

Mr. L. C. Ashton, Perry Bar, Birmingham, whom we have to thank for the photograph from which our illustration has been prepared, writes as follows:—

This beautiful hardy annual should find a place in every garden. Nothing

the blooming season is lengthened. Take Daffodils, for instance; the difference between blooms that remain until fully open on the plant and such as are cut when about half expanded is very noticeable. Placed in a cool room, the blooms will come quite one-sixth larger, and the same thing is observable to a more or less greater extent with all flowers that can be used in a cut state. When sending flowers away I make a point of cutting them at least twenty-four hours before I despatch them. They become so highly charged with moisture that they bear the journey much better. Gladioli are wonderfully improved by early cutting. In very hot weather the lower flowers go off before those above them can open, so that one cannot get a spike with more than two or three blooms on it. By cutting as soon as the first two blooms are opened, and keeping them in a cool place, one gets some well-furnished spikes. Paeonies, Irises, and some other things cut when just showing colour will last very much longer than if allowed to open on the plants.—T.

ROYAL HORTICULTURAL SOCIETY'S VEGETABLE SHOW.

SEPTEMBER 26TH, 1916.

This was held in conjunction with the Society's fortnightly meeting on September 26th, and, from many points of view, was a considerable success. High class produce was general, and competition in the more important classes fairly keen. A champion cup offered by the Society to the winner of the greatest number of first prize points throughout the whole exhibition—the winner in Class 1 being excluded—was won by Mr. James Gibson, gardener to His Grace the Duke of Portland. A gold medal was awarded to Messrs. Webb and Sons, Stourbridge, for a highly representative collection of vegetables, everything being first-class and admirably set up. An exhibit of Premier Onion, some six or seven dozen bulbs in all, giants in their way and each a replica of the other, gained a silver Knightian medal for Messrs. Dickson and Robinson, Manchester, a like award going to Messrs. Sutton and Sons, Reading, for an exhibit of Scarlet Runner Beans showing the development of this much-esteemed vegetable. Starting with the common Scarlet with thick, curved pods of 6 inches in length and proceeding by way of Champion, Ne Plus Ultra, Sutton's Scarlet, one of the most prolific with pods each 10 inches in length, its present ultimatum is seen in Prizewinner and Best of All, which are between 17 inches and 18 inches in length, perfectly straight, proportionately broad, young and succulent withal. Pods of all were shown on a board, and in the foreground, dishes of these with climbing French Beans and coloured-podded sorts.

In the competitive section the largest class was for twelve kinds, distinct, to be selected from a scheduled list, the "Sutton" challenge cup being included in the first prize. This was secured by Captain H. Spender-Clay, M.P., Ford Manor, Lingfield (gardener, Mr. D. Gibson), who showed admirable produce; second, His Grace the Duke of Portland, Welbeck (gardener, Mr. James Gibson), with an exhibit for all practical purposes just as good. Indeed, speculation was rife as to the points separating these two exhibits, some considering the latter the better of the two. Both were, however, excellent, reflecting the highest credit on the growers. A chief object of Class 2 for nine distinct kinds was the exhibiting of those vegetables which are most useful and acceptable for table, the judges being empowered to disqualify any exhibit opposed to this principle. Hence for once we were confronted with examples of moderate size as opposed to those of exhibition order pure and simple. Seven collections were staged, the leading award going to Mr. H. Myers, Swanmore Park, Bishops Waltham (gardener, Mr. G. Ellwood), for a really useful lot. We regarded his dishes of Best of All Tomato and Dwarf Gem Brussels Sprouts ideal for table use.

In the class for six kinds Mr. T. Jones, Ruabon, showed some of the finest Red Intermediate Carrots we have seen. His other dishes were also fine. The Potato classes, whether here or elsewhere, are generally well contested, six collections of twelve distinct varieties being staged, the Rev. T. McMurdie, Woburn Park, Weybridge (gardener, Mr. A. Basile), receiving the premier prize for produce bordering on perfection. Practically without spot or blemish, and of a high standard of excellence throughout, the exhibit found many admirers. Only four staged in the class for six varieties of Onions, Mrs. Jenner, Wenvoe Castle, near Cardiff (gar-

dener, Mr. H. Wheeler), being first. In the single dish class for Runner Beans sixteen competed, the prize being awarded to Miss E. L. Bradshaw, Steeple Ashton, Oxford (gardener, Mr. R. Wadham), for a particularly handsome exhibit. The variety was Prizetaker. For a dish of Brussels Sprouts nine dishes were set up, Mr. T. Jones, Ruabon, being an easy first with a perfect dish of Dwarf Gem, the tight little "buttons" ideal for table use. We grew this variety in preference to all others, and know something of its nut-like flavour, and were pleased to note that it was favoured by the judges in a keen competition. It is not likely to satisfy the market man, but for those desiring the highest table quality and a Sprout which may be partaken of whole, we know of nothing to equal it.

ROYAL HORTICULTURAL SOCIETY'S FRUIT SHOW.

OCTOBER 3RD AND 4TH.

No greater tribute to the enterprise and enthusiasm of British horticulture could possibly have been paid than the excellent exhibition of fruit brought together on the above-named dates. Ranking high with the best that have preceded it—albeit the exhibits of several eminent fruit-growing firms were, on this occasion, conspicuous by their absence—it was superior to them all in the Grape classes, which never before have been so keenly or so numerous contested. In these alone, apart from those reserved for collections of dessert fruit elsewhere, over 200 bunches of, for the most part, excellent produce were staged, their quality proving that the leading horticulturists are as keen and alert as ever. This, in these strenuous times, remembering the increased difficulties of labour and transit, is saying much, the wide area from which they came demonstrating not a little enthusiasm. Grapes of such excellence as would a year ago have been well in the running for prizes were upon this occasion passed over. Apples, too, if not quite equal to the prime quality to which we have become accustomed, were, nevertheless, very fine, a remark which has an all-round application—the big and county classes and single dishes alike. In only one direction did a jarring note occur. This was a collection of fruit set on gawky stands. Out of scale with the rest of the exhibits, the painted legs of these were too painfully evident, and we saw the thicket of these rather than the fruit at their summit. Good fruit needs no such exalting, it is seen to greater advantage at, or immediately below, the line of vision. Following are brief particulars of the show, which, owing to lack of space, we are unable to give in detail.

OPEN TO GARDENERS AND AMATEURS.

Three exhibitors staged collections of nine dishes of ripe dessert fruit, Lord Somers, Eastnor Castle, Ledbury (gardener, Mr. G. Mullins), occupying the leading place with particularly good fruit. Muscat of Alexandria and Black Hamburg Grapes, Peaches Sea Eagle and Barrington, and Doyenne du Comice Pears were very fine. The Duke of Newcastle (gardener, Mr. S. Barker), who was second, had admirable dishes of Crimson Galande and Princess of Wales Peaches, and Pears Triomphe de Vienne and Marguerite Marillat. In that for six dishes of ripe dessert fruit five collections were staged, the whole making a considerable display. Here Lord Hillingdon, Wildernes, Sevenoaks (gardener, Mr. J. Shelton), gained the premier award, Madres-

field Court and Muscat of Alexandria Grapes, Charles Ross Apple, and Lord Palmerston Peaches being in every way excellent.

The Grape classes throughout, as already hinted, were of high excellence, worthily reflecting the skill of the British gardener. In the leading class for six distinct varieties (two bunches of each) six collections were staged. Arranged in crescent-shaped outline, the whole made a telling display; a great attraction to gardeners and visitors alike. The chief prize winner was the Duke of Newcastle, Clumber, Work-sop, who staged Black Hamburg, Buckland Sweet-water, Chasselas Napoleon, Madresfield Court, Muscat of Alexandria, and Gros Colman as his six. These merited the highest praise, good finish and uniform size being notable features. Mr. W. Mackay, Ascog, Bute, N.B. (gardener, Mr. D. Halliday), was in the second place with Grapes of excellent quality, while the bunches of Appley Towers staged by Mr. G. Miller, Radlett, who took third prize, approximated to perfection. The Black Hamburg class for two bunches brought eight contestants, Lord Hillingdon sending perfectly-finished, well-berried examples of this popular sort, and gaining first prize. Lord Saville, K.C.V.O., Rufford Abbey (gardener, Mr. J. Doe), was second with excellent Grapes. Lord Hillingdon also sent the best bunches of Mrs. Prince and Madresfield Court, superb quality and perfect finish characterising the whole, Mrs. W. Raphael, Englefield Green, having the finer bunches of Black Alicante. Seven staged in each of the two latter classes. For Muscat of Alexandria the Duke of Newcastle, Clumber, Work-sop, led, Lord Somers, Eastnor Castle, Ledbury, following. The finest bunches of this highly-esteemed variety, whether for size of bunch or berry, gained no prize, doubtless due to the lack of table fitness of the moment. They were probably thrice the weight of the first prize lot, and even in their unripe state reflected the highest cultural skill. They came from Mr. C. W. Mann, Bexley, Kent (gardener, Mr. J. Simon). Lord Somers sent the best collection of hardy fruits—thirty dishes, distinct, grown entirely in the open, to include not more than twelve of Apples or eight of Pears. These were of excellent quality, and, with Peaches, Nectarines, Cherries, Figs, and Plums, made up a sumptuous and representative whole.

NURSERYMEN'S CLASSES.

In the premier class—space allowed, 30 feet run of 6 feet tabling—two exhibitors staged, the gold medal as first prize being awarded to Messrs. H. Cannell and Sons (manager, Mr. J. Lawson) for a high-class collection embracing nearly 250 dishes of Apples, Pears, and Plums. A few weeks earlier, with all fruit at a standstill, owing to the prevailing dryness, this exhibitor doubted whether there would be any fruit to show, hence such excellence as obtained was all the more surprising. Notable dishes of Apples were Egremont Russet, Winter Ribston, Charles Ross, James Grieve, Bramley's Seedling, and Warner's King. Plums Monarch, Belle de Septembre, Coe's Golden Drop, Archduke, and Wyedale were remarked. In the following class—space, 20 feet by 6 feet—Messrs. J. Cheal and Sons led against four competitors, staging clean, well-developed fruits throughout. Prince Albert attracted by colour at once, Egremont Russet (a fine dish) because of its excellent table quality. Gascoyne's Scarlet, Rev. W. Wilks, and Blenheim Orange were other dishes of importance. Messrs. Laxton Brothers were second, and, while staging good Apples and Pears, and Plums

Monarch and Claude de Ravay, also contributed dishes of promising cross-bred Plums as yet unnamed. Messrs. Thomas Rivers and Sons alone exhibited orchard-house grown fruit and fruit-trees in pots. The fruits of Cox's Orange Apple were particularly attractive by reason of colour, while trees of Plums President and River's Late Orange demonstrated the prolific cropping qualities of these valuable sorts. Trees of Peaches, Salway, Sea Eagle, and Thomas Rivers, carried heavy crops. Gathered fruits were excellent.

MARKET GROWERS ONLY.

Messrs. Gaskain and Whiting showed the best twenty baskets of cooking and dessert Apples, Lieutenant-Colonel H. Lumley Webb being second. The first-named lot was very fine. For twelve baskets, six cooking and six dessert, the Horticultural College, Swanley, deservedly secured the premier award, Warner's King, Peasgood's Nonsuch, Bismarck, Golden Noble, Lane's Prince Albert, Cox's Orange Pippin, and James Grieve representative of the finer sorts. Well-finished fruits and good staging characterised this exhibit. Only one exhibitor, Lieutenant-Colonel Lumley Webb, staged six baskets of Pears. They were excellent, the first prize being awarded. The whole of the fruit shown in this section, it is interesting to note, was Kent grown.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM OCTOBER 4TH.—*Michaelmas Daisies* (in great variety), *Helianthus* (in variety), *Helconium*, *Enocheras*, *Pentstemons* (in variety), *Rudbeckias*, *Scabiosa* (in variety), *Herbaceous Phloxes*, *Annual Delphiniums*, *Salvias* (in variety), *Lobelia cardinalis*, *Bergamot*, *Linums*, *Phygelius capensis*, *Montbretias*, *Gladiolus*, *Lilium speciosum* (in variety), *Tritomas*, *Amaryllis Belladonna*, *Statice* (in variety), *Dahlias*, *Antirrhinums* (in variety), *East Lothian Stocks*, *Myosotis*, *Campanulas*, *Echinops*, *Achilleas*, *Lavatera Olbia*, *Agapanthus umbellatus*, *Hardy Cyclamens*, *Colchicum autumnale*, *Crocus speciosus*, *Bunch Primroses* (*Polyanthus*), *Mesembryanthemums*, *Anthemis Kelwayi*, *Sedum Sieboldi*, *S. spectabile*, *Cosmos*, *Convolvulus mauritanicus*, *C. Cœneum*, *Androsaces* (in variety), *Linarias*, *Potentillas*, *Gypsophilas*, *Hutchinsia alpina*, *Ethionemas*, *Plumbago Larpetæ*, *Erigerons*, *Francoas*, *Sweet Sultan*, *Early-flowering Chrysanthemums*, *Ericas* (in variety), *Menziesias*, *Hypericums*, *Genista tinctoria*, *Spartium junceum*, *Buddleia variabilis magnifica*, *Abelia rupestris*, *Clerodendron trichotomum*, *Veronicas* (in variety), *Myrtle*, *Hardy Fuchsias* (in variety), *Hydrangea paniculata grandiflora*, *Laurustinus*, *Viburnum coriaceum*, *Ceanothus* (in variety), *Tricuspidaria lanceolata*, *Solanum jasminoides*, *Polygonum baldschuanicum*, *Magnolia grandiflora*, *Clematis* (in variety), *Wistaria*, *Roses* (in variety), *Pampas Grasses*, *Artemisia lactiflora*, *Solidagos*, *Primula capitata*, *Water Lilies*.

WORK OF THE WEEK.—The herbaceous borders were again looked over during the week, clearing away all dead flower-stems and annual plants which have finished flowering, and removing stakes which are no longer needed. The position of all deciduous bulbous plants is marked with labels, so that when the border receives its annual dressing the dormant bulbs and corms may not be disturbed. Early-planted Gladioli, having ripened their foliage, have been carefully lifted and laid with the stems attached in a cool-house to dry. Before storing them for the winter, all offsets are rubbed off and the corms graded into different sizes. Both the tuberous and fibrous rooted Begonias are still flowering freely. Cannas have been examined, and the best varieties marked for propagation in the spring. Directly the leaves have been blackened by frost the foliage will be trimmed off to within 5 inches or 6 inches of the ground and the roots lifted and stored for the winter.

It is not always necessary to dry them, but if very wet it is advisable to allow some of the superfluous moisture to escape before storing them. Autumn-flowering Chrysanthemums are blooming freely, and notes have been made of the most useful varieties as a guide to propagation. All cuttings in cold-frames are examined from time to time for the purpose of removing decayed leaves and weeds that have come up in the soil. Very little water is required, and when it is necessary it is given on fine mornings. Calceolaria and Pentstemon cuttings are now well rooted, and an abundance of air is admitted on all favourable occasions. Plenty of good cuttings of Tufted Pansies (Violas) are now available, and another batch of Gazania cuttings has also been put in, choosing the smaller shoots which have no flower-buds. These are inserted at about 2 inches apart on a bed of sandy soil and kept close and shaded until rooted. Specimen plants in tubs are beginning to look shabby, and have been removed to a place where they can be protected when necessary. Hydrangeas and similar subjects will be left out-of-doors for some time, and will come to no harm if a little tiffany is thrown over them when frost is expected. If a glass-house is not available, these may be wintered quite well in a barn, stable, or similar structure.

F. W. GALLOP.

Lilford Hall Gardens, Oundle, Northants.

SOUTHERN COUNTIES.

Cucumbers.—The plants intended for fruiting during the next few months should now be making vigorous growth and fast covering the trellis with bine. Until the trellis is covered, the plants should not be allowed to bear. Cut off all fruits as they appear for the present, and take the points out of young shoots to make them break and produce secondary shoots. In this way the trellis can speedily be covered with healthy growth, which, when allowed, will then produce fruit in succession over a long period. Ventilate freely on every favourable occasion, and syringe the foliage twice daily with tepid water. In the interval maintain a moist atmosphere by frequently damping down. Top-dress on the little-and-often principle, and do not, so long as growth is satisfactory, resort to the use of stimulants. Plants still in bearing should be induced to continue so for some time longer by supplying the roots with rich top-dressings and stimulants when watering. Liquid-manure sprinkled on the paths when banking up at night will also be beneficial. Keep red-spider in check by a free use of the syringe in bright weather, and remove a few at a time of the oldest of the leaves if there is plenty of younger ones to take their place. Regulate the supply by allowing no more fruits to develop in various stages than will be required for consumption.

Hardy fruit garden.—Preparation for lifting the roots of fruit-trees to check exuberant growth or where trees have got out of health as a result of the roots having descended into a cold, sour subsoil can now with safety be made and the operation undertaken afterwards. In some instances new compost or a modicum of it is required when the roots are laid out afresh, and in the case of stone fruits lime rubbish is also needed if the soil in its present state is either devoid of it or it is present in insufficient quantities. Drainage material may also be needed, particularly where the subsoil is very moist or likely to become flooded in wet weather—i.e., if concreting, the best of all remedies in such cases, cannot for various reasons be afforded just now. It is not always necessary to lift the whole of the roots of a tree in order to administer the needful check. This can often be done by opening a trench some 6 feet away from the stem and lifting or baring the roots to some 3 feet or 4 feet away from the bole, laying them out afterwards after trimming off broken ends and shortening back the strongest in a nearly horizontal position, adding lime rubbish to the soil in the case of stone fruit, even if nothing further is required. Unfruitful Apricot, Peach, and Nectarine trees may be restored to a healthy and fertile condition by the adoption of these principles. With regard to the first-named fruit, a total lifting of the roots, if the trees bear but sparsely, gum, and

make rank growth is absolutely necessary to counteract the tendency which Apricots have to get into such a condition when improperly planted. For Apricots a very liberal quantity of lime rubbish should be added to the soil, and ample drainage provided beneath the roots, as considerable supplies of water are necessary when the trees are in full growth and carrying a good crop of fruit.

Root pruning.—Where this has become necessary the results are of a more satisfactory character if undertaken now than during the resting period, as the fact of the foliage still being green is the means of the trees overcoming the shock caused by the severance of the large roots more quickly and induces them to push out new fibres soon after the conclusion of the operation. When the trees are at rest they do not recover nearly so rapidly. One-half of the roots only should be operated on in each case in one season, leaving the other half to be dealt with either in the following year or the year after. When it is found that the soil has become exhausted, it is a good plan to mix some good fibrous loam with the staple when refilling the trench, as this and a little burnt soil, if at hand, encourage the emission of fibrous roots. When root-pruning is about to be undertaken, the necessary trench should never be opened nearer the stem of the tree than 3 feet. The operator should be guided in this matter by the age and the spread of its branches in every instance, and not by any set rule.

A. W.

MIDLAND COUNTIES.

Apples.—With the exception of a few very late varieties, the majority of these have been gathered. Apples generally are below the average in size this year, and they are far from plentiful. Therefore, it is necessary to take extra care in gathering and storing, as any carelessness either in selecting the fruit or in handling it will have unsatisfactory results. The greatest care should be taken in the handling of the fruits in order that they may not be bruised, and every fruit that is not perfect should be set aside for present consumption. Much of the shrivelling noticed in late Apples in the spring is the result of their being stored in too dry an atmosphere. A cool dark room, with atmospheric conditions similar to those generally found in a good cellar, is an ideal place for preserving fruits. Indeed, there are few fruit rooms that are better than a good cellar for the purpose. No straw, hay, or other material should be used in the fruit room, as it is apt to become musty and taint the fruit.

Figs.—The cold and damp weather early in the summer retarded the growth of Fig-trees, the result being that very few good fruits have been gathered in this locality. The trees have since made a considerable amount of growth, which needs all the sun and air possible to mature it. All weak and unnecessary shoots have been cut out in order that those retained for fruiting next year may be well exposed to full air and sunshine.

Perpetual-flowering Carnations.—The temperature of the house in which these are growing is maintained at 55 degs. at night, with an advance of 5 degs. during the day. Ventilation is afforded regularly, leaving the ventilators open a little during the night, and in cold weather on the opposite side to that from which the wind is blowing. An abundance of fresh air is admitted during favourable weather, when the paths are damped twice daily. Occasional applications of clear soot-water are afforded, as these impart a deep, healthy colour to the foliage. A slight top-dressing of an approved Carnation manure is given fortnightly throughout the flowering season, taking care to avoid an overdose. Malmaisons layered last August and potted into 3-inch pots are now ready for repotting into 5-inch and 6-inch pots, according to the progress made since the last potting. The pots must be clean and dry, and have ample material for drainage. The potting compost used is of a slightly rougher nature than that for the previous potting, adding mortar rubble and broken charcoal. The plants are placed as near the glass as possible, allowing ample ventilation in favourable weather. Through-

out the winter the plants require to be kept slightly on the dry side at the roots, but never allow them to suffer from excessive dryness. This type of Carnation is very subject to a fungoid disease known as rust, but if the house is kept dry and well ventilated during the dullest part of the year disease is not so troublesome.

Turnips have done exceedingly well, the season having been an ideal one for this crop. Late sowings should now be thinned to 6 inches apart, stirring the ground between the rows directly the thinning is done. Soot is one of the finest stimulants for this crop, and an application once every ten days is not too frequent. On very poor ground a frequent slight application of an artificial manure will be very beneficial. Roots which have grown to full size should be lifted and stored before they become too large for use. Store them in ashes or sand, but avoid placing them in too great bulk.

Celeriac has made excellent growth during the last six weeks. The crop must shortly be lifted, the foliage trimmed off, and the roots stored in sand in a place secure from frost.

Winter Greens.—A few late plants may still be planted on vacant ground, and provided the winter is not too severe will prove useful later. The earliest-planted Kales have made good growth. Stir the land occasionally and draw a little soil up to any plants that need it. Remove decaying foliage so that air and light may reach the plants. Late Leeks that were planted on well-prepared ground have done exceptionally well, and little attention beyond an occasional hoeing has been necessary. Up to the time of writing we have only registered 2 degs. of frost, which has done no damage. Frosts may now occur any night or morning, therefore every preparation should be made to guard against injury therefrom.

French and Runner Beans have yielded splendid returns, and most of the plants are still in full bearing. French Beans, which were sown in a warm border for fruiting late, are just coming into bearing. These are protected by placing a temporary frame-work over them with spare lights thereon. These will be further covered with mats at night when severe frosts are likely to occur; and good crops are expected until the end of October.

F. W. G.

SCOTLAND.

Cuttings.—The work in connection with cuttings was brought to a close in the course of the week. This included the putting into cold-frames upon previously prepared beds the more hardy things which are used from year to year. Departing from the usual practice, nearly a thousand cuttings of Antirrhinum were made. The strain is an excellent one, the plants being of a good intermediate habit, very free-flowering, and true to description. It is thought that by using these cuttings a considerable amount of work will be avoided in spring, in the way of sowing, pricking-off, etc. At the same time, cuttings of Tufted Pansies were put in. These included, among others, a good quantity of the favourite Maggie Mott, of the neat little Violetta Waverley, and of a good form of the old Viola cornuta named Thuringia, which is very effective when massed and flowers freely over a long period. Cuttings of Pentstemons were likewise attended to. We have for the present discarded the "florist" varieties of these showy flowers; but the useful Gem family is largely used, chiefly Newbury Gem, Southcote Gem, and an unnamed variety almost equally good, which originated in a neighbouring garden a few years ago. With the insertion of a small number of Calceolarias—these being put in merely to keep up the stock—the cutting season may be said to have come to an end.

Dahlias.—These showy autumn flowers have made excellent growth, and during the week decayed blooms and superfluous shoots were removed. With the advancing season the flowers do not endure so well as they did, and if decaying blooms are not promptly removed they are apt to contaminate others which are on the point of expanding. As has been indicated in previous notes, a large quantity of the old Glare of the Garden is used, and dur-

ing the present rather peculiar season it has well maintained its popularity. On the other hand, I have to some extent revised my opinion as to the value of the Giant-flowered or Pæony-flowered section. These are, beyond question, very massive and showy, but if the quarter in which they are grown is a trifle rich, the growth is vigorous, not to say gross, and the blooms verge upon the monstrous. It appears, therefore, that this section is more fitted for use in shrubberies or in similar positions. The Cactus, Collarette, and single Dahlias are better adapted for general decoration.

Pits in which Melons and Cucumbers were grown during summer and early autumn have now been cleared of the hotbeds. The maure is wheeled straight to any vacant break, and afterwards the pits, which are about 8 feet deep, will be thoroughly lime-washed. These pits are very useful for storing cuttings of tender subjects over winter, and, being heated by hot-water pipes, frost can be easily kept at bay. Such things as Arum Lilies, too, succeed perfectly well in these pits until they are required for the greenhouse.

Potting.—A day was devoted to potting in the course of the week. *Primula obconica*, *P. sinensis*, and *P. malacoides* were given a move on. It is again intended to grow a batch of *P. malacoides* in 10-inch pans—this being, as I think, the most effective way of growing this useful variety. Careful watering is now essential in the case of the family generally, few plants resenting an excess of moisture so quickly as the *Primulas*. Some promising *Cinerarias* were also put into larger pots—chiefly those 7 inches and 8 inches in diameter. A batch of *Schizanthus Wisetonensis* was moved into its flowering pots. These plants had been pinched some time ago and have broken freely. Meantime, a light stake was placed in the centre of each pot to which the growths have been loosely tied. Leaf-cuttings, now well rooted, of *Saintpaulia ionantha* were potted off, and some plants of *Begonia Gloire de Lorraine* were given a shift.

Plant-houses.—Now comes the time when, in order to make room for winter-flowering stuff, no hesitation should be felt in discarding plants of no intrinsic value. Most of us, I daresay, grudge to part with plants which have taken time and care to grow, but, after all, when they have served their purpose it is as well to let them go. For example, such things as *Coleuses* should be got rid of with the exception of sufficient stock plants. The same course may very well be followed in the case of *Fuchsias*, of *Zonal Pelargoniums*, of *Diplacis*, *Celsias*, *Petunias*, and so forth. There is (in my own case, at all events) a tendency to retain too many plants. Over-crowding leads at times to insect pests, and, therefore, it is better to harden the heart and discard freely. In the greenhouse the display still remains tolerable, and with regular picking and careful watering no further rearrangement will be necessary until the *Chrysanthemums* are housed. Seedling *Begonias* of the present year's growth have lately been useful. The proportion of good doubles and semi-doubles is larger than usual. As regards the stove, late-flowering plants of *Pancreatium* fragrans are showing the flower-stem. These useful and sweetly-scented subjects are always appreciated, more especially after the outside display begins to wane. *Gesneras* are at present useful, and *Pentas rosea* is beginning to show up well. The earlier *Cypripediums* will very shortly be in bloom, and *Eucharis amazonica* and *Cælogyne cristata* are coming on apace. *Ixoras* are always attractive and useful. These, however, require more heat than the ordinary run of stove flowering plants; and the heat must not be intermittent. Among roof plants, *Thunbergia laurifolia* is a fine thing, and blooms almost continually during the winter. This plant and *Passiflora quadrangularis*, in my opinion, are more valuable than *Clerodendrons* or even than *Allamandas* as stove roof plants. The cool-house provides as yet sufficient heat for such things as *Libonia floribunda* and a spare batch of *Gesnera cinnabarina*, both of which will be very useful at a later date. Damp is easily dealt with as yet by means of moderate firing and by strict attention to ventilation on all suitable days. W. McGRUFFOG.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Wintering plants in a cold house (M. W.).—*Chrysanthemums* and *Calceolarias* might be safely wintered in an unheated greenhouse—but not so *Pelargoniums*, as frost and damp will certainly destroy them. It would be much the best plan to heat the house with a small hot-water apparatus, if *Pelargoniums* and other tender greenhouse plants are required to be kept safely in it through the winter season.

Salvia splendens (F. S. T.).—If you have any old plants your best way will be to keep them in the greenhouse during the winter. These plants will, in the spring, push out a quantity of new shoots, which will make first-rate cuttings, which, if put into pots and stood in a propagating case, will very soon root. These should be potted off when rooted and grown on in the same way as *Chrysanthemums*.

TREES AND SHRUBS.

Swellings on Pine-tree stems (W. A. East).—The swellings on the stems and shoots of your *Picea nobilis* are caused by a fungus (*Peridermium elatinum*). This fungus has also another form in which it appears on the leaves of the attacked parts of the tree, as small, more or less cup-like projections filled with spores. Spraying with a fungicide just at the time when the spores were ripe might have some effect in checking the spread of the disease, but it would have no effect on the swollen shoots where the fungus is safely doing its work beneath the bark. Practically the only thing to save the tree is to cut off and burn the infested shoots and branches.

FRUIT.

Spotted Apples (F. Otway Johnson).—The spotting on the fruit is caused by a fungus brought about, no doubt, by the roots getting into a cold subsoil, which cannot supply proper food. You should open a trench round the tree, 4 feet or 5 feet from the stem, and sever all downward roots, refilling the trench with some good turfy loam, bone-meal, and wood-ashes, mulching the surface afterwards with rotten manure. You should also in the winter, when all the leaves have fallen, syringe the tree with the caustic solution which we have so often advised in these columns, as this would destroy the spores of the fungus, which seldom attacks healthy trees.

SHORT REPLIES.

H. W. Coutley.—We have never heard of the Privet leaves being injurious to poultry.—**W. E. E.**—The best manure for such a soil as yours is cow-dung, this keeping the soil cool. You should dig in one of the several soil fumigants now on the market.—**Mrs. Herbert Paul.**—There are no better *Roses* for your purpose than the one you mention and *Zephrin Drouhin*, but if you wish them to succeed in such a position as you refer to your best plan will be to have the tiles lifted and a border, consisting of good loam, some rotten manure, and a few bones, made for the *Roses*. Evidently the soil is exhausted and the border dry at the bottom, hence the attack of mildew.—**Canterbury.**—1, During the winter *Cinerarias* must be kept in a house the temperature of which does not exceed 40 degs. to 45 degs. They may be kept in a heated frame, if the heat can be turned on when the weather is severe to keep the temperature at the figures given above.—**Margaret Wilson.**—Your best way will be to wait until the leaves fall, then have all the old wood cut out, laying in the young shoots that will bear the fruit next year at a distance of about 4 inches apart, spurting back to two buds those not required for filling in. 2, The shoot you refer to is probably a sucker, and should at once be dug up as it is only weakening the tree.—**Wood.**—We doubt very much whether with such a tall building so near you would get the *Roses* and *Clematis* to do any good. If you do decide to try them, then you have a wide selection in the many varieties of *Rambler Roses* and *Clematis* now to be had. We see no reason why you should go to the expense of tubs; old barrels sunk in the ground will answer quite as well and can

be had cheaply. For the green-fly, get some *Quassia* extract and soft soap, which can be had from any horticultural sundriesman.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*E. B.*—*Polygonum baldschuanicum*.—*F. Keane.*—*Erigeron multiradiatus*.—*Miss Wauchop.*—One of the many forms of *Aster cordifolius*.—*M. T. Gray.*—The plant you refer to as "The Silver Sage" is *Petrovskia atriplicifolia*.—*J. B.*—*Leycesteria formosa*.

Names of fruits.—*Anon.*—Pears: 1, Fondante d'Automne; 2, Dr. Jules Guyot. — *C. H. G. P.*—Small fruits of Cox's Orange Pippin.—*Amelia.*—Plum Transparent Gage.—*A. G.*—1, Cellini; 2, Medium-sized fruit of Kentish Filbasket.—*J. J.*—Apples: 1, Hawthornden; 2, Lemou Pippin; 3, Alfriston; 4, Worcester Pearmain.—*C. L.*—Apples: 1, Duchess of Oldenburgh; 2, Yellow Ingestre. Pears: 3, Louise Bonne of Jersey; 4, Beurré Superfin.—*E. N.*—Apples: 1, Stone's (syn. Loddington Seedling); 2, Cox's Orange; 3, Mère de Menage; 4, Cellini.—*A. Grant.*—Apples: 1, King of the Pippins; 2, Warner's King; 3, Lord Suffield; 4, Laue's Prince Albert.—*A. R. H.*—Plum Coe's Golden Drop.—*W. C. L.*—Apples: 1, Emperor Alexander; 2, The Queen; 3, Cox's Pomona; 4, Golden Spire.—*A. E. J.*—Apples: 1, Stirling Castle; 2, Cellini; 3, King of the Pippins; 4, Ribston.—*W. P.*—Apples: 1, Hawthornden; 2, Warner's King; 3, Alfriston; 4, A very poor Cellini.—*T. H.*—Pears: 1, William's Bon Chrétien; 2, Durondeau; 3, Beurré Bosc. Apple: 4, King of the Pippins.

CATALOGUES RECEIVED.

JOHN WATERER, SONS, AND CRISP, LTD., Twyford and Bagshot.—Home-grown Bulbs and Fruit-trees.

R. WALLACE AND Co., Colchester.—List of New Chinese Plants, Lilies, Tulips, etc., etc.

M. M. LEMOINE AND SON, Rue du Montet, 136-142, Nancy, France.—General Catalogue of Plants.

Summer-fruiting and autumn-fruiting Raspberries.—Trials of both summer-fruiting and autumn-fruiting Raspberries will be held at Wisley. Three plants of each variety should reach the Director, R.H.S. Gardens, Wisley, Ripley, Surrey (station, Horsley. L. & S.W. Ry.), by November 13th, 1916, accompanied by the necessary forms of entry (one for each variety), which may be had on application to the Director.

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OCTOBER 21, 1916.

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NOTES OF THE WEEK.

Ducks in pleasure-grounds.—I am glad you are against ducks in pleasure-ground waters. Wherever there are ducks or other water-fowl there is always a kind of ugly scum of small feathery *débris* that gives the water a sordid and extremely unpleasant appearance.—G. JEKYLL.

The white Meadow Saffron (*Colchicum speciosum album*).—This is the fairest flower of the week facing the storms of early October, only asking for a little shelter and a carpet to sit on. I have not got it quite happy as to place as yet, the best in effect nestling on a tuft of the dwarf Lavender. There should be a soft Mossy carpet over the ground in which it grows to prevent the effects of heavy rain on bare earth.—W.

Brilliant Toadstools.—Last week, when visiting a friend at Woking, whose garden includes a bit of Pine wood, I was struck with a large patch of brilliant Toadstools. They were each 6 inches or 7 inches across, of a vivid scarlet hue above with white spots, and made a very bright splash of colour. It is quite a common Toadstool in Pine woods, but I have never before realised how beautiful a large patch of it could be.—N. L.

Gaillardias.—One is, at times, asked to recommend a hardy plant which will succeed in a semi-dry position, such as on a sloping bank or similar place. Under such circumstances no one can go wrong in planting Gaillardias freely. There are not many plants that will give such a good return, and, apart altogether from their value in dry situations, the flowers are very useful when cut. Plant about the middle of October and give them a chance to get established before winter sets in.—KIRK.

Iris reticulata in Suffolk.—I saw a country cottage garden in Suffolk recently where this Iris grows like a weed and flowers freely every spring. I was told that a single bulb had been given to the cottager some years ago, and it had increased so rapidly that there were now hundreds. A large number had been dug up for removal, and they were as sound and healthy as possible. No special care was taken with them, but evidently the soil, which was light and sandy, suited them well.—W. O.

Erigeron "Asa Gray."—This rather quaint-coloured flower, which was given an Award of Merit by the Royal Horticultural Society, is praised in catalogues, but it does not strike me as very effective. The colour of the blossoms is variously

described as "apricot-yellow" or "buff-yellow," but it is not at all a clear colour, the tone being somewhat "muddy." It is a vigorous grower and quite a change from the usual mauve tints of the family, and is, moreover, very free-flowering. It is still blooming freely with me in my North London garden.—W. O.

Kniphofia Nelsoni.—It is often alleged, and with a certain amount of truth, that the Torch Lilies are clumsy and ungraceful plants. These faults cannot be charged against *K. Nelsoni*, which may be truthfully described as of elegant habit and quite devoid of clumsiness. Its foliage, too, is graceful and free from the heaviness of that of some of the Torch Lilies, while its bright spikes are always appreciated. *K. Nelsoni* flowers at the same time as the Michaelmas Daisies, Sun-flowers, and similar things.—KIRK.

The Violet Cress (*Ionopsidium acaule*).—This, like other annual flowers, is often forgotten, from, perhaps, not going well with other annual flowers. It is best treated in a different way. Last winter a bed was covered with it, lasting in flower till summer, when it began to fade. Instead of removing it I let the plants seed, with the result that now there is a close bed of self-sown plants quite fresh when most flowers are fading. A pinch of seed on a gravelly spot will sometimes thrive and renew itself for years.—W.

Cyclamen neapolitanum.—This, just opening its lovely rosy-pink and white flowers, looks very dainty in a shady part of the rock garden. The white form is charming and is flowering as profusely as the pink. Planted in leaf-mould with some old mortar-rubble incorporated in the soil, in a well-drained position where they are shaded by trees, they do very well in my North London garden, the marbled leaves almost as attractive as the flowers. With old corms I think it is a good plan to plant them obliquely, as there is often a hollow at the top of the corm, and, planted thus, there is no chance of water collecting in the hollow and rotting the corm.—N. L.

Hedges.—The prevalence of hedges and fences in Britain struck a Belgian friend now in England as a waste of land, etc. He said there were almost none in Belgium. He agreed with me that hedges were, to a certain extent, picturesque, and I pointed out to him that without them we should be so windswept as to be able to grow little but common vegetables. I certainly think that, despite certain drawbacks, our hedges are useful. He thought that, on the whole, the Belgian country

worker was in a happier economic position than ours, and I should say that he is right in this respect, but I hope that whatever changes we may make in our country we shall always retain our hedges and all the wildness that still remain to us, even if they do not pay.—W. J. FARMER.

Starworts.—Of the plants useful in the autumn for the hardy flower garden there are very few that can equal the Starworts, about the more select of which there is a quiet beauty which is charming in the waning days of the year. The variety of colour, form, and bud is delightful, one great point in their favour being that they are regardless of cold and wet. Less showy, may be, than the early-flowering Chrysanthemums, they are, we think, more refined in colour and form. The great thing is to get the distinct kinds, there being so many with little character or value.

Chrysanthemum Cranford White.—This, I think, is one of the best of all the dwarf forms. In my garden, in an aspect facing south, it has reached a height of not more than 15 inches. Its flowers are white with a slight yellow-green in the centre. The petals are tinged with pink when the buds are nearly open, but this fades. The chief point in its favour is its long blooming season. In my garden it started blooming about the middle of July, and has not ceased since. It is about at its best now (September 27th), and there is a prospect of it continuing for some weeks, since many more buds are being produced. It was planted out in April in a well-manured plot, and has had nothing but ordinary care.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield.*

Clematis Campanile.—Messrs. G. Paul and Son staged this good novelty before the Royal Horticultural Society on September 26th last, when an Award of Merit was granted it. This, according to M. Lemoine, raised from seeds saved on *C. grata* without any artificial cross, is herbaceous, attaining only some 3 feet or so high, and in this way suggestive of *C. Davidiana*. The flowers are produced in erectly-disposed pyramids. Tubular in the bud, pale blue with violet-coloured mouth, and each about $\frac{3}{4}$ inch long, they presently open, and the sepals, recurving, present pretty shades of light and dark blue which, with the clusters of creamy-coloured anthers, are singularly effective as a whole. For so distinct a novelty, appearing thus late in the season, there is abundant room, whether in the border or occasionally in thoughtfully-selected posi-

tions in the rock garden. The newcomer, too, has the good attribute of fragrance, though it claims attention by colour-effect alone.—E. H. JENKINS.

Sedum spectabile.—I think the old pink form is prettier than the deeper-coloured ones, a large patch in full flower being effective now in the rock garden. I think one of the great charms of this species when in flower is that it is such an attraction to the big autumn butterflies, particularly the brilliant Red Admiral and the Peacock. On a sunny day there is almost sure to be one or more of these beautiful insects on the flowers. This *Sedum* is not content with the dry, poor soil which satisfies, or even is necessary for, so many of its relatives, but likes a good loam, not too dry.—N. L.

Questionable advice.—I read with interest the note of "In Doubt," at page 476, on "Economy in the Garden"—the pamphlet of the Royal Horticultural Society. In respect of the advice given to sow Cabbages where they are to grow, those who want a few thousands of early heads would find that the price of the seed would be far beyond the value of the Cabbages. Further, it would involve the waste of all the thinnings. The advice may be all very well for those who wish to grow about fifty heads, but, even so, I have my doubts as to the "economy" of the proceeding. Much of the advice given in the pamphlet is superfluous. Most of us know—or ought to know—all the everyday "tips" given by the writer of the pamphlet. Whether we agree with them is another matter. If it is permissible to criticise such an august body as the Royal Horticultural Society it may be remarked that the Society might have economised by suppressing the pamphlet in question, thus effecting a saving alike of paper and the cost of printing.—Scot.

The broad-leaved Spindle-tree (*Euonymus latifolius*).—There is a distinct beauty about this deciduous European kind just now where, fruiting with any measure of freedom, its fruits also remain untouched by birds. Not all its attractiveness is, however, due to the fruits alone; the fleshy, five-parted capsules, rose-scarlet in colour, on pendent, wiry pedicels are equally showy and of an unusual tone of colour among shrubs. Dangling elegantly in pairs or more from the leaf axils on sufficiently long foot-stalks as to hang clear of the bronzing leafage, they afford, in conjunction with the bright orange fruits, an unusual attraction. The plant is worth grouping in shrubbery border or in beds alone. Not usually fruiting with great freedom, artificial pollination might profitably be indulged in when the plant is in flower. Recently I saw it planted near the margin of a lake, where in mid-September it was all but leafless and bearing but one or two fruit clusters on a 6 feet high plant. In all probability the soil conditions were too wet for it. In well-drained loam in the same garden the plant was far more happy.—E. H. J.

Clerodendron trichotomum in Scotland.—This fine shrub is not often to be seen in Scottish gardens, though it is quite hardy. Probably the reason is that, when young, it is so fully occupied in forming fresh growth that the flowers appear too late in the season to be of much account. But old bushes behave more satisfactorily. One of the most attractive objects in the garden here just now (September 30th) is a plant of this *Clerodendron* fifteen years old, 8 feet high, and 12 feet through, spangled with white star-like blossoms set in ruddy bracts. The flowers are delightfully fragrant, and the leaves, when

crushed, emit the same odour as our native Gladdon (*Iris fetidissima*), that of cold roast beef. It is one of the few late-flowering shrubs that will flourish in London. I was first attracted to it by the beauty of a shrub in the garden of Hans Place. In London, moreover, it flowers in August, a full month earlier than it does in our latitude.—HERBERT MAXWELL, *Monreith*.

Fallugia paradoxa.—This is a very interesting and ornamental shrub with white flowers, somewhat like those of *Potentilla*. It is a native of New Mexico, Nevada, and other countries, and was originally introduced to the British Isles about 1877. Under cultivation it grows about 4 feet high, forming a dense mass of slender, greyish branches clothed with tiny, deeply-lobed leaves that are grey-green above and silvery beneath. The flowers are produced during the greater part of the summer, a few appearing in early autumn. Each one is about 1 inch across, white, with a central mass of yellow stamens. Unfortunately it is not very hardy, and except in the most favoured parts of the British Isles must be grown against a wall with a south or west aspect. When selecting a position care should be taken that the soil is well drained and that the plant is exposed to full sun, for it is essentially a sun-loving shrub. Light loamy soil is suitable for it, and cuttings can be rooted in a close frame during summer.—D.

Roses with attractive fruits.—What is usually one of the more interesting and uncommon classes arranged by the National Rose Society at its autumn show is that for a collection of Rose hips and which serves to demonstrate that the Society is alive to any form of beauty or ornament of which the Rose is capable. The hips produced by *Rosa rugosa* and several of its forms are well known for their size and decorative character in autumn, and which, in conjunction with handsome leafage, show to considerable advantage. There are, however, several others, and among them some of the newer species from China deserve notice. Two, *R. Moyesi* and *R. Fargesii*, were conspicuous in Mr. Allgrove's first prize lot, the former having scarlet-coloured hips nearly 3 inches long and highly attractive. Those of *R. Fargesii* are even more brilliant, the fruits softly spiny. A third, which may or may not be Chinese, is *R. setipoda*, the hips being shorter than in the others named. All three, however, are brilliant in colour, and, with characteristically ventricose fruits—*i.e.*, large and globular at the stalk end and contracted near the mouth—are as distinct as they are ornamental. All three have the pinnate leafage of *Rosa Moyesi* and are worth cultivating because of a fruit beauty and brilliancy which remain well into the autumn.—E. H. JENKINS.

Pretty flower effects in bowl or vase.—This title is suggested by an oblong glass dish filled with moderately long sprays of *Erica vulgaris* Alporti, *E. v. Hammondii*, and *E. vagans rubra*, from out of which three handsome blooms of *Rose Caroline Testout* on nearly foot-long stems appear. The *Rose* has quite a rich tone—that fuller pink which apparently is its more frequent endowment in autumn than at other times and for which the Heaths named—flower and foliage—make a most agreeable setting. No other foliage is used and none is required. From the ends of the boat-shaped dish the reddish-coloured *Erica Alporti* extends, the other two occupying the central part. The Heaths are not heavily flowered—it is, indeed, a little late for these two now to be seen at their best—and this might prove a gain. The charm

of it all, however, lies in the happy commingling of the Heaths with which the *Roses* harmonise in a most pleasing manner. A tall vase filled with the same *Rose*, having light sprays of *Pittosporum nigrum* as garniture, is also effective and good.—E. H. JENKINS.

Eucryphia cordifolia in South-West Scotland.—Sir Herbert Maxwell has kindly sent me a spray of this *Eucryphia*, which I saw in the month of June when I was at *Monreith*. It is flowering well at *Monreith* this year, and must be very handsome with its fine glossy leaves and large white flowers. I believe that it is not quite so hardy as *E. pinnatifolia*, of which there are now a few good plants in the south-west of Scotland. *E. cordifolia* has not yet found its way into many gardens in the district, but Sir Herbert Maxwell's success will, doubtless, induce others to attempt it in this favoured part of Scotland. It is a great pleasure to see *E. cordifolia* in bloom from this part of Scotland, and so charming a shrub or small tree ought to be better known.—S. ARNOTT.

Dianthus aridus.—By some this has been considered as synonymous with *D. Knappi*, but whether distinct species or not, they are certainly distinct enough as garden plants, more particularly in colour. Indeed, in this respect it may briefly be referred to as a sulphur-coloured *D. Knappi*, the latter, when compared with it, being of a decidedly deeper tone of yellow. Less showy than the dwarf-growing members of the race, the above-named are interesting late in the season. Of erect habit and growing 18 inches or so high, the position best suited to them is a slightly raised one in the rock garden, so that they do not get above the line of vision. A soil freely mingled with sand or old mortar rubble, with good drainage suits them well. Easily reproduced from seeds, there is little difficulty in keeping up a stock, if this is indulged in periodically, for, though of perennial duration and in rock or wall crevice or the like going on for three or four years without giving any sign of impaired vitality, an exceptionally good flowering may produce this at any time. Grown in richer soils, *D. Knappi*, to which the above is obviously nearly related, frequently suffers after a profuse flowering.—E. H. J.

Colchicum speciosum album.—It is just sixteen years ago that this was shown before the Royal Horticultural Society by Mr. J. Hudson, Gunnersbury House, and gained a first-class certificate. Probably no recent hardy plant novelty has more thoroughly deserved that honour. Hardiness, vigour, and freedom of flowering are chief among many good attributes, and whether in the Grass or the richer border soils it appears equally happy. Some growers say it is more vigorous and free than any other form of the species, though this does well in light and medium loams generally. At East Burnham Park Sir Harry Veitch has it planted with much success in the Grass, where it does uncommonly well. Indeed, on single bulbs (corms) three years' planted I counted a year ago a dozen flowers, the pure white cups erect and self-supporting—another good attribute of a fine plant. The soil is moderately light and stony. The plant is now so reasonable in price that it is possible to employ it with some freedom in Grass gardening, and if, as the excellence of the subject merits, it is planted in prepared positions, so much the better. Though the orthodox planting season has passed, the plant is of so accommodating a nature that it may be dealt with for some time to come.—E. H. JENKINS.

TREES AND SHRUBS.

RHODODENDRON GAUNTLETTI.

This is a supposed hybrid, but what the parents are no one seems to know. One of its parents is evidently *R. Griffithianum*, better known as *R. Aucklandi*. The large flowers, which often each measure over 4 inches across, are of a pale flesh colour when they first open, eventually changing to pure white. As many as nine blooms are often borne on a single truss. A large bush is a beautiful sight when in full bloom. Though it is such an ornamental variety it is apparently little known, and is not often met with. It makes a fine contrast to the crimson-flowered sorts as *R. barbatum*, *R. Thompsoni*, *R. Shilsoni*, and the dark-flowered forms of *R. arboreum*.

HARDY FUCHSIAS.

DURING the latter part of the summer and for a good while in the autumn, should

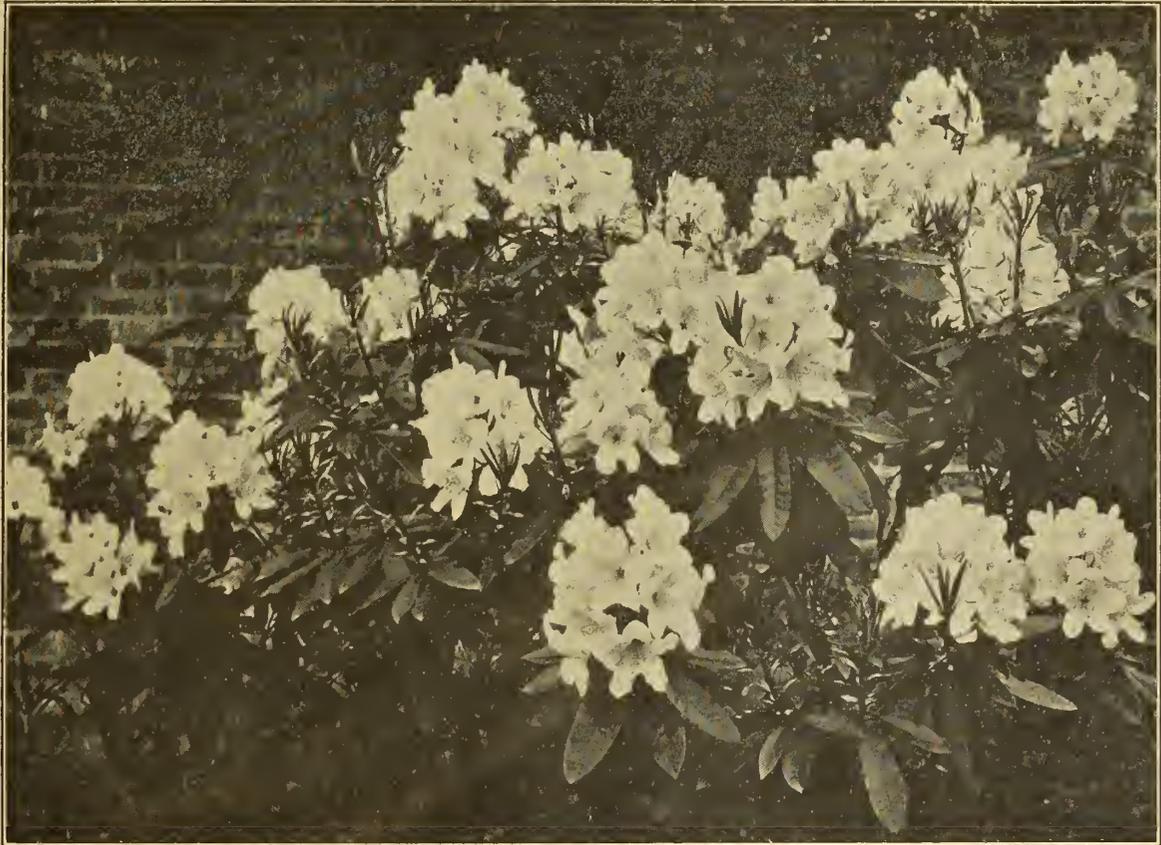
of a small tree. In colder districts these Fuchsias may be treated as herbaceous subjects, that is, cut to the ground in the winter, when the roots can be protected with a few leaves, which will render them perfectly safe. Plants so treated will throw up shoots which will, under favourable conditions, attain a height of 4 feet to 6 feet in one season, and yield a wealth of blossom. A hardy variety quite different from any of the others is *F. corallina*, often known as *F. exoniensis*. This is of a more spreading habit than either of the two preceding, forming as it mostly does a spreading bush whose arching shoots are clothed with larger leaves than those of the preceding. The flowers, too, are more suggestive of some of the greenhouse kinds. From its somewhat spreading style of growth this Fuchsia is seen to advantage in an elevated position, such as in some of the larger arrangements of rockwork, especially where it is lit up by the rays of the declining sun.

GARDEN PESTS AND FRIENDS.

NOTES AND REPLIES.

Christmas Roses unhealthy.—Can you tell me what is wrong with these Christmas Roses and what to do? Before planting them the soil was entirely renewed from a pasture, with good manure mixed into it. I put some Vaporite in afterwards, but the leaves almost all come up spoiled or discoloured, and I think there must be some evil influence in the soil—possibly a grub or worm. The situation is under a north wall.—M. KEEP.

[The leaves are badly attacked by the Hellebore leaf-mould fungus (*Ramularia Hellebori*). Usually the active season of the growth of the fungus is during summer, though its worst effects do not appear till later. All that can be done now is to collect and burn all the affected parts of the plants, removing and burning if possible 1 inch or so deep of the soil about the plants, which is probably full of the spores of the fungus. In spring—say



Rhododendron Gauntletti. Nymans.

the weather be favourable, the different hardy Fuchsias form a delightful feature in the garden. Their merits in this respect are too often passed over, although I believe a good demand has sprung up for them within recent years. In country gardens some of the commonest and, I must say, still some of the best may be often seen. The old Fuchsia *gracilis*, which, by the way, is now regarded as a variety of *F. macrostemma*, is one of the most generally met with. In mild districts it will pass unscathed through the winter and form a good-sized bush which, when laden with its myriads of slender blossoms, forms a handsome specimen. In habit, too, it well merits the distinctive name of *gracilis*. Another good old kind of which large specimens may be seen in various places along the sea coast is *Riccartoni*, a stiffer and larger grower than *gracilis*; indeed, in favourable localities, it will almost attain the dimensions

The list of varieties of hardy Fuchsias is now a long one, a good many seedlings having been raised within recent years, but some, probably owing to the influence of tender kinds, are not so hardy as the old and well-tried ones. When such as *gracilis* or *Riccartoni* are planted in a good-sized bed, *Hyacinthus candicans* or some of the light-flowered *Gladioli* may well be associated with them. An open loam where moderate drainage is ensured is very suitable for these Fuchsias. As with most Chilian shrubs, they delight in a liberal amount of atmospheric moisture.

K. R. W.

"The English Flower Garden and Home Grounds."—New Edition, 12th, revised, with descriptions of all the best plants, trees, and shrubs, their culture and arrangement, illustrated on wood. Cloth, medium 8vo, 15s.; post free, 15s. 6d. Of all Booksellers or from the office of GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

about May—periodical syringing with sulphide of potassium should be started, and if kept up at intervals of two or three weeks for some time would doubtless keep the fungus at bay. One ounce of the sulphide to two gallons of rain water will be strong enough, and care should be exercised to wet all parts of the plant, the under as well as the upper surfaces of the leaves. Prior to adding fresh soil to replace that removed, a dusting of air-slaked lime should be given.]

Orange-fungus on Roses.—I would be very much obliged if I could be informed what is the blight which is affecting my Roses and if there is any cure. I send a few specimen leaves. This blight has only appeared during the last month or so, and has rapidly spread, even amongst Rose bushes just planted.—M. COURTNEY.

[The leaves you send have been attacked by the red or Orange-rust (*Pragmidium subcorticium*), which appears first on the

leaves in orange, powdery patches. These in time become darker, owing to the formation of the second kind of spores, which are dark brown, the third kind being produced later and forming small black dots on the undersides of the leaves. In this state the fungus passes the winter; the spores form these black dots, infecting the young leaves the following spring. It is very essential when the leaves fall in the autumn that they should be collected and burned, and plants that have been attacked should, in the spring before the buds open, be thoroughly wetted with 2 oz. of sulphate of copper dissolved in 3 gallons of water. If the disease still shows itself spray with weak Bordeaux mixture and pick off the infested leaves.]

FRUIT.

GRAPES AND GRAPE VINES IN AUTUMN.

A LITTLE fire-heat is absolutely essential in the case of Muscats, Lady Downes' Seedling and Gros Colman in the autumn. It prevents the undue decay of the berries and improves the flavour, especially if the ventilation is well attended to. Advantage should be taken of every bright, calm day in autumn to get the atmosphere as buoyant as possible by ventilating more, and, at the same time, keeping the pipes warm. It is never necessary to have the pipes very warm, and, in the case of the variety Alicante, dangerous to have them so, as much heat causes the berries to decay. Where there are pot plants in the vinery at this season all needful watering of such must be done about 10 o'clock in the forenoon, taking care not to spill any water about the house. The moment a decaying berry is observed cut it out, as, if left, it will cause the decay of many more. The bunches of Muscat of Alexandria should be fully exposed to all sunshine, as there will not be much danger from burning now.

The early varieties, from which the Grapes have been cut, should be treated as carefully as the others. Ripeness of wood is an important matter, and to secure this, ample ventilation is essential at both the top and front of the structure. The ends of the bunch-bearing shoots may be cut off now if a length of about 14 inches from the base can be left, the final pruning being done when the leaves have fallen naturally. Do not neglect the borders. If the soil is approaching dryness—as it will in the case of inside borders—give a thorough watering, repeating if need be.

BOURNE VALE.

THE COMPOST YARD.

WHERE much renovation of fruit borders or top-dressing of the same is contemplated the stock of material for the carrying out of the same should, if at all depleted, be replenished before the work is commenced. This will avert any delay occurring, a most important consideration when the roots of Vines or fruit-trees, as the case may be, are already out of the soil and cannot, owing to a shortage of compost, be properly laid out or replanted. Loam is, of course, the principal and most important of the various ingredients required for work of the above-named description, and a good stock of the best procurable in each individual instance should be carefully stacked both for present and future requirements. For border renovation this may be used in a fresh condition or just as it is carted in. Burnt soil is another necessary ingredient, especially when heavy soils have to be dealt with. This generally consists of the

residue left over after burning a quantity of garden refuse. Very heavy clayey soil and clay itself are oftentimes burnt for the same purpose when the before-mentioned material is not available. Wood-ashes are a valuable asset and should be kept in the dry after hedge trimmings and refuse wood gathered up after gales have been burnt or charred. An abundance of drainage material, such as brick-bats, clinkers, stones, or coarse gravel, should also be kept in readiness to avoid loss of time in cleaning the old when removed from the base of the border. Drain-pipes in two or three sizes should be stocked, while, if necessary to concrete the base of the border, the various requisite ingredients for doing so should be ready to hand. Horn shavings, hoof parings, $\frac{1}{2}$ -inch bones, bone-meal, soot, air-slaked lime, and lime rubbish, all of which must be kept in the dry, are a few other necessary and important materials required for enriching, and, in the last-named instances, making good any deficiencies when lime is lacking in the soil used for forming the compost.

THE LOGANBERRY.

THE Loganberry has become one of the established fruits of the garden, generally speaking, but it cannot be said that it is a success everywhere. The Raspberry has the same variable character. In my own case it is absolutely impossible to maintain full-bearing rows of Raspberries without periodical removal to fresh sites. Unless this is done debility is set up and the plants dwindle away. This does not, of course, happen exactly in the same way with Loganberries, because it is a common experience to find a tendency to excess of vigour on the summer growth, the hopes that may very reasonably be set up by this summer vigour being dashed to the ground when the fruiting season arrives. So disappointing has the open trellis system of growing Loganberries proved with me that I have now grubbed them out. While this has been my experience for several seasons I have envied the fine crops of large berries that I have seen in some other gardens and to which no more attention had been paid than to my own. In one small garden I visited this summer Loganberries had been substituted for Raspberries because these latter had failed, while the Loganberries had borne heavy crops.

The cause of the failure with Loganberries seems to be due to the presence of an insect which deposits its egg in the embryo shoot in the early weeks of the year. The larva burrowing into the shoot causes its collapse, consequently, there is no fruit except on straggling shoots which may happen to have been missed. Raspberries are found to be similarly infested by it. I have observed how well in some gardens Loganberries will fruit when trained to walls, and though I have not seen them thus trained, it is said they can be adapted to narrow arches in Rambler Rose fashion. The great vigour of the root stock and the thicket of growth that springs up from the base would suggest that unless thinning and tying are attended to there would be neither pleasure nor profit in growing them on a trellis. I saw the common Blackberry in Mr. Crook's garden at Camberley as fine in fruit as the much-boomed Lowberry a few years since, but the spiny canes made one shrink from growing them in the garden, fine as was the crop. W. STRUGNELL.

[The pest to which our correspondent refers is, no doubt, the Raspberry moth, to a description and a preventive of which we hope to devote an article in an early issue.—Ed.]

ROOT-PRUNING.

I HAVE just had the pleasure of an afternoon with a Belgian gentleman who comes of a famous gardening family, and he told me that he does not believe in root-pruning, and disapproves of restricting the growth of fruit-trees. He admitted that in the case of wall-trees it was essential, but for orchard or garden he believed in allowing fruit-trees to grow almost as they pleased, merely doing a little thinning-out of the branches. On a large scale he was convinced that too much pruning did not pay, and that it was better to devote the time to spraying the trees. He said he considered cordons quite the wrong method of growing fruit-trees, and also that it was wrong, or, at any rate, commercially and naturally unsound, to try to train trees with every branch a cordon. I have lately been coming round to this point of view. The single cordon in good soil grows so vigorously that it requires an infinite amount of labour to prune it and keep it in bounds, and unless one has a very tiny garden only, and wishes to grow a great variety in a small space, I would do all in my power to persuade others to have nothing to do with single cordons unless on walls. My friend would plant strong-growing varieties 30 feet apart on the Crab and prune them very little. Of course, circumstances may make other methods desirable with some, but in the long run the more natural method would pay the best in quality and fertility, I believe. I should like to hear what others have to say on this matter.

Redruth, Cornwall.

W. J. FARMER.

NOTES AND REPLIES.

Treatment of Apple-trees.—Bush Apples planted last autumn had shoots all shortened by removing upper third. A friend says that they require further shortening. Is this so? There was plenty of bloom, but very little fruit, fortunately, this season. The shoots appear well furnished with fruit-buds for next year.—N. E. W.

[It all depends on the age of the trees. If young and vigorous, shortening the leaders on main and subsidiary branches to the extent you have done will suffice, and nothing further in this direction is needed this winter. Side shoots should, however, be shortened to four buds to form the foundation of fruiting spurs. With respect to trees which are nearly or fully established, all shoots except those at the extremities of the branches should be shortened to four buds either in this or the succeeding month. The leaders may be left 5 inches or 6 inches long. It is a good thing the trees failed to fruit, as nothing tends to cripple newly-planted trees more than premature fruiting.]

Fruit-trees for north-east wall.—Can you suggest two or three Pears (cordons) for north-east wall in Vale of Evesham? If not Pears, Apples or other fruit-trees. I already have Jargonelle on another wall.—N. E. W.

[We fear you would not find Pears do well on such an aspect. Why not try Plumus, such as Coe's Golden Drop, Ickworth Imperatrice, and President or Late Orange, all of which would succeed on a wall facing north-east? Cherries, such as May Duke, Late Duke, or Waterloo, would also answer. If anxious to have Pears, select Louise Bonne of Jersey, Beurré Hardy, and Marie Louise d'Uccle.]

Propagating Currants and Gooseberries.—In view of the diseases which, nowadays, are apt to be imported through the medium of bought-in plants, it is advisable that, where practicable, young stock be raised at home from clean bushes. The strong summer growths of Gooseberries and of Currants make excellent cuttings. The best time to deal with

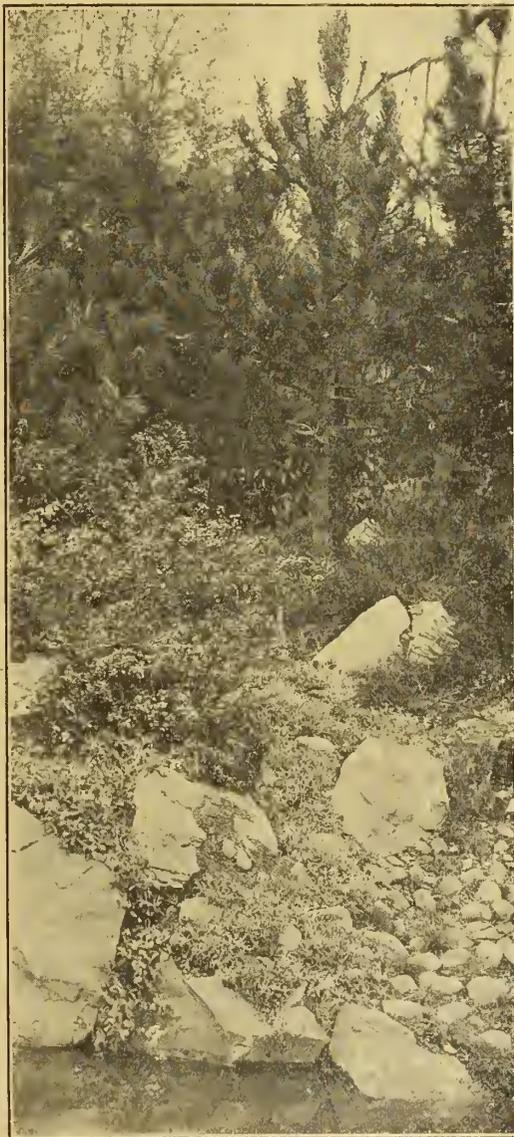
them is immediately after the foliage drops. In making cuttings the base of each should be cleanly cut across just below a bud. In the case of Gooseberries, all the buds ought to be rubbed out from the base upward to the fourth from the top. As regards Black Currants, all the buds may be left, treating Red Currants similarly to Gooseberries. Let the cuttings be from 12 inches to 14 inches in length. Take out a notch with the spade about 8 inches deep, put in 1 inch or 2 inches of sharp sand, placing the cuttings thickly on the latter. Fill up, and make very firm, and the greater part of the cuttings will succeed.—Kirk.

Grapes failing.—I should be grateful to you for advice as to treatment of Vines which have gradually deteriorated year by year for the past six or seven years. Before that my Grapes were noted. I have a large vinery, but lately I use no heat in winter; in fact, living by the sea, we get little frost, and have not thought it necessary. The border outside has a thick line of Belladonna Lilies against the wall. These have increased very much, and it is possible they are robbing the Vines. I intend to reduce them this winter, but should be obliged if you would tell me what sort of manure to apply to the roots and how deep I ought to dig, probably any time now would be suitable. The Grapes are small, and the bunches small, and this year most of them have shanked, even a young Vine, Muscat Hamburg, only planted two years.—CECILIA GEORGE.

[From the description given as to the condition of the Vines in question there is but one remedy, and that is to lift the roots and replant them in an entirely new border. In future we advise you to grow nothing whatever on the border, but to let it be for the roots of the Vines alone. No greater mistake can be made than devoting the surface of Vine borders to other purposes than for which they are intended, and, if insisted on, the Vines invariably suffer and eventually come to grief. Your suggestion as to applying manure and digging it in would but add fuel to the fire, as the effect of the manure, combined with the destruction of the roots, would cause the Grapes to shank still more. Manure should never be applied in the manner suggested, and digging, as is generally understood by the term, should never be attempted. The only approach to digging that is permissible is in spring, when applying an artificially-compounded Vine manure, and in autumn when top-dressing the border. Even then the surface should, at the most, be broken up no deeper than 3 inches, using for the purpose a digging-fork only.]

Enemies of Currants.—The enemies of Red and White Currants do not produce such disastrous effects as in the case of the Black Currant with its big bud, although aphid, and in some seasons red spider, are rather troublesome. In some districts the foliage is affected with a kind of spot or black mildew, causing it to drop prematurely, and although the fruit is not affected to any great extent, it has a tendency to lead to premature ripening, with the result that the berries are neither

so large nor sweet as under more favourable conditions. I used to think that this visitation was due entirely to atmospheric influence, but this is not altogether the case, or, rather, there are certain conditions under which the trees are much more susceptible to attack. I noticed this season, for instance, two plantations not very far apart, the one very old and rather neglected and the other of young, vigorous bushes. The old plants were practically denuded of foliage quite early in the season, while the leaves of the younger plants were only occasionally spotted. The remedy is obvious, *i.e.*, young plantations kept in a healthy-growing state.



A rocky bank in Mrs. Greer's garden at Curragh Grange, Co. Kildare.

Until these can be raised it is advisable to spray older trees fairly early in the season with one of the preparations recommended for preventing and arresting fungoid growths. When starting a new plantation the cuttings should be obtained from a healthy stock, this being specially important in the case of Black Currants, the "big bud" in their case leading to such disastrous results and being so difficult to eradicate. It is fortunate that it is confined to certain districts, there being many places where it is practically unknown.—E. B. S., *Hardwick*.

Planting.—Where vacancies are to be made good by lifting and transferring trees from

one part of the garden to another, the work may be commenced now. If carried out promptly far better results follow than when it is postponed till later in the season, as the trees then become partly re-established before winter sets in. If trees have to be purchased and sent from a distance, preparation for the planting may then be carried on as opportunity offers, there being less need for hurrying matters in this case, as actual planting cannot at the earliest be done until November. Bush fruits, which are to be had earlier than fruit-trees, may be planted during October, therefore, if the planting of new quarters is contemplated and the bushes for the same have to be purchased, the holes should be dug in readiness. If there is a reserve of bushes on the spot to draw from, lifting and transplanting may go forward at once.—A. W.

Fruit stock trials in Kent.—You may be interested to hear we are doing fruit stock experiments at the Malling Experiment Station (under Wye College).—E. A. B.

PLANTS AND FLOWERS.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

A ROCKY BANK.

The illustration shows part of a rocky bank in Mrs. Greer's garden at Curragh Grange, Co. Kildare. This bank runs down into water which catches the reflection of the stones above.

R. H. BEAMISH.

NOTES AND REPLIES.

Newly-planted alpiners after frost.

Many people plant rock plants too late in the season—either from necessity or choice—these requiring careful attention after frost. In many cases it will be found that the plants are partially lifted out of the ground by the frost. Little can be done to them while this lasts, but I have found that small specimens which may have their roots exposed are all the better for having a little dry soil or sand put over them and brought up to the necks of the plants. As soon as a thaw occurs they may be pressed gently down into their proper position. By attention to these little points many small rock plants which would otherwise be lost have a good chance to pull through and start into growth in the spring.—S. ARNOTT.

Airing rock plants in frames.—Many alpiners in frames are lost in winter through keeping them too close, with the result that they damp off badly. They suffer more from damp than from cold, and a free circulation of air should always be allowed. If the sashes are slightly raised this will be sufficient. An ideal frame for wintering rock plants is one which can be ventilated by side or end ventilators just a little above the level of the plants. The plants should be plunged in sand or ashes. Some people keep their rock plants close during severe frosts, but if the plants are dry overhead air is very beneficial.—S. A.

Viola calcarata Papilio alba.—I had some plants of this sent to me in the spring, and have been charmed with them. They are as free-flowering as the typical *Papilio*, and quite as easy to grow. Like it, too, they ripen plenty of seed, and sow thousands about, but they are so dainty that they are welcome anywhere. They have been flowering all the summer, and are still in bloom. The seed-pods of *Violas* must be picked while still green, as they seem to open and throw their seeds out all of a sudden.—N. L.

Carlina acaulis.—This looks very pretty grown in a retaining wall in a hot, sunny position, the curious "everlasting" flowers being handsome among the green spiny foliage. It is allied to our native *Carlina Thistle*, and, like it, the flowers have the habit of expanding in dry weather and closing when it is damp, retaining this property for quite a long time. It needs a dry, poor, sandy soil. It is quite worth growing, and is a contrast to the majority of rock plants. It comes readily from seed.—J. W. O.

VEGETABLES.

PARSLEY FOR WINTER USE.

IN some gardens Parsley always winters badly outdoors, no matter how much care may be bestowed upon it in the shape of affording protection with mats or tanned canvas covers laid on a rough framework, or long rods arched over the beds, and having both ends inserted in the soil. In such cases the precaution should be taken to fill a frame or cold pit at the present time with plants raised from a sowing made in the early part of July. If nice, rich, friable compost is employed as a rooting medium the plants quickly become well rooted, and are soon established. Once the plants begin to recover from being transplanted, the lights should be drawn off, and the plants should be encouraged to make as hardy a growth as possible. The lights need only be used in the event of sharp frost occurring, or when the weather is very wet or snow-storms are expected. In the last two contingencies the plants may receive the requisite amount of air by tilting the lights at the back. Care must, of necessity, be taken to see that the plants receive all the root-moisture they require, but at the same time over-watering must be guarded against, otherwise rotting and cankering at the collar will result. Grown on these lines, a frame filled with plants standing 6 inches apart now will furnish a quantity of pickings all through the winter, or whenever the weather is too severe to allow of the outdoor plants being interfered with. When the time arrives for the frame or pit to be required for something of a more urgent nature the Parsley plants may be lifted and planted outdoors in a sheltered situation should those which have wintered outdoors be in such a condition as to render it unwise to destroy them altogether. When the demand is not so extensive as to require a pit or frame being set apart for the accommodation of the plants the case can be met by filling a few boxes some 6 inches or 9 inches in depth, or a suitable number, of large flower-pots, with some good-sized plants. These, being portable, they can, on the approach of hard weather, be accommodated in an orchard-house, or any structure from which severe frost is merely excluded. Failing this, a cold pit matted over at night would answer.

All this may appear very unnecessary to many, but as Parsley is in daily demand in so many establishments, and has, moreover, to be forthcoming, this is the simplest way out of the difficulty when either the nature of the soil or situation renders the wintering of it so uncertain that to place dependence on it doing so is a sure means of courting trouble and annoyance.

NOTES AND REPLIES.

Treatment of kitchen-garden soil.—I live in Hants, and have a poor soil—sand, peat, and large stones. In my kitchen garden the Cabbages get clubbed, also roots do not do, but Peas and Beans do well; there is no lime in the soil; it has been manured with farmyard stuff. Would a dressing of basic slag do? How much to the square yard?—ELEANOR.

[Yes, a dressing of basic slag dug into the soil where you intend growing the various crops specified next season would greatly improve its condition and render it more suitable for them. As it is slow in its action the slag should be applied and dug in not later than next month. Good lime would also be beneficial. This should be applied next February. Whichever of the two you use it should be thoroughly incorporated with the soil. Of basic slag $\frac{1}{2}$ lb. per square yard could be

applied next month. Dig it in at once, then fork the plots over next February, or, say, a week or two in advance of the time you intend sowing and planting them, as the case may be.]

Forcing Rhubarb in underground quarries.—I have some large disused underground slate quarries at the back of my house; temperature from 50 degs. to 55 degs. all the year round. They are pitch dark. I am informed that Rhubarb could be grown successfully in them. Could you kindly tell me if this is so, and which is the best book to get dealing with the culture, etc.?—F. E. R.

[Yes, the underground quarries, if dry, should prove admirable places in which to force Rhubarb. If the temperature ranges between 55 degs. and 60 degs. there would be but little, if any, need to employ artificial heat in the shape of fermenting manure. A good book for you is, we think, "The Vegetable Garden," which can be had from this office, price 15s. 6d. post free.]

GARDEN FOOD.

FOOD PRODUCTION AND THE GARDEN.

DURING the past two years we have been recommended by authorities—from the Royal Horticultural Society downwards—to increase the supply of foodstuffs in the garden. Admittedly, the advice is good; but let us look a little more closely into the recommendation—that is, from the point of view of the average private gardener. When the outcry for more vegetable production began, many, both employers and gardeners, rushed to extremes. Flower beds and borders were ruthlessly sacrificed, the usual work was upset or disorganised, the soil did not get a necessary rest, and with what result? In the ordinary course of matters, a gardener knows, or, at least, ought to know, the approximate quantity of vegetables consumed by the establishment throughout the season. Even with only the usual supplies available, there is generally more or less waste. There must at times be, as in the case when Peas or Cauliflowers—even Cabbages—turn in more rapidly than they can be consumed. Now, in the case of over-planting, merely for increasing the production, I submit that the waste will be inconceivably greater, and that, therefore, the increased planting is not justified. Two objections may be taken to this statement. Firstly, it may be said, superfluous supplies can be given to those in the neighbourhood who are not so well off. That objection fails, because practically every workman in country places has his own garden or allotment, and has sufficient supplies of his own; and even were that not the case, wherein lies the economy of over-cropping the ground and of harassing an already-over-worked and under-handed gardener, quite sufficiently worried to keep things going? The second objection which may be taken is: Why not send superfluous vegetables to training camps or to the Fleet? Let it be freely admitted that they could not be put to a better use. There arises, however, the question of transport. Take the case of a place sixteen miles from the nearest railway station, and in which all the available horses were requisitioned on the outbreak of hostilities, and which it has been found impossible to replace. Now, owing to the petrol restrictions, motor traction is out of the question. How, then, are these spare vegetables to be forwarded? As a matter of fact, an offer of such was made to a local committee, on condition that they were collected; but the same reason which prevented the vegetables from

being sent to the collecting depôt prevented the committee from coming for them. Therefore, they were wasted. The point need not be elaborated. Then there is another aspect of the matter. Increased production means increased labour. All our young men are now in the Army or the Navy. Casual labour is at a premium. How, then, can the output of the garden be increased? Let us be consistent.

A SCOTTISH GARDENER.

HODGE-PODGE.

WHEN the war broke out a French officer began the study of English with such ardour that he soon felt confident that he could converse freely with the allies of his country. One day, with an English officer, he chanced to visit a company kitchen belonging to a Highland regiment just as the cook was compounding a savory stew of the sort known in his native land as hodge-podge.

"What is it you cook, *mon ami*?" he inquired.

"'Odegpodge, sir," was the reply.

"'Odegpodge? 'Odegpodge? I know it not. Tell me, then, how is it made?"

"Why," said Sandy, readily, "there's mutton intil't, and Turnips intil't, and Carrots intil't, and—"

"But yes, so I see," assented the Frenchman, puzzled. "The vegetables, yes; but what is intil't?"

It was Sandy's turn to be puzzled, but he repeated with patient politeness—

"There's mutton intil't, and Turnips intil't, and—"

"*Oui, certainement!* But intil't—what is intil't?"

Sandy flourished his long spoon with a gesture of helpless despair.

"Am I na juist tellin' ye, sir, what's intil't? There's mutton intil't, and—"

But just then the English officer stopped laughing to explain that "intil't," although not to be found in the dictionary, was a perfectly good Scottish abbreviation for "into it" or "in it"; it was not an ingredient.

"In your so-expressive idiom, then," said the amiable Frenchman, joining the laugh, "I put my foot intil't, did I not? I who thought it was a seasoning! Not yet, alas! do I comprehend fully the English language!"

NOTES AND REPLIES.

Blanching Celery.—Labour is so scarce now that means of dispensing with it are worth attention. The Americans, or one firm in Pennsylvania, are said to carry out a system of blanching of which we hope to give some account later on. MM. Vilmorin write us from Paris:—

One of those most generally used consists in pulling up the plants with a good ball about three weeks or one month before the time of harvest and placing them side by side in a trench from 14 inches to 16 inches deep. They are then watered copiously, and when new leaves begin to develop, showing the plants to be well established, the trench is filled up with fine, friable soil, rather dry than wet, to one-third of the height of the plants. Eight to ten days later a fresh lot of similar soil is added to the two-thirds, and in another ten days the plants are completely buried, so as to leave only the upper part of the foliage in the open air.

As some of our readers may have experienced in the effort we should be glad to hear from them. It is those with heavy, cold soils who find the ordinary way of earthing so great a labour and not always giving a good result.

OUTDOOR PLANTS.

THE BLUE LACTUCAS.

You did not see *Lactuca* (*Mulgedium*) *alpina* here. I have it, but in a very safe and far away corner, whence it cannot well escape. What you did see were *L. Plumieri*, a species that makes a large tap root and never runs, and *L. Bourgaei*, the handsome, stiff-stemmed species, which, although it seeds about more freely than I want it to, plays no pranks at the root, but is a steady stay-at-home. I am also very fond of *L. perennis*, the smaller species, so pretty in the Maritime Alps and many alpine districts, and I am trying to start *L. sonchifolia*, rather like it, but more starchy in flower. It does well

without injury. In gardens where any of the Tulip diseases appears it is, however, safer to lift it yearly. It may be planted from now until the end of November at a depth of from 2 inches to 3 inches.—S. ARNOTT.

LILIUM SPECIOSUM.

OWING to the wet, cold weather experienced in August this Lily has, in some places at least, been less effective than usual this season. With the advent of cold nights and heavy dews the flowers do not open with the same freedom as when the weather is more favourable. Even if they are less satisfactory out of doors they are very useful where the greenhouse or conservatory has to be kept gay at all seasons, as they come in at a

parts, they are sure this season to be more expensive. Owing to this it behoves one to be particularly careful of those that have flowered in pots, for they are often neglected, trusting to make up any deficiencies from freshly-imported bulbs. One noticeable thing in connection with these last is that they are later in flowering than bulbs which have been grown in this country for one season or more. By some it is considered that the bulbs must be dried off for a time after flowering, but this is a mistake, as it leads to many of the basal roots perishing and the bulb itself being greatly weakened. When the flowers are past, the pots should be stood out of doors and watered when necessary till frosts set in, when they may be removed to a frame, giving them plenty of



Lactuca Plumieri at Myddleton House.

with Mrs. Lloyd Edwards, but has not quite caught hold here yet.

E. A. BOWLES.

Tulipa Greigi.—This is a striking Tulip, and attractive even before the flowers appear. The broad leaves are prettily marbled and flaked with a good chocolate-brown on the green ground. The flowers, each sometimes as much as 8 inches across when open, are of a dazzling scarlet. Several varieties have been selected, but most of these are too high in price to recommend in these days of economy. *T. Greigi aurea*, of brilliant yellow, if dearer, is not excessively priced. Although this handsome Tulip is all the better for being lifted annually when the foliage has withered and rested until early November, it may be left in the ground for some years

time when many of the summer-flowering occupants of the greenhouse are past their best. For decoration under glass they are most useful when they are as late as possible, unless there are especial reasons for having them in flower earlier.

In order to obtain late blooms the best way is to grow them altogether outside, from the time sharp frosts are over and throughout the summer months. In potting it is very essential to put the bulbs sufficiently deep to allow of a top-dressing of good soil, when the stems lengthen and the roots form at their base. Unlike *L. longiflorum*, insect pests rarely give any trouble in the case of *L. speciosum*. In previous years, owing to the immense importations from Japan, good bulbs of *L. speciosum* have been obtainable at a very cheap rate, but, owing to restricted im-

portations, they are sure this season to be more expensive. Apart from protection from frost the lights will serve to ward off heavy rains. In the event of sharp frosts a mat or some other protection should be given to the frame. Then at any time during the winter or early spring the bulbs should be repotted in a mixture of loam, peat, or leaf-mould and sand. In potting, as much of the old soil as possible should be taken away as can be done without injury to the roots, and, on being returned to the frame, enough water should be given to keep the soil slightly moist till growth recommences, when the supply must be increased.

W. T.

Helenium autumnale "Riverton Gem."—This richly-coloured form is indispensable for the autumn border, and when grown in a large patch has a very telling effect.

The flowers are large, the petals heavily streaked and splashed with a coppery-erimson hue, making a gorgeous piece of colouring. To get the best blooms the clump should be split up every spring and the strongest crowns planted separately about a foot apart. The result is very large branching heads of fine flowers. There is a more highly-coloured form known as *H. autumnale rubrum*, but I do not think it is superior to "Riverton Gem."—J. W. O.

OURISIA COCCINEA.

ONE cannot but think, when Mr. Arnott (p. 507) refers readers of GARDENING ILLUSTRATED to Mr. Cornhill's note, which scarcely confirms his own view of the above plant, that he is content to let the matter rest on weak, inconclusive testimony. On Mr. Cornhill's own showing his experience of *Onrisia* appears to be limited to three plants, two only of which did well for a time. These, apparently, were neither lifted nor divided, hence their failure in no sense gives support to Mr. Arnott's theory that the occasional lifting, dividing, and replanting which I advised and still practise are, in some instances, wrong. Mr. Cornhill's words are: "I took several well-rooted pieces from it, and from that time it never flourished, and the young plants died." Nothing is said about "lifting and dividing," to which Mr. Arnott appears opposed, hence, not only must Mr. Cornhill's failure be looked for elsewhere, but Mr. Arnott is not justified in seeking shelter for his statement under it. Why established examples did not thrive because a few well-rooted pieces were taken from them is a little puzzling, and we are not told when, or how, it was done. The fact that the "well-rooted pieces died" also would, for these, point to some cultural error or lack of appreciation as to their precise needs.

Here it may be helpful, seeing that failures do occur, to state more clearly and emphatically than I have done before some of the essentials to success. Planting is one of them. This *Onrisia* is rhizomatous, nearly two-thirds of the extending rhizome rooting freely as it goes on. The essential in the case is that these running shoots be planted naturally, *i.e.*, horizontally-disposed, practically even with the soil. If planted erectly so that the greater portion cannot touch the soil they are bereft of support and doomed to failure. Dryness the plant abhors. A cool root-run and humid conditions it revels in. Much heat, full exposure, absence of shade, or some cooling influence, as nearby rock, are, alike, distasteful, each responsible for a meagre, restricted growth and an equally meagre flowering, or none at all. The soil conditions I have given before and will not repeat. Here, however, the plant is not very fastidious. At the moment I have some pieces in pots doing uncommonly well in sandy heath soil, which is neither ideal nor what I would use for choice. They were planted on the principle I have laid down, and at the end of a month new roots are pushing freely. There is no better sign. They have had the protection of a somewhat shaded frame and been given humid conditions throughout.

I would not have written of this plant again except for its sterling worth and beauty, and the desire to help those who have not yet succeeded with it. That it is an exceptional subject I admit. Its cultural difficulties are, however, by no means insurmountable, and those that are—and they are few—will be best overcome by a close study of the plant in conjunction with the genial conditions of its native land.

E. H. JENKINS.

THE THYRSOID BELLFLOWER (*CAMPANULA THYRSOIDEA*).

YELLOW Bellflowers are rare in the genus *Campanula*, and the thyrsoïd Bellflower usually attracts the notice of those who come across it in a garden because of its colour. It deserves some notice in other respects, as its general appearance is otherwise very unlike that of the other *Campanulas* with which we are more familiar. It has entire pilose leaves, forming a kind of rosette, from the centre of which rises the dense pyramidal spike of bloom. The upper part of the spike forms a dense inflorescence of small sulphur-coloured sessile flowers which are sweet-scented and open from the top downwards. Taking it altogether, it is



The Thyrsoïd Bellflower (*Campanula thyrsoïdes*).

one of the most distinct of the genus. Notwithstanding this, it has one grave fault. This is, that it is only a biennial. It usually grows from a foot to a foot and a half high, and prefers a light, rather dry soil in a sunny position. Thus it is more suitable for the rock garden than the border, although a group in a good border is always attractive in its season of bloom, which is generally about July. Its treatment is comparatively simple. The seeds should be sown preferably under glass in April or May, covering them lightly with fine soil and placing the pots or pans in a cold frame or one with a little bottom-heat, moving the seedlings when strong enough to where they are to bloom. It is a native of the European Alps and was introduced in 1785.

Mr. Chas. Oakford, The Gardens, Mells

Park, Frome, who kindly sent us the photograph from which the illustration has been prepared, writes as follows:—

Campanula thyrsoïdes is a good thing among *Campanulas*, and I do not think it is often met with. It has done well with me in the rock garden. The flowers are rather dull in colour, but they are very sweet scented.

NOTES AND REPLIES.

Heuchera sanguinea not flowering.—Will you kindly inform me if *Heuchera sanguinea* requires special treatment to make it flower? I have a strong, healthy-looking plant of it, which has doubled in size in three summers without producing a single flower. It is on a rock bank, well-drained, sunny, and open, ordinary garden soil. Will any special fertiliser help? Ought it to be moved every couple of years, as I have seen suggested, or is it unlikely to succeed near a town?—Z. M.

[In not a few instances this is a shy bloomer, though this is rather due to position than any special soil. It is said to be partial to frequent division and replanting, but we doubt it, more especially if the plants are growing in a very dry, overdrained soil. In certain positions we would only divide and replant every third year. This plant is much more a cool and shade-loving subject than many think, and if a deep soil in a shady corner can be given it all will be well. It is not a suitable plant for a cold clay soil, and prefers that of a leafy nature to which has been added plenty of sandy loam. With this, endeavour to combine a little shade, and see that the soil does not become too dry.]

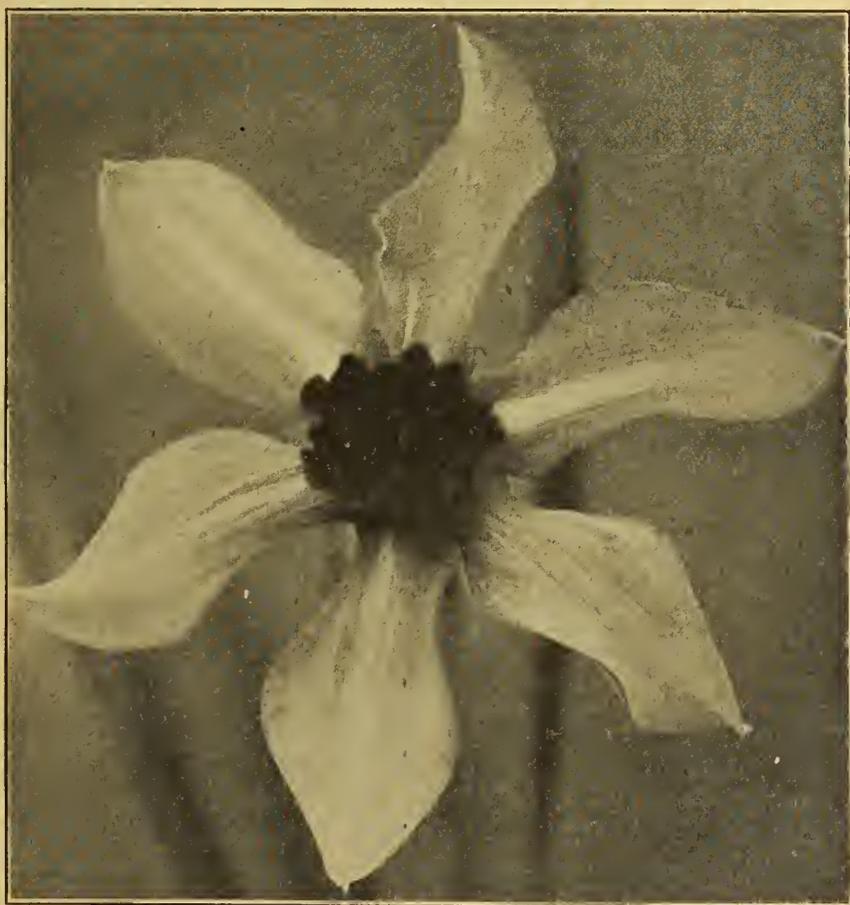
Antirrhinums in the flower garden.—Like "W. McG.," I have been struck with the freedom with which *Antirrhinums* have been planted in the station gardens of the Glasgow and South-Western Railway. I quite agree with him regarding the desirability of employing more decided colours in some cases. As he remarks, the pinks and yellows ought to be more decided. I have specially observed the want of brightness in some of the yellows, especially in those grouped with whites. Some of the whites are inclined to be cream rather than pure white, and a poor yellow beside these detracts from the brightness of the beds. It is a little disappointing, also, to see how the yellow *Calceolaria* is so much planted, when there are so many other more pleasing plants. "W. McG." is also correct in his remarks about the scarlet *Zonals*. In some seasons they are excellent for station gardens, but latterly in the gardens referred to they have suffered so much from wet as to be disappointing in the extreme. *Begonias* generally do better in the south-west of Scotland, but railway station gardens are so much exposed to draughts that they are frequently dried up in summer and autumn, and then the *Begonias* suffer. At some of the first prize stations the best effects were produced by the herbaceous perennials supplemented by annuals. A great annoyance to some of those in charge of these gardens is caused by rabbits, which are very destructive in some quarters.—S.W. SCOTLAND.

Hardy-flower borders.—These still remain very bright, and the later forms of *Asters* are beginning to be noticeable. These include the viminalis type, as well as the *Novae-Angliae* and *Novi-Belgii* varieties, which go far towards maintaining a display during the rapidly-shortening days. A most useful variety is *A. Drummondii*, one of the very latest, if not quite the latest, flowering *Asters* with which I am acquainted. So late is it, indeed, that unless protected by scrim it is occasionally cut down by the earliest frosts before blooming. Nevertheless, it is worth inclusion in any collection, even with this drawback, for it is distinct alike in colour, habit, and foliage

from other Asters. Outstanding have been the Phloxes. The cool, dripping season has evidently met their requirements perfectly. Not only has growth been more robust than usual, but the trusses are larger, and individual pips clear and distinct, but the time of duration has been more prolonged than usual. Phloxes, of course, are hungry subjects, requiring plenty of nourishment; and it will be found that young pieces are always the most satisfactory. As has been said, all have done well, but *Eclairneur*, *Coquelicot*, and *Crepuscle*, with perhaps *Chateaubriand* in addition, have been the pick of the collection.—W. McG., *Kirkcudbright*.

NARCISSUS INCOMPARABILIS TORCH.

MANY of the newer high-priced Narcissus are unattainable by the greater number of flower lovers, and it is always well to grow some of the finest of the varieties obtainable at a moderate price. Such a



Narcissus Torch.

one is Torch, here illustrated. It is a very handsome, vigorous, and early variety, the perianth yellow, the segments long and twisted, with a crown of glowing orange-scarlet. F. W. G.

Erigeron mucronatus.—I am always grateful for this little plant in the autumn, as it goes on blooming till the frost, producing its delicate little pink and white, Daisy-like flowers in the utmost profusion. Its only fault is that its seeds travel all over the place, the seedlings springing up everywhere. However, they are easily pulled up where they are not wanted, and the plant is so graceful and unassuming that the seedlings are often allowed to remain. It likes a gritty, well-drained soil, but otherwise needs no special care.—N. L.

Thymus micans.—Although the flowers of this Thyme are inconspicuous, it makes such a neat little bush of grey-green or golden foliage that it is pleasing all the year round. I think it is by far the sweetest smelling of all the Thymes.—J. W. O.

INDOOR PLANTS.

SOFT-WOODED WINTER-FLOWERING PLANTS.

THE time is at hand when all soft-wooded plants that have been grown for winter flowering, including Pelargoniums, Begonias, Salvias, Marguerites, Eupatoriums, *Lassandra macrantha*, and *Libonia penrhosiensis* should be under cover, or, at any rate, sheltered from incessant rain and cold. If not in pits or frames an extemporised covering should be provided, as the cold is apt to arrest growth and too much rain washes out all the good properties of the soil. One does not often see *Libonia penrhosiensis*, but it is one of the best of the smaller winter-flowering plants, decidedly superior to *L. floribunda*, being of better habit, brighter and clearer in the flower, and

thum, although of very little use for cutting or as a room plant, is valuable for the size and brilliant colour of its flowers. *Hardwick.* E. B. S.

NOTES AND REPLIES.

Calceolaria Clibrani unhealthy.—Can you tell me what is the cause of these leaves turning colour in this way and if there is any cure for it? I have grown this *Calceolaria* (*C. Clibrani*) for some years in a greenhouse and it has always done very well, but this year both the old plants and the cuttings are nearly all affected in this way.—K. M. B.

[We have not met with a parallel case to yours, and, after careful examination, we have come to the conclusion that the trouble is of fungoid origin. There is no trace of insects on the leaves sent. A course of treatment likely to prove successful would be to spray the foliage both on the undersides of the leaves as well as the surface with a rose-red solution of permanganate of potash. It readily dissolves in water and is cleanly to use.]

Mignonette in pots.—In the greenhouse the shortage of bulbs will be felt, more especially in the spring. *Mignonette*, therefore, will be very useful, and during the week a sowing was made for the purpose under notice. Usually the seeds have been sown in 5-inch pots, the seedlings thinned down, and the resulting plants bloomed in 7-inch pots. An experiment is being made during the present season by sowing the seeds in 10-inch pans, which are fairly deep. It is intended to leave three plants in each pan when thinning is completed. The compost used consists of old loam, which has been stacked for some years, and which is now so friable that it can be rubbed down to the necessary fineness with the hands. A very little leaf-mould is added, together with some fine mortar rubbish and a sufficiency of sharp sea-sand. In filling the pans, the soil is made quite firm, and the seeds are only lightly covered. The pans are placed in a cool greenhouse until germination is visible, being kept covered with obscured glass. When the seedlings are sufficiently large for the first thinning the pans will be removed to a cold-frame until they are required.

CHRYSANTHEMUMS.

CHRYSANTHEMUMS IN SMALL POTS.

(REPLY TO "WOULD-BE GROWER.")

CHRYSANTHEMUM blooms, each from 4 inches to 5 inches in diameter, borne upon plants not more than 1 foot high and requiring pots only 4 inches wide at the most, are desirable subjects to have where the filling of small vases with living plants and flowers is a necessity during the winter months. Such plants can easily be obtained if a few simple details of culture are carried out. Early in August is the time to commence the cultivation of these miniature plants. Both Japanese incurved and Anemone Japanese varieties are suitable for this form of growth. The preference should be given to those varieties which are strong in growth, avoiding those that have slender peduncles, as they need so much support to show off their blooms to advantage. One advantage of cultivating plants in the manner named is that any points of growth which may through accident be broken off the plants which are intended for the supply of large blooms can be utilised. From now onwards some points are sure to be broken off the plants. The ligatures which support the plants will have become too tight to allow of the shoot growing. The growth is thus "buckled," so to speak, and then snaps off about 4 inches long generally, or heavy rains will sometimes damage the succulent growths, or birds will alight on the extreme points where they extend beyond the top of the stake, or are not kept tied to the supports. If more shoots were allowed to each plant when growth first

much more enduring. It makes a good companion to *Primula obconica* and *P. malacoides*.

It is generally recommended to put all the above plants into pits or frames through the summer months, and very good places they are if not too much exposed to the sun. Where such is the case it is advisable to shade a little during the hottest part of the day, otherwise the plants dry out very quickly, necessitating far more use of the water-pot than is advisable. It is as well to loosen the surface of the soil and give a small dose of some fertiliser before putting the plants into winter quarters. Any of the plants subject to insect pests should be overhauled and remedial measures taken. Salvias, for instance, are rather subject to red spider in hot, dry summers, the *Lassandra* to thrips, and the Marguerite to the leaf-boring maggot. The *Lassandra*, or as it is now generally called, *Pleroma macran-*

was made from the natural break in May than it is intended shall develop blooms, such surplus shoots will furnish capital material for the subject in hand.

From the first to the last week in August is the best time to strike the cuttings. If the cuttings are inserted sooner than the date named, the plants after being struck are liable to get too tall, and if taken later than the last date the flowers are liable to be much smaller. Varieties with large-sized blooms may be rather taller than smaller-flowered sorts, as the drooping florets show to greater advantage on a correspondingly taller plant. The cuttings should be firmly dibbled into pots 2½ inches in diameter, and well watered to settle the soil. Plunge the pots in a gentle hot-bed, shading the cuttings carefully from the sun. Syringe the foliage every afternoon on fine days, and by keeping the frame nearly close, roots will be formed in about a month, when air should be admitted gradually and afterwards freely when the plants will bear exposure without flagging. When the plants are well supplied with roots they should be shifted into pots 4 inches in diameter, using a fairly rich compost and potting the plants very firmly. When the roots have taken to the new soil the plants should have abundance of air, so that the growth may be stocky and the foliage clean. No place suits them better than a shelf close to the glass in a cool house. As soon as the pots are filled with roots, stimulants should be given to the plants freely, as they require plenty of support when growing in such small pots.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM OCTOBER 11TH.—*Amaryllis Belladonna*, *Montbretias*, *Gladioli*, *Colchicum speciosum album*, *Hardy Cyclamens*, *Sternbergia lutea*, *Oxalis*, *Linarias*, *Androsaces*, *Lobelia cardinalis* (in variety), *Verbena venosa*, *Pentstemons* (in variety), *Salvias*, *Enotheras* (in variety), *Achilleas*, *Platystemon californicus*, *Omphalodes cappadocica*, *Corydalis thalictrifolia*, *C. lutea*, *Convolvulus mauritanicus*, *Hutchinsia alpina*, *Dwarf Campanulas*, *Mazus Pumilio*, *Plumbago Larpentæ*, *Sedum spectabile*, *S. Sieboldi*, *Valerian*, *Acanthus*, *Helenium*, *Helianthus* (in variety), *Michaelmas Daisies* (in great variety), *Scabiosas*, *Statice*, *Linum arboreum*, *Tufted Pansies* (in variety), *Gazania splendens*, *Nigella*, *East Lothian Stocks*, *Acrocliniums*, *Potentillas*, *Leptosiphons*, *Nemesias*, *Begonias*, *Cosmos*, *Pelargoniums* (in variety), *Marguerites*, *Calceolaria amplexicaulis*, *Ageratum*, *Antirrhinums* (in variety), *Argemone*, *Agathæa cælestis*, *Heeria elegans*, *Dwarf Erigerons*, *Mesembryanthemums*, *Myosotis*, *Sweet Violets*, *Rudbeckias*, *Pyrethrum uliginosum*, *Francoas*, *Dahlias*, *Cannas*, *Tritomas* (in variety), *Early-flowering Chrysanthemums*, *Erigerons*, *Clematis* (in variety), *Tropæolum speciosum*, *Dwarf and Climbing Roses* (in variety), *Cyperus longus*, *Polygonums* (in variety), *Pampas Grasses*, *Nymphæas*, *Hypericums* (in variety), *Genista tinctoria*, *Lavatera Olbia*, *Laurustinus*, *Escallonia montevidensis*, *Hydrangea paniculata grandiflora*, *Hardy Fuchsias* (in variety), *Viburnum coriaceum*, *Abelia rupestris*, *Spiræa Thunbergii* (second flowering), *Myrtles*, *Vernonias* (in great variety), *Daphne Dauphini*, *Calycanthus occidentalis*, *Magnolia grandiflora*, *Desmodium penduliflorum*, *Clerodendron trichotomum*, *Jasminum nudiflorum*, *Buddleia variabilis magnifica*, *Berberis nepalensis*, *Ericas* (in variety), *Menziesias*.

WORK OF THE WEEK.—The planting of Wall-flowers, *Myosotis*, *Polyanthus*, *Aubrietias*, *Alyssum*, and other spring flowers has been continued and will shortly be completed. It is important that the ground be in a proper condition for planting, to allow the plants to be set firmly, as a protection against wind and frost. A few of each sort are kept in reserve for filling blank spaces where the

plants have died. *Salvia patens* has been lifted, the tubers placed closely together in boxes filled with sifted soil, which is made quite firm. The boxes are then placed in a frost-proof shed and kept quite dry. In this manner they winter well. To increase the stock of *Ourisia coccinea*, a few clumps have been lifted from the rockery, the soil washed away, the rhizomes carefully detached with roots, and potted up three together in 4-inch pots in well-prepared sandy soil. The pots are stood in a cold-frame, which is kept close until the plants have made fresh roots, after which plenty of air is admitted. These will be planted out in their permanent positions in March.

Where it is intended to plant *Roses* this autumn, preparations should be made without delay. As these plants occupy the ground for several years, it is necessary that the soil receive a thorough preparation at the start. *Roses* may be planted during favourable weather at any time from now until March, or even April if the work is done with care; but, undoubtedly, the best time of all is the latter part of October and November. At this time the ground is still warm, and the plants have an opportunity to become established before the winter. Therefore, the work of trenching should be hastened, so that the ground may settle somewhat before the time for planting. The best soil for *Roses* is a strong, rich loam of a heavy nature, having natural drainage. Light, sandy, or gravelly soils are unsuitable, but may be improved by taking out a quantity of the staple and adding good, rich, heavy loam. When trenching, dig in plenty of decayed farmyard manure at the bottom of the trench, but do not allow the manure to come into contact with the roots. F. W. GALLOP.

Lilford Hall Gardens, Oundle, Northants.

SOUTHERN COUNTIES.

Tomatoes.—After this date it can hardly be expected that the fruit will ripen properly outdoors. All fruits of nearly full size should be cut and taken indoors and placed on a stage or on shelves, where, if situated so that they experience full light, they will quickly colour and become fit for use. The smaller or not fully-grown fruits can then be used for the making of chutney and other purposes. On plants under glass still carrying a nice lot of fruit the greater part will ripen given a period of bright weather. As an aid towards attaining this end, give less water at the roots and maintain a dry, airy temperature. The plants grown for winter, on which the trusses of flowers are now expanding, should, to facilitate the setting, be kept rather on the dry side and be fertilised daily or the trellis smartly tapped about mid-day to ensure a good set. A sweet, dry, and airy temperature, maintained either with or without fire-heat, according to circumstances, is also necessary, the reverse conditions being conducive to failure.

Late Peach-house.—Every effort should now be made to get both foliage and wood properly ripened, using a slight amount of fire-heat if at command if it appears necessary to attain that end, and freely ventilating the house also.

Maincrop Leeks.—These should now be finally moulded up, first drawing the tops together and tying them temporarily together with raffia to facilitate the placing of the soil around them. They do not need to be earthed up to too great a height, as the object should be to obtain plants having stems large in circumference rather than of less dimensions and of greater length. This condition will result if plenty of well-rotted manure was placed within the reach of the roots and feeding has been properly attended to.

Spring Cabbage.—The plants from the second sowing are now ready for getting out into their permanent quarters. As these will form a succession to those planted earlier in the season, it is not so essential that they be accorded quite so warm and sheltered a position, otherwise they will be turning in too close on the heels of the former, and cause a glut. Rather more space should also be afforded the plants, allowing them a distance

of 18 inches each way. Plant in drills drawn about 4 inches deep, which can be filled in later when the plants have made sufficient growth, both to steady and protect the stems.

Bedding plants.—*Pelargoniums* of all types will now be the better for being placed under cover, *Vineries* from which the fruit has been cut being very good places for the purpose when heated pits are not available or non-existent. Carefully pick off all dead leaves before housing them, and allow them all the space that circumstances permit to prevent their becoming drawn. *Lobelia*, *Iresines*, *Heliotropes*, *Cupheas*, *Ageratums*, etc., require rather warmer quarters, otherwise the losses from damp will most likely be great.

Violets.—Pits and frames should now be got ready for the planting of both single and double varieties. The beds should be made up of a sufficient depth that the plants when set out will be close up to the glass, this being more essential in the case of the double than the single kinds. The double kinds should be planted without delay, but as the singles are still flowering freely, planting in their case may be deferred for another week or ten days. In both cases use good, sound, fresh loam in which to plant them, adding just enough leaf-mould and old Mushroom manure to render it suited to their requirements. Give the plants a good soaking of water as soon as planted, and if lifted with a good ball the sashes need not for the present be placed over them.

Tuberous Begonias.—Pot plants should now be placed under cover, if only in frames, to facilitate the ripening of the stems. When this has been accomplished the pots may be stored away close together in a dry frost-proof place. If space is limited they can be knocked out, relieved of the crocks, and stood as close as possible together in boxes, which, if of convenient depth, may be stood one on the other.

Fuchsias.—These, like the preceding, should now be stored, first relieving them of decaying leaves before placing them under cover for the winter. Any place where frost will be unable to reach them will, so long as it is dry, suffice for these.

Cyclamens.—These having made a full complement of leaves, and beginning to push up their flowers, a house must now be got ready for them. This must be light and sufficiently heated to ensure a temperature of 60 degs. to 65 degs. without the over-heating of the pipes. Before taking the plants in, the structure must be scrupulously cleansed and the walls white-washed, etc. A. W.

MIDLAND COUNTIES.

Root-pruning is a necessary operation in the case of trees making rampant growth, in order to bring them into a fruitful condition, especially if such trees have been established for many years and it is considered unsafe to transplant them. For younger trees transplanting is decidedly better, the removal at once checking the exuberant growth which young trees frequently make for a few years. The present is the most suitable time for this work to be undertaken. In root-pruning, before taking out the necessary trench make sure that the soil is in a moist condition, and if it is not give a good watering and wait for a few days. Take out a trench 4 feet from the base of the trunk, and afterwards gradually work away the soil towards the stem with a fork quite down to the drainage, carefully preserving all fibrous roots and tracing to their original thong-like fibreless roots, which cause the excessive wood growth. Search well under the ball of soil, as these roots—known as tap-roots—often penetrate straight down into the subsoil. Cut well back all such roots, making an upward, sloping cut, so that the new roots that will be formed may be encouraged to grow towards the surface. Return the soil to the trench, making it quite firm about the roots, and lay out evenly all roots with the points trending upwards. It is advisable to put a few inches of fresh soil on the surface to keep the roots there. Should the weather remain dry for long afterwards, it may be necessary to afford water to the trees thus treated. Extra large trees should only have half their roots interfered with this autumn, the remainder being dealt with next year.

Raspberries.—Those who have unprofitable Raspberry canes should now make preparations for planting afresh. October is the best month for making a new plantation. Raspberries will succeed in almost any soil provided the water can pass through it easily and that it is at the same time one that never becomes very dry. If the soil is light in texture and rich in plant food, then deep cultivation is all that is necessary, except for a liberal dressing of well-decomposed manure. On cold and wet ground some additional preparation will be necessary, as the soil must be drained and trenched, adding such materials as burnt refuse, decomposed manure, leaf-soil, and road-scrappings. Any or all of these materials may be used to make the soil more porous, and they will improve the ground for a number of years to come. The Raspberry being rather a shallow-rooting plant, the richest compost should be kept near the surface. The planting of the canes may be carried out according to the aspect of the ground. It is generally best to have the rows extending from north to south, and these rows should be from 4 feet to 5 feet apart, putting each plant at a distance of from 2 feet to 3 feet apart in the rows. After planting is completed apply a light mulch of stable-manure or some other light material over the roots.

Freesias.—The earliest batch of Freesias is now growing freely in a position close to the glass in a south aspect. A little weak liquid-manure is afforded the roots twice each week. As the earliest batch of

Roman Hyacinths is showing signs of top growth this has been removed from the plunging-bed and placed in an unheated frame. In about a week a batch will be placed in the forcing-house, and plenty of tepid water applied to the roots, and as soon as the foliage and flower-spikes begin to develop they will be placed as close to the glass as possible.

Cyclamens.—The earliest plants are showing their flower-buds, and have been given a good position in a light, well-ventilated house. Seedlings raised during the autumn are now ready for pricking off. The largest will be potted singly into thumb-pots, using a light compost of equal parts of sifted loam, leaf-soil, and plenty of silver sand. Press the soil firmly and place the young plants near the glass in an atmospheric temperature of 60 degs., shading them from direct sunshine.

Indoor plants.—All kinds of indoor plants, especially those of a soft-wooded nature, need to be watered with extra care at this season. Syringing must also be reduced, and if overhead syringing is necessary in the warmer houses to keep down insects it should only be done once a day, and in the morning after the temperature has risen a little. As the weather becomes colder it is advisable to drop the temperatures of the houses a little rather than use an excess of fire-heat.

Celery has done remarkably well this season, especially the plants of the later batches. Continue to place earth about the stems on fine days, especially in the case of the very latest batches. It may not be necessary to blanch all the crop for the present, as when the shoots are blanched the plant is more tender and likely to be injured by frost.

Late Peas.—Owing to the favourable weather, late Peas have been plentiful and the quality good. There is every appearance that in the absence of frost the supply will continue for another month. Early varieties of

Rhubarb which are grown for forcing will be lifted as soon as the foliage has died down, leaving the roots intact as far as possible, and allowing them to rest for a period on the surface of the ground under a north wall, covering them with a little long litter to prevent the wind drying them unduly. This will give the roots a check, which is necessary, as Rhubarb is not easily forced at this season. The warmer end of the Mushroom-house is set apart for Rhubarb. After removal to the Mushroom-house, the roots are covered with ordinary soil, and the crowns and surroundings damped twice daily with tepid water.

Tomatoes in the open.—Many fruits are now on the point of ripening, the plants generally being in full bearing, owing to the backward season. To obtain the best results under the

circumstances the plants have been cut off at their base with the fruits attached and suspended their full length in the vineries. By this means they retain their plumpness much better than if cut off individually or in clusters, and the supply will be kept up for some considerable time. A sowing of Tomato seed will now be made to raise plants for spring cropping under glass. Sow in pans, cover the seeds lightly with fine soil, and stand the seed-pans on a gentle hobbed until the seedlings are well through the soil, when they should be raised to within a few inches of the roof-glass. When the plants are large enough to handle they are potted singly into small clean pots filled with a compost of two-thirds loam, one-third sifted leaf-mould, and sufficient coarse sand to render it porous. Grow them close to the roof glass, and when they begin to make fresh growth admit air in sufficient quantity to prevent them becoming drawn. Avoid exposing the plants to cold draughts or they may become stunted. F. W. GALLOP.

SCOTLAND.

Late Potatoes.—At a slightly earlier date than usual a beginning was made in the course of the week with the lifting and storing of late Potatoes. The crop cannot be described as being more than moderate. It was anticipated that, owing to the wet season, disease might prove to be more than usually prevalent; but such is not the case. In most areas of considerable size disease is generally present in a greater or less degree, and during the lifting (so far as it has gone) no more diseased, or partially diseased, tubers than might be expected in the ordinary course of events have been found. The tubers are, however, rather disappointing in respect of size, and there is a marked absence of the extra large specimens which we have been accustomed to expect. Especially is this noticeable in the case of my favourite, King Edward VII., which, for some reason, has been a comparative failure. This, however, does not interfere with the high opinion which I have formed concerning this excellent Potato, and I shall have no hesitation in planting it equally freely next season. Up-to-Date and British Queen have, on the whole, been fairly satisfactory. Storing is done at the close of each day's lifting when the weather is fine, and the tubers are kept in a cool, well-ventilated, and frost-proof house. Lifting will be persevered with, as opportunity offers, until the whole of the late Potatoes have been stored.

Onions.—These, which had been laid out in a sunny position to dry off, have now been removed to their winter quarters. In storing, a strict look out was kept for slightly damaged specimens, these being put on one side for immediate use. Many growers like to "rope" their Onions; but I find that they are more easily dealt with and keep quite as well when they are laid out thinly in a house with a temperature similar to that in which Potatoes are kept, but with rather more light, semi-darkness being apt to induce premature growth in the case of Onions.

Apples.—Further progress was made with the gathering and storing of Apples—a comparatively easy task during the present season. At this time of the year we in this district are at times compelled to gather certain Apples at an earlier date than is absolutely necessary for two reasons. The one is, birds are very numerous, and blackbirds, especially, attack the fruit and soon work considerable damage. The other reason is that the autumn gales, from which we suffer every season, bring down the finer samples; so that, on the whole, it is more profitable to anticipate the gathering by a week or two in the case of mid-season Apples in the open. The case is different with trees on walls, such as Ribston Pippin, Margil, Nonpareil, Court Pendu Plat, and others of that type. These require to hang as long as possible. It is easy to circumvent the fruit-eating birds by close netting. It is regretted that our local Apple, the Gallopway Pippin, a good and long-keeping variety, has failed entirely.

Pears.—In the case of Pears, the wall trees are now inspected frequently, and such fruits as part from the tree when lifted to a horizontal position are gathered. On the whole, the crop, though late, is fairly satisfactory.

During the week the picking of William's Bon Chrétien was completed. Some good samples of Louise Bonne de Jersey were also secured, and if not quite ripe when picked the fruit soon matures when stored in a comfortable temperature for a short time. The crop of this fine Pear is highly satisfactory, both on old and on young trees. A fine crop of Pitmaston Duchess has been gathered. The fruits, although of a good size, are not so fine as usual, still they are quite large enough. There has been much discussion about this Pear. Certainly it is not in the foremost flight, but when grown on a wall and thoroughly ripe, it is not to be despised. A look over was given to later Pears—Doyenné du Comice, Glou Morceau, Winter Nelis, Marie Louise, and so forth—to see that tits, sometimes troublesome, had not begun to peck the fruits at the stem. All these are bearing useful crops, as is Souvenir de Congrès, which, though it does not ripen so soon as it ought to do, owing to its position, is nevertheless a very useful Pear.

Plums.—The season of Plums is now practically over, only trees of Coe's Golden Drop, Reine Claude de Bavay, and Pond's Seedling remaining to be dealt with. The crop has been, for these gardens, a light one, although such varieties as those just mentioned, Washington, and Kirke's did very well. The crops of Jefferson and most of the Gages were very indifferent.

Peaches.—The latest variety grown out-of-doors, Dymond, is now being picked. Although later than usual, and in spite of an unfavourable season for out-of-doors Peaches, the fruits of this variety are well coloured and of quite average size. Peach-trees in the open are at times, and especially if September be a sunny month, predisposed to attacks of red-spider. No traces of this pest have during the season been visible, and this is directly attributable to the cool weather. Nectarines Humboldt and Stanwick Elruge yet remain unripe, and it is now feared that the fruits may have to be ripened artificially. This is a somewhat critical operation—the fruits, if picked prematurely, shrivelling instead of ripening.

Hardy flower borders.—The hardy flower borders begin to assume a rather untidy appearance. It is much better to tolerate this than to try, by cutting over ripening stems and so forth, to smarten up these borders. Such things, however, as spent colonies of annuals and similar subjects which have ceased to be effective may be dispensed with, and, where time can be spared for the purpose, a little tying up and a stir with the hoe will go far to make things passable for the brief time which now remains to the hardy flowers.

Salvia Pride of Zurich.—In the course of the week a quantity of this showy Salvia was lifted and potted up from the beds in which it was grown. These plants are mainly intended to provide cuttings in spring for next year's work. In an ordinary year beds of this plant are very showy, but owing to the unfavourable summer they have not this year been a success.

Arum Lilies.—The last of the Arum Lilies were potted up towards the end of the week. These had been planted out during summer, and have started into vigorous and healthy growth. In potting, a rather retentive soil was used, with but a moderate allowance of sand and a sprinkling of soot. Pots 10 inches in diameter were used, each pot accommodating four crowns. Space was left for top-dressing at a later date. Meantime, these plants have been placed in an unbeated structure, from which, in order to make room for them, exhausted Tomatoes were removed.

Fruit-houses.—Fallen leaves ought to be regularly removed from all fruit-houses, and alike in Peach-houses, orchard-houses, and vineries, in which the foliage is now ripening, the syringe or garden engine should be kept at work. If this be neglected there is a chance of red-spider putting in an appearance. Borders must be inspected from time to time, for while they may not require much moisture, it should be remembered that any dryness at the roots will inevitably result in bud-dropping. If there are no plants in fruit-houses (a practice always to be deprecated) let the ventilation be ample both by day and night.

W. McGuffog.

Balmoe Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 10TH, 1916.

DESPITE the frequent meetings held recently that on the 10th inst. was of considerable extent and variety. Two collections of excellent fruit were staged, one from a private garden, the other from a trade source. Roses from Twyford and Oxford were as fine as could be desired, which, nearing mid-October, is saying much for the varieties concerned and their profuse flowering. Collections of beautiful and rare shrubs from more than one source aroused a new interest in these at a seasonable time for planting, while affording a good idea of their value. Dahlias, too, were very fine, their quality demonstrating the mildness of the time and the freedom from autumn gales. In hardy plants the chief novelties were Michaelmas Daisies, and there is proof that important work is being done among them. Ferns, Orchids, Sweet Violets, and Carnations were well shown. Several important novelties received awards.

HARDY PLANTS.

Chief among the novelties in this section was the welcome Genm Borisi, a plant of hybrid origin suggestive of the influence of *G. Heldreichii superbum* or *G. miniatum*, or both. Orange-coloured externally and showing a deep scarlet surface not unmixed with orange, it is particularly brilliant, and, being free-flowered, effective also. The single flowers, too, are large and very shapely. It was presented by Mr. Clarence Elliott and gained an Award of Merit. From the same source, too, came a pair of *Gentiana sino-ornata*, that brilliant alpine which, as *G. ornata* variety, gained an Award of Merit a fortnight ago. The former is the authenticated name. From Messrs. Baker Limited, came a new pure white double Michaelmas Daisy, *J. S. Baker*, that may be likened to a pure white Beauty of Colwall. As shown, it was very pure and good, and likely to be of much value to both gardener and florist. It gained an Award of Merit. This firm also showed a considerable variety of Michaelmas Daisies, *Blue Gem* (the finest blue we know), *Edith Goodwin* (blue), and *Peggy Ballard* being notable among many. Quite a brilliant lot of flowers of the common *Gentianella* (*G. acaulis*) was staged by Mr. G. Kerwell. These late flowers render it highly acceptable now. A new *Colchicum* provisionally named *C. illyricum superbum* presented by Messrs. Barr and Sons and gaining an Award of Merit also attracted considerable attention. Of sturdy habit, with roundly-formed flowers of rosy-lilac, it was most effective. Some new and highly promising Michaelmas Daisies were sent by the Hon. Vicary Gibbs, Elstree, Herts (gardener, Mr. E. Beckett). The plants were growing in tubs, and well displayed habit and merit. Of the set, *King of the Belgians*, with large, shapely, mauve-coloured flower-heads, gained an award. We thought highly, too, of *Brightest and Best*, a *Novi Belgii* form with trusses of bright rosy-red flowers. Its warm colour alone will make it popular in the garden, where, if massed, it would prove most effective. Other good novelties from this source included *Namur* (rosy-pink), *Mons* (reddish-purple), *Brussels* (soft lavender-blue), and *Aerschot* (deep blue inclining to semi-double). *Cimicifuga simplex* was shown by two or three firms, Messrs. W. and A. Clark, Limited, and Mr. W. Wells, Juur. To the former lot the addition "*Clark's variety*" was added to the specific name. We detected no difference beyond the purity of the flowers, due, unmistakably, to the examples having been pot-grown and

flowered under glass. Mr. Wells also had *Echinacea* (*Rudbeckia*) *purpurea* in good condition; also the new *Asters*, *Brightest and Best* and *King of the Belgians*, which, we understand, have passed into his hands. The more notable things from Mr. G. Rente were *Satyrion roseum* and *S. carneum*, only rarely seen. *Phillyrea viburnoides* is a shrub novelty from China having terminal cymes of creamy flowers. *Polygonum amplexicaule* was brilliant, *Cimicifuga simplex* very pure, and *Campanula muralis* still full of bloom. A table group of Michaelmas Daisies from Messrs. Waterer, Sons, and Crisp showed these to advantage. The finest thing, however, was the intensely-coloured Italian *Stewart*, *Ultramarine*. We know nothing like it. *Lustre* (red), *Cloudy Blue*, *splendens* (rich blue), *White Diana*, and *Nancy Ballard* (rosy), of the first-named set, were also good. The *Violets* from Mr. J. J. Kettle have never been better shown, and they were greatly admired. They were chiefly double-flowered. *Mrs. J. J. Kettle* (silvery-mauve), *La Belle Parisienne* (an improved *Marie Louise*), *Comte de Brazza*, and *Marie Louise*, all in ample bunches, were among those making quite a feast of these popular flowers. A group of Michaelmas Daisies from Messrs. W. Cntbush and Sons included the rosy-red *Sirius* and the indispensable *Climax* (blue) among many others.

ROSES.

The wealth and beauty of these were remarkable, and rarely have finer blooms been staged at this season. We were particularly struck with those from Mr. Elisha J. Hicks, who had a wondrous display of the new single crimson *Princess Mary* among many sorts. We thought it finer than ever, and Mr. Hicks has been showing it since March last at frequent intervals. No single Rose is so brilliant, few more delightfully fragrant or so little inclined to mildew. Two great banks of it were separated by a big group of the semi-double cream and yellow *Joanna Bridge*. *Charles E. Shea*, a glorious pink, is the H.T. novelty of the moment. It gained a Gold medal, we believe, last year. *Ophelia* and *Mme. E. Herriott*, the latter rich in colour and still full of buds, were others. Mr. G. Prince, too, had some lovely Roses, none so chaste, graceful of form, or set in such a profusion of buds as the pure white *Mrs. H. Stevens*, which a big stand showed to perfection. *Moonlight* (white cluster), *Josephine Nicholson* (pink), *Rayon d'Or*, *Edith Malcolm* (flesh), *Mrs. Alfred Tate*, *Mrs. David McKee* (cream), *Lady Hillingdon*, and *Mme. E. Herriott* were also abundantly represented. *Rev. J. H. Pemberton*, in addition to *Moonlight*, *Queen Alexandra*, *Clytemnestra*, and others, showed good vases of *Comtesse du Cayla* and *Rayon d'Or*.

SHRUBS.

Messrs. Piper staged a most comprehensive collection, which also embraced some few choice and rare. Of these, *Olearia semi-dentata* (white stems and woolly leaves), *Elsholzia Stauntoni* (pink flowers in Veronica-like spikes), *Osmanthus armatus* (the lustrous, leathery leaves margined by curved spines), *O. rotundifolius* (neat and distinct), *Caryopteris mastacanthus* (a good blue-flowered shrub), *Buddleia macrostachya Yunnanensis* (spicate racemes of white flowers and woolly leaves), *Rubus Veitchi* (silvery), and *Viburnum Henryi* (one of the most distinct of its race) were remarked among many things. Messrs. George Paul and Son had a striking hybrid novelty in *Laurns Cerasus cheshuntensis* (*azorica* x *lusitanica*), a handsome plant likely to displace the *Bay* for tub work and terrace

gardening. The graceful, silvery-stemmed *Salix pruinosa*, *Prunus Pissardi nigra* (of good leaf colour) and *Yucca Ellacombei* were other notable things. In a group from Messrs. John Waterer, Sons, and Crisp, the foot-high *Cotoneaster pyreuaica* was a feature. Rarely exceeding that height and of neat trailing habit, subsequently it should prove ideal to the rock gardener. *Pittosporum eugenioides variegatum*, *Leptospermum bullatum* (white flowered), and the scarlet trumpet *Honey-suckle* (*Lonicera sempervirens*) were also remarked. *Acer cratægifolium*—the name appears to be a misnomer—is the most brilliant-leaved *Acer* we have seen. Its effect in the garden in sunlight would be gorgeous. Messrs. J. Cheal and Sons contributed *Ceanothus* in variety, *Pernettyas*, cut shrubs, and a collection of clipped bushes, Mr. L. R. Russell showing a considerable collection of tree *Ivies* grown in pots and tubs.

MISCELLANEOUS.

Dahlias were contributed by Mr. J. B. Riding, in whose set *Marianne* (a dwarf bedding sort of self orange colour) claimed attention at once, and by Messrs. J. Cheal and Sons, who had many good singles and a delightful series of "*Star*" varieties, *Scarlet Star*, *White Star*, and *Crawley Star* (the original) being well shown. The most conspicuous *Dahlia* novelty was the *Paeony-flowered J. A. Jarratt*, which bears the raiser's name. The revolte florets are heavily tipped, fiery scarlet. *Rex Begonias*, all too rarely seen to-day, were in some variety from Messrs. H. B. May and Sons, and interspersed with many good Ferns. Fascination was the richest-coloured, *Lady Veitch* and *Silver Queen* others of note. Carnations were well presented by Messrs. Allwood Brothers, particularly *Nora West* (a lovely pink), *Nancy* (the latest salmon-pink novelty from America), and *Destiny* (cerise), also from across the water. Some three dozen amply-filled vases were on view.

ORCHIDS.

The pure white *Cattleya Saturn* from Messrs. Armstrong and Brown was among the most chaste varieties shown, their *Cattleya Venus*, *Orchidhurst* variety, one of the most remarkable. Its ruby-crimson lip and golden-bronze petals were in striking contrast. It originated from *C. Dowiana* x *C. Iris*, and, framed after the latter, is three times its size. Messrs. Charlesworth showed the beautiful tri-generic hybrid *Sophro-Laelio-Cattleya Lutetia*, with reddish sepals and petals, its ruby-red lip having a touch of bronze-gold at base. *Brasso-Cattleya Veitchi Queen Alexandra* (an almost pure white form) was included in the group. A particularly good form and well-flowered plant of *Vanda cœrulea* came from Mr. C. F. Waters. The choicest thing, from Messrs. Sander and Sons, was the pure white *Cattleya Lady Veitch*, variety *superbissima*. *Cattleya Cowana alba* from Messrs. J. and A. MacBean was chaste and beautiful, the new *Odontoglossum percultum*, variety *Nicator*, from Mr. E. G. Mocatta, Woburn Place, very fine. It and the two first-named novelties gained Awards of Merit.

FRUIT AND VEGETABLES.

A table of fruit in variety, excellent for the most part, came from Mr. C. A. Cain, Welwyn, Herts (gardener, Mr. T. Pateman). Pears and Apples were in much variety, the former being particularly good. The dishes of Peaches *Sea Eagle*, *Lord Palmerston*, and *Plums Golden Drop* and *President* were of exceptional quality. Good bunches of the leading Grapes were in the background. A *Hogg Silver Medal*

was awarded. Basket-dishes of Apples of much excellence and considerable variety were contributed by the Barnham Nurseries, Limited. Egremont Russet, Allington Pippin, Brownlee's Russet, Ben's Red, and Lane's Prince Albert were among the finer varieties shown.

A complete list of the certificated plants and medals for groups will appear in next issue.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Kalosanthes coccinea (W. S.).—This is one of those good old greenhouse plants that have from some cause or other ceased to be popular. Not many years ago it was one of the most brilliant plants in collections of stove and greenhouse plants, for its natural season of flowering when grown in a greenhouse is from midsummer to the end of July, a time there is not so much variety in plants that bloom naturally as there is in May and early June. If half-a-dozen strong shoots are placed round the edge of a 4-inch pot they will soon strike root, and in the spring, if shifted into 6-inch pots, will produce many heads of bloom. The plants do not need very large pots, and quite large specimens may be grown in pots of from 8 inches to 10 inches in diameter. By cutting out the old straggling growths after flowering the plants may be kept of useful size for a good many years.

Watering pot plants (M. T.).—It is not possible to lay down any hard-and-fast rule, as so much depends upon the temperature of the house, the nature of the soil, and the state of the weather. For example, soft-wooded plants like Fuchsias and Heliotropes, cannot go very long in a warm house without needing moisture. On the other hand, it is possible to over-water delicate Ferns like some of the Adiantums, though liking an atmosphere charged with moisture. It is scarcely possible to give Spireas, especially when near the blooming period, too much water. Azaleas and other peat-loving plants often suffer from want of water, although they may appear damp on the surface, and this is because, peat being of such a close, retentive nature, enough water is not given to penetrate to the ball of roots. After all, as in other departments of gardening, it is the daily attention which brings about the most satisfactory results. When sending several queries, kindly read our rules as to putting each one on a separate slip of paper.

FRUIT.

Peach-tree leaves, insects on (A. M. M.).—In all our experience we have but seldom seen the leaves of Peach-trees in such a bad state. They are infested with brown-scale, red-spider, and thrips, showing all too plainly that the trees have been allowed to get dry at the roots, while moisture in the house, so inimical to the two latter pests, has been neglected. The best thing you can do is to thoroughly water the border in which the trees are and wash the foliage with the garden engine. When the leaves fall gather them all up and burn them, and wash the whole of the shoots with an insecticide, also thoroughly cleaning every part of the woodwork and limewashing the wall with a mixture of hot lime to which some sulphur has been added. No half measures will do any good. The failure of the Vine is, no doubt, due to the rats, while it may be that the leaves of this have fallen a prey to red-spider and thrips, due, also, in great measure, to the soil of the border being dry and want of moisture in the house.

VEGETABLES.

Tomatoes diseased (Mrs. Lawrence).—Your Tomatoes have been attacked by the same disease as affects Potatoes, due to the cold wet weather we have lately had. The cultivation of Tomatoes in the open air is very risky, as in but few seasons can a satisfactory crop be had. All the diseased fruits should be at once gathered and burned. We should also advise you to gather all the remaining fruits, even if only partly coloured, and lay them on

a shelf in the greenhouse where they will ripen sufficiently to come in useful for cooking.

Scarlet Runners not setting (A. R.).—The cause of your Beans not setting is not from want of fertilisation, but food or moisture at the roots. As they are in full leaf water does not get to the roots, which get dried up; the flowers then drop because they need more moisture. A thorough watering, also liquid-manure if you have it, afterwards will often save the crop.

MISCELLANEOUS.

Destroying woodlice (Cucumber).—Woodlice in a Cucumber-frame can best be destroyed by setting traps for them. Flower-pots filled with dry hay and then inverted, and placed in the corners of the frame, will attract great numbers of them. Examine these pots every morning, and shake out the insects into a bucket of boiling water, and also pour boiling water round the edges of the frame, being careful in doing so not to wet the foliage or shoots of the Cucumber plant with it. If this is persevered with they will soon disappear.

Weeds in lawn (Croquet Lawn).—Judging from your letter, no half-measures will be of any avail. Your best plan will be to have the lawn trenched, clearing out the weeds as this is being done, adding plenty of good rotten manure. Do this as early as you can, so that the soil can settle down. If you can get good, clean turf in the district, then you may return it after having made it quite level and firm. If not, then you had better wait until April, when you can sow it down. The above is a drastic remedy, but it is the only thing you can do in the case of a lawn that is so over-run with bad weeds as yours seems to be.

SHORT REPLIES.

M. A.—It is very difficult without seeing your trees to give any advice as to pruning. By far the best plan would be for you to consult a practical gardener in your neighbourhood, who on seeing the trees could suggest what had best be done with them.—*L. I. O.*—See reply to your query in our issue of September 16, page 464.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*T. L.*—1, Cupressus Lawsoni erecta viridis; 2, Thuja elegantissima aurea.—*T. M. S.*—Cape Figwort (Phygelius capensis).—*H. T. Shawcross.*—Bugbane (Cimicifuga simplex).—*Mrs. Phipps.*—Your specimen was named in our issue of October 7th, page 510. We do not reply to queries by post. See our "Rules to Correspondents."

Names of fruits.—*T. L.*—Apples: 1, Lord Derby; 2, Newton Wonder.—*Amelius.*—A, Kentish Fillbasket; B, Probably Yorkshire Greening; C, Cox's Pomona. Please, before sending fruit for name, kindly read our "Rules to Correspondents." As Apples vary so, it is very difficult to name with any certainty when only one specimen is sent.—*A. O.*—Apples: 1, Cox's Pomona; 2, Ribston Pippin; 3, Wellington; 4, Blenheim Orange.—*A. H.*—Apples: 1, Cellini; 2, Lemon Pippin; 3, Norfolk Beaufin; 4, King of the Pippins.—*J. Simpson.*—Apples: 1, Lord Suffield; 2, Lord Derby; 3, King of the Pippins. Pear: 4, Mme. Treyve.—*J. Ross.*—Pears: 1, Williams' Bon Chrétien; 2, Beurré Bose. Apples: 1, James Grieve; 2, Cox's Orange Pippin.—*W. S.*—1, Plum Coe's Golden Drop; 2, Pond's Seedling.—*Pomum.*—Apples: 1, Manx Codlin; 2, Blenheim Orange; 3, Yorkshire Beauty; 4, Wellington.—*W. O. S.*—Apples: 1, Grenadier; 2, Bramley's Seedling; 3, Alfriston (very late); 4, French Crab.

CATALOGUES RECEIVED.

Toogood and Sons, Southampton.—List of Guaranteed Bulbs.
R. H. BATH, LTD., Wisbech.—Choice Bulbs, Roses, Pzonies, etc., etc.
ROBERT A. MORRIS, 225, Bristol-street, Birmingham.—Descriptive Catalogue of Bulbs, Roses, Hardy Plants, and Trees.
AMOS PERRY, Hardy Plant Farm, Enfield, Middlesex.—Select List of New and Rare Alpines and Perennials; Abridged List of Irises.

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Double Orange Phoenix	..	8d
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Lyons Rose, H.T., shrimp pink	..	8d
Mme. A. Chatenay, H.T., salmon	..	9d
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A GARDEN ON A FELL.

You may be a dreamer of dreams all your life, but seldom does it fall to the lot of man that his dreams take form and substance.

In GARDENING ILLUSTRATED, November 8th, 1913, in an article called "Nature in the Garden," I indulged in a day dream of a garden on a moorland planted with Heaths. It was to some extent a criticism of one of a series of garden essays of *The Times*. The particular dogmas I attacked were these:—

"Large or small, the garden should look both orderly and rich. It should be well fenced from the outside world. It should by no means imitate either the wilfulness or the wildness of Nature, but should look like a thing never to be seen except near a house. It should, in fact, look like part of the house. There are, of course, very skilful specialists who, by the expenditure of a great deal of pains, can make a wild garden beautiful, but those who hope to imitate natural beauty with less trouble than it would take to make a pleasant formal garden will surely be disappointed."

Thus *The Times*.

I asserted that the style of a garden should be governed by the kind of country in which the house is built, and amongst other instances gave that of an imaginary house in a moorland country where the great variety of Heaths now in cultivation could be used with brilliant effect:—

"There would be in the short, grassy soil of the moorland garden a sea of Erica carnea intersected by rivers of the cushioned French Gorse, with billows of the hybrid Mediterranean Heaths behind, and in the further distance bold groups of E. australis, more beautiful than the Lilac and more durable in effect, and the fine, upstanding Portuguese Heath, with feathery plumes in early spring. Surrounding the back of the house and sides the Commemara Heaths, and beyond them again the Cornish Heaths. There would be never a season of the year without some great vista of bloom. To many of us this escape from the tyranny of beds and pergolas would be as welcome as the open sky to a dweller in a factory town."

Mr. Hoyle, who calls his house appropriately enough "Above Beck," has to a very large extent realised my dream. Here, on the steep side of a fell overlook-

ing Grasmere, he has planted with very great skill a perfect moorland garden. Down the fell runs a little mountain stream which falls over the face of a splendid rock, picturesque and natural as anything could be. On each side of the little stream, or Beck, as they call it in those parts, the fell side is planted richly with nearly all the best known Heaths in masses. The access to this fell-side garden is made easy by paths partly stepped running crosswise. Half-way up this delightful garden a beautiful terrace intersects the fell. This is formed with the natural rock of the country and is 160 yards long by about 15 yards wide. It is carpeted with the velvety turf which the rainfall of this lovely country keeps ever green. There are two well-built stone summer-houses at each end, and the view from this terrace over Grasmere, the lake, and the mountains is enchanting. The garden contains many beautiful alpine plants, flourishing in their natural habitat.

Let us see how far this garden conforms to the dogmas put forth in *The Times*.

It is well fenced, but there is no appearance of this from below, for the garden looks like what it is, part of the fell. I do not know if it can be said to imitate Nature. It is Nature, and in its wilfulness and wildness lies its charm. The house is a good stone building worthy of its situation, and you feel that it has the garden it ought to have, a garden that appeals to the eye of an artist, a living picture in a picturesque country.

SYDNEY SPALDING.

NOTES OF THE WEEK.

Some Californian plants at home.—In the issue for August 26th (p. 421) I noticed an account by "North London" of *Zauschneria californica*. In California we have two forms—*Z. c. microphylla* and *Z. e. latifolia*. *Z. c. microphylla* is a shrubby variety and the one probably referred to, and the other a broad-leaved, dwarf, creeping form found in the mountains at 5,000 feet to 6,000 feet elevation, and so would be much hardier than *Z. c. microphylla*. It is very free-flowering and is four to six weeks earlier, a point of interest to English growers. In another note "Kirk" speaks of *Diplacus glutinosus*. We have at least five distinct forms here—two red ones, two yellow, and one intermediate variety ranging in colour from red through to yellow. One yellow form is found in company with *Zauschneria e. latifolia*, growing beneath

boulders at 5,000 feet to 6,000 feet. It is also a dwarf 6 inches to 12 inches in height, the flowers being of a light buff-yellow, early, and free. Coming from the ice and snow it also should prove perfectly hardy for rock or wall gardens.—J. HARRY JOHNSON, *Plantsman, Los Angeles Park Dept.*

Cynoglossum amabile.—This is a good addition to annual flowers—bold, free grower, good blue, and is good in effect as I write (October 8th) after flowering through the summer. It is best in a bed of yellow Tea Roses rather openly planted.—W.

Caultheria tricophylla.—I counted today (October 1st) between sixty and seventy ripe berries on *Caultheria tricophylla*, most of them so entirely hidden by the foliage that a casual observer would never see them. On two other plantations which have hitherto been far the most prolific I only found one berry.—E. CHARLES BUXTON, *Coed-Derw, Bettws-y-Coed.*

Chrysanthemum Soeur Melanie.—The pure white blooms of this are borne with the greatest freedom. In the south, no doubt, the variety would expand its blooms in the open, but further north, unless protected by tiffany, frost is apt to occur before the display is general. The plants, if lifted in October and given the shelter of a greenhouse, will provide a wealth of material for cutting over a long period.—KIRK.

Gentiana verna.—This plant, with me, flowers twice in a season, in spring and in autumn. I wonder why this plant does so, seeing in some places it fails to flower at all? On the other hand, I cannot, or at least have not yet, managed to flower *G. acaulis*. It has been tried in varying positions, but the plants dwindle away. *Gentiana verna* is grown in full sun in a front position on the rockery.—C. T., *Hightate.*

Note from Bucks.—A man who prunes Holly and Yew would do anything. It is a curious thing how hard pruning seems to die, and one sometimes wonders if it ever will. The Jalap plant (*Ipomæa Purga*) is beginning to bloom, and there is a good show of Nerines. *Lapageria* also had about a dozen good blooms on it. Do you succeed well with *Romneya Coulteri*? My plants have a habit of doing very well the first year, and then slowly getting worse and worse each year. I think they like all the sun one can give them.—M. Y.

[Sun and free soil should do, and good, young plants are essential; plant in April, using seedling plants.—Ed.]

Rose George Dickson.—This is one of the finest velvety-crimson Roses we have, the colour of the blooms in the autumn days being very rich, while to this is added the fact that it is very sweet-scented. Those who are looking for a richly-coloured, sweet-scented Rose that flowers freely in the autumn should find room for this.

The Blue Bindweed.—I have this in various positions on walls and as edgings, usually working with plants from cuttings. This year a batch, raised from seed in spring, is now flowering very well as a carpet beneath Tea Roses. A more beautiful plant for the flower garden has not been introduced. It is still in good bloom—early in October.—W.

Erodium corsicum.—My plants of this are still (beginning of October) covered with their bright pink flowers and seem to be inexhaustible. They only ripen a few seeds with me, which no doubt helps to prolong the flowering period. To my mind it is quite one of the prettiest of the family. I grow it in a rather poor, very gritty soil.—J. W. O.

Crocus speciosus albus Bowles's White.—This is one of the many new Crocuses we owe to Mr. E. A. Bowles, and a great beauty it is. The flowers are large, of good substance, and of wonderful purity. On first opening, the outside is slightly flushed with pale blue at the base, but this soon disappears. The inside is pure white with the exception of faint purple lines towards the base. This is the best white form of *C. speciosus* which I know.—S. ARNOTT.

Crinum Powelli.—I am glad to see, page 514, that "E. H. Jenkins" recommends *Crinum Powelli*. Some bulbs in my rock garden, planted ten years ago, have again flowered well this autumn. Nothing has been done to them since they were put in, and they have needed no protection in the winter. Do you recommend dividing the bulbs in order to increase them?—M. C. GILLET, *The Elms, Banbury*.

[So long as the bulbs are doing well we should leave them alone, but if you wish to increase your stock, then the best way is to lift them and remove the offsets.—Ed.]

I have a specimen of this fine *Crinum* now carrying seven spikes. The first spike has really finished blooming, and the last one has not opened its flowers, but given a continuance of mild, fine weather, no doubt it will expand. It has never before thrown up more than three spikes in a season, so seven must bespeak unbounded vigour and soundness. The *Crinum* being a deep-rooting plant, many of this plant's roots must now be down in the clay, for the place prepared for it did not exceed 2 feet in depth when planted about seven years ago. The plant gets no protection in winter unless it comes unusually severe, when I place a mound of sand or ashes around the stem. This shows that *C. Powelli* is hardier on cold soils when established than is generally supposed.—C. TURNER, *Highgate, London, N.*

Pyrus (Sorbus) Vilmorini.—This was one of the shrub novelties that gained an Award of Merit at the Royal Horticultural Hall on September 26th last. A Chinese plant as yet not well known in this country and bearing certain affinity to the Mountain Ash section of the race, it appears so far as is at present known to incline to a bush-like habit of growth rather than the small tree character of the Mountain Ash. It is an attractive shrub, the long pinnate leaves and branching clusters of fruits, rose to scarlet in colour and quite *Pernettya*-like in these respects, being somewhat out of the common. Grouped

on the lawn so that other plants—e.g., Lilies—might be associated therewith, it would make quite a new feature. Bearing seeds freely it should soon be available in plenty.—E. H. J.

The Western Yellow Pine on the Sierras.—In support of what I wrote recently as to the need of respecting the natural habit of trees of the Pine tribe I quote this from Jepson's *Sylva of California*.—W.

The Yellow Pine is the most abundant and widely distributed tree of the forests of California, and is particularly characteristic of the Sierra Nevada, where it attains its finest development. The largest trees most commonly grow along the ridges, and it is the ridges which the trails ordinarily follow. Here the traveller may journey day after day over needle-carpeted or Grassy ground mostly free of underbrush, amidst great, clean shafts 40 feet to 150 feet high, of really massive proportions, but giving a sense of lightness by reason of their colour, symmetry, and great height. No two trunks in detail of bark are modelled exactly alike, for each has its own particular finish, so it is that the eye never wearies of the fascination of the Yellow Pine, but travels contentedly from trunk to trunk and wanders satisfyingly up and down their splendid columns—the finest of any Pine.

Cotoneaster Dielsiana.—Seeds of this species were originally sent home by Mr. E. H. Wilson in 1900, and it created a good impression a few years later when exhibited in full fruit at one of the autumn fortnightly meetings of the Royal Horticultural Society. It was at that time exhibited under the name of *C. applanata*, but it had apparently been previously named *C. Dielsiana*, which is now the accepted name. One of the deciduous-leaved set, it forms a light-branched shrub 6 feet to 8 feet high, with long, slender branches clothed with dark green, ovate leaves, from the axils of which, on short shoots, the small, rather inconspicuous flowers appear in June to be followed later by bright red or almost scarlet fruits, which ripen in September and remain on the bush for a couple of months or more if protected from birds. It is a native of Central China, and one of the most attractive of the several species that have been recently introduced. It thrives in good, loamy soil, and can be increased either by seeds sown in spring or by cuttings of half-ripe shoots inserted in light soil in a close frame during summer.—D.

Sweet Verbena (Aloysia citriodora) in Scotland.—Some weeks ago there was an interesting article on fragrant plants in your columns. Among others mentioned was Sweet Verbena, and it was remarked that it flourished in the milder parts of Scotland. This I can vouch for. In Campbeltown, Argyle, there is an old bush growing in a warm, sheltered corner of a garden. It is never protected in any way. I took the opportunity of measuring it, roughly, the other day, and found it was fully 9 feet high and about 8½ feet through—truly a noble bush, and its fragrance is truly delightful. A younger bush has been planted as a companion, and it also has grown to nearly the same size.—SCOTUS.

—In our mild climate the Sweet-scented Verbena (*Aloysia citriodora*) will remain out of doors for a succession of seasons, but, in the event of a very severe winter, such pieces will succumb. One such plant which has been outside during the past few years has assumed the proportions of a shrub, some of the present year's shoots being almost 9 feet in height, while the plant is nearly as much through.

On the other hand, pieces raised in heat from cuttings in spring, hardened off, and put out in late June are only a little over 3 feet high, in some cases slightly under that height. Of course, the unfavourable season must be taken into consideration, but it is clear that, where *Aloysia citriodora* will stand the winter out of doors, better results may be obtained than by annually raising young plants from cuttings, even if the former are cut down to the ground-line.—W. McG., *Balmac*.

FRUIT.

GRAPE CHASSELAS NAPOLEON.

I SEE that Chasselas Napoleon has been exhibited recently at the Royal Horticultural Society's Fruit Show. The fact that it was in the winning collection of six varieties where the competition was keen proves that this is a fine Grape when well grown. It was in 1867 that I made the acquaintance of Chasselas Napoleon, when exhibited in company with about 400 varieties of Grapes in the Paris Exhibition. These Grapes came from the south of France and varied greatly in colour. Some were white, some were tinted with amber, and there were all shades of chocolate, purple, and black. The difference between many of them was, naturally, minute. They were probably mostly local varieties, which had at various times originated in the vineyards, many, perhaps, being chance seedlings. Among them Chasselas Napoleon was prominent and distinct, and I thought at the time that in the hands of English Grape growers it would be a fine addition to the varieties grown under glass in this country. The bunches exhibited were from the open air. The berries were of medium size, but finely coloured, and it seemed to me that this variety would be a good companion for the Hamburg and Buckland's Sweet-water. The colour of the berries and the flavour seem to indicate that it is a cross between Muscat of Alexandria and the Chasselas, so much grown in France. It would be interesting to know what treatment is given to this Grape at Clumber. Is it grown with the earlier-ripening kinds or with those that require a considerable amount of artificial warmth? For years past I have been watching for some account of this Grape, but have not in the course of forty years come across a Grape grower who had ever cultivated it, and not more than one who knew of its existence. Anyway, it is evident that it is worth the attention of Grape growers in this country.

J. CORNHILL.

NOTES AND REPLIES.

Apple Allington Pippin not fruiting.—I will be obliged if you will tell me if the shoots with bud at tip I send you should have been pruned away on Apple Allington Pippin? The tree was first started on wires as a cordon, but from neglect in pruning became a bush. It has never fruited though four years planted, and the gardener prunes off the branches every year to the third eye. Is this right, or should these branches with the bud have been left?—A. L.

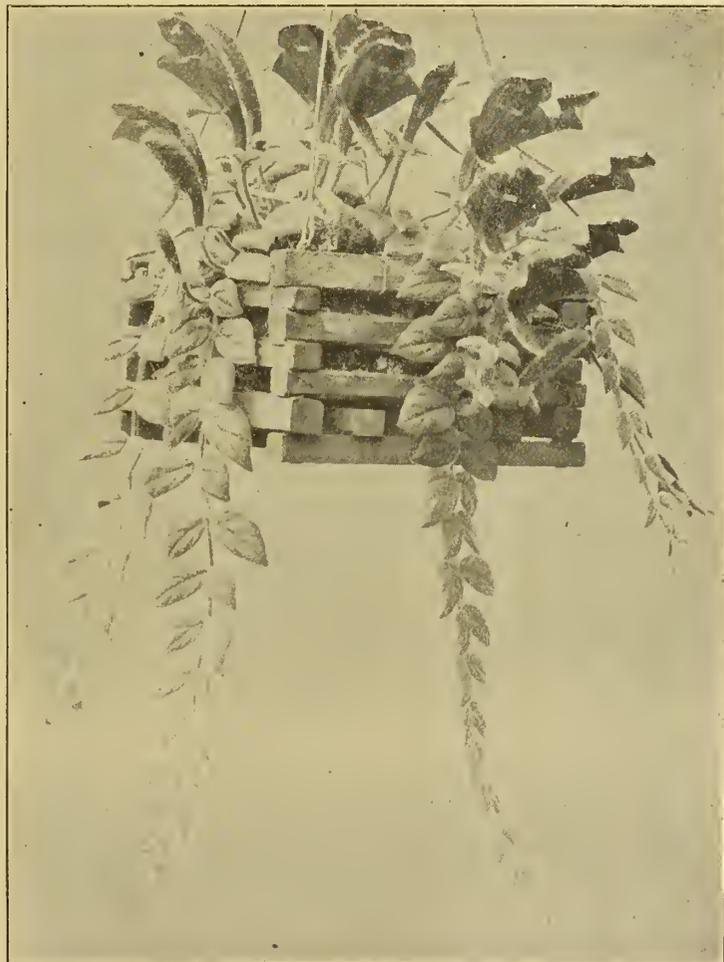
[The variety of Apple mentioned is prone to form fruit-buds at the points of the young shoots. These may, when it can be done without unduly shading the buds on the spurs behind them, or when it is not likely to lead to a congestion of young shoots, be left to fruit and then be cut away. As a rule, Allington Pippin produces such an abundance of fruit-buds on the spurs as to render those formed on the tips of the shoots superfluous, and we invariably sacrifice them when winter pruning. We are, however, always careful to leave five buds when cutting these shoots back in

summer and retain four at the winter pruning. Too close pruning leads to the production of growth alone, and this may be the reason why your tree has not yet fruited. If, after treating the tree as we advise, next season it still fails to fruit, lift it and replant it.]

"Sleepiness" in Pears.—Never a season passes in which there are not complaints of sleepiness in Pears. This is not a disease as is by some supposed. It is merely an indication that the fruits have not been used soon enough, and that the first symptoms of decay are setting in. Some varieties are more prone than others to this fault, Williams' Bon Chrétien being a confirmed offender in this respect. Generally speaking, it will be found that early and mid-season Pears are more apt to go sleepy than later sorts, but even the

a somewhat pronounced flavour and aroma, as Cornish Gilliflower, Ribston, Margil, and others, are the favourites of the birds, and one occasionally comes across varieties in out-of-the-way cottage gardens practically unknown to commerce that seem very susceptible to attack. I have one, apparently a good type of Pearmain, on which they started early, but a plentiful supply of strips of old curtains hung in different parts of the tree checked the onslaughts, although, I fancy, the ripening of the fruit in wood, covert, and hedgerow may have drawn them in other directions.—E. B. S., *Hardwick*.

Pears.—Many varieties are ready for storing, and the following have been gathered: Beurré d'Amanlis, Beurré Superfin, Beurré Hardy, Fondante d'Automne, Pitmaston Duchess, Louise Bonne of Jersey, Marie Louise, Hessele,



Columnea gloriosa at Glasnevin.

latter will go "sleepy" if they are kept too long. A good deal depends on the fruit-room. A cool, uniform temperature ought to be aimed at, fire-heat being only permissible to bring on a variety which may be required at an earlier date than that at which it will naturally mature. Pears ought to be allowed to hang as long as possible upon the trees, too early picking, I think, being one of the chief factors in the production of sleepiness.—KIRK.

Late Apples.—It being advisable to let the late Apples hang as long as possible before gathering, it will be found necessary to keep a sharp eye on those varieties for which birds have a decided partiality, and, where it is not possible to net the trees, to try some means of keeping them at bay; also to have some plaster of Paris ready to hand with which to stop any tiny holes as soon as the fruit is gathered. Yellow-fleshed Apples with

Seckle, and Thompson's. Many of the later varieties should be allowed to hang on the trees until nearly the end of October, shrivelling taking place if gathered too soon, these later sorts requiring a longer time to mature. The varieties mentioned above must be examined every few days, as they ripen quickly when stored, and will not keep in good condition for a long time.—F. W. G.

Apple Warner's King.—This is an overpraised Apple. Many growers who planted this in small gardens or as restricted trees soon found out their mistake. In my garden the owner planted eight trees some ten years ago. When I came these were in positions where they had to be pruned, but those I could allow to extend have borne heavy crops for four years or five years, while those restricted have not paid for the room they occupy. I have seen this Apple give enormous crops on large standard trees on the free loam of Ilminster in Somerset. With me it is a poor keeper, but commands a good price in the market owing to its size.—WEST SURREY.

PLANTS AND FLOWERS.

INDOOR PLANTS.

THE COLUMNNEAS.

THE Columnneas, which consist of a large number of species, belong to the Gesneria family. In a state of nature most of them occur as epiphytes in the forests of Central America and in the warmer parts of the southern portion of that continent. Their cultural requirements are much the same as those of the different *Æschynanthuses*, also belonging to the order Gesneraceae. The genus *Æschynanthus* is, however, as a rule, confined to the tropics of the old world. Most of the Columnneas will succeed when grown in hanging-baskets, as in the accompanying illustration of *Columnea gloriosa*. A suitable compost may be made up of fibrous peat, Sphagnum Moss, and sand. During the growing season they need liberal supplies of water, while at no time must they be allowed to get dry. They may also be grown in pots into which an upright piece of dead Tree Fern stem has been placed. The shoots will in time clothe the stem, and a very pretty effect is produced when the plant is in flower. A prominent characteristic of some of the Columnneas is the large size of the curiously hooded blossoms. The flowers are scarlet and yellow. A notable feature is the pretty, bronzy tints of the hairy leaves. Much in the same way is *hirta*, with deep green leaves; indeed, by some *gloriosa* is regarded as but a variety of this. *Columnea glabra* is an upright shrubby species, with small, fleshy, glossy green leaves and long, red flowers, while *C. magnifica*, also an erect grower, has hairy leaves and brilliant scarlet flowers. Within recent years a first-class certificate was given to *C. Cerstediana*, a species whose long pendent shoots bear a profusion of erect scarlet flowers. A curious, yet attractive, species is *C. Scheideana*, whose large flowers are coloured brown and yellow. Between *C. glabra* and *C. magnifica*, M. Lemoine, of Nancy, has raised a very desirable hybrid, whose large upright flowers are of a rich scarlet colour. It is more or less erect in habit. There are many other species, but few, if any, of them are in general cultivation.

K. R. W.

BOUVARDIAS.

WHERE a greenhouse has to be kept as gay as possible throughout the year the different Bouvardias are of great service. While the long-tubed, white-flowered, fragrant *B. Humboldtii corymbiflora* will flower during the summer, the others are at their best during the last three months of the year. If cuttings are struck early in the year neat little bushes may be obtained in 5-inch pots by the time the flowering season comes round. By some, Bouvardias are planted out during the summer and lifted and potted before the flowering season, but this is, I think, not so much practised as at one time. They can all be propagated by means of root cuttings, but I prefer to take the young growing shoots which have been brought forward in a gentle heat, treating them the same as *Fuchsia* cuttings. They will form neat flowering plants the first season, but if larger specimens are desired they may be grown on a second year. When it is intended to treat them in this way they, as soon as the flowers are over, should be kept somewhat drier at the roots in order to give them a partial rest. Then early in the year they should be pruned into shape and placed in a structure a little warmer than an ordinary greenhouse. As soon as the young shoots

make their appearance the plants should be repotted in a mixture of loam, leaf-mould, and sand. In potting, as much of the old soil should be removed as can be done without unduly distressing the plants. For this potting they may not require pots any larger than those in which they have flowered, but may be shifted into larger ones when growth is more active.

VARIETIES.—A selection of the best varieties would include *alba odorata jasmiflora* (blush-white), *elegans* (scarlet), *Humboldtii corymbiflora* (white), *King of Scarlets* (large scarlet flower, white tube), *Mrs. Robert Green* (salmon-pink), *President Cleveland* (vivid scarlet), *Priory Beauty* (delicate rose), and *Vreelandi* (pure white). The above are all single-flowered varieties, a few of the best doubles being *Alfred Neuner* (white), *Bridesmaid* (pink), *Hogarth flore pleno* (scarlet), and *President Garfield* (pink). This limited number has been raised in different parts of the globe, for *King of Scarlets* comes from Australia, *Alfred Neuner*, *President Cleveland*, and *President Garfield* from the United States, *Hogarth flore pleno* from the Continent, while most of the others have been obtained in this country. W. T.

NOTES ON GREENHOUSE PLANTS.

BOUARDIAS.—The excellence of these, as seen in some of the London market gardens, would surprise those familiar with the class of plant commonly seen in private gardens. It cannot, of course, be expected that amateurs with a miscellaneous collection of plants which all vary somewhat in their needs can compete with the market grower, who concentrates his energies on three or four things, the peculiarities and needs of which he has studied for years. As regards the *Bouvardia*, the mistake commonly made is in coddling the plants too much. Early in spring they need to be brought along in a rather confined atmosphere, with plenty of overhead sprinklings, but as the season advances they should get plenty of air, and by the end of June they are best in the open, and well supplied with moisture. They must never get dry. When the weather is warm they make a short, stout growth, which is able to produce large heads of high-quality blooms. Grown all through the summer with other things under glass the plants are apt to become somewhat attenuated and the flower trusses poor in quality. Those who may have been rather disappointed with this fine greenhouse plant should try the above method, which is practised by the experts who produce those fine specimens which form a feature in Covent Garden Market during the winter and early spring.

KALOSANTHES COCCINEA.—There was a time when this was very popular with amateurs. At the present time I fancy that it is not much grown. Properly managed, it is a very attractive greenhouse plant, the deep green foliage displaying the vivid tints of the flowers to great advantage. It is, moreover, easy to cultivate and is a good thing for the amateur who has not expert knowledge of plant culture and has not, perhaps, much time to spare for gardening. Some things, if they get on the dry side in the growing time, are much checked in their development, but the *Kalosanthes* shows a happy indifference to neglect in this way so long, of course, as it is not pushed to an extreme. The great fault that amateurs committed in those days was in retaining old plants instead of putting in a cutting or two every year. The plants in the course of a couple of years became gaunt, bare of leaves at

the base, and therefore unsightly. Such plants can be cut back and dwarfed, and the very big specimens, some 4 feet across, which once formed a feature in collections of stove and greenhouse plants at the big shows were treated in this way, but this involves shifting along into larger pots, and in a general way the amateur does not want to go beyond the 6-inch pot stage. Where there is ample glass accommodation and there is a large conservatory to decorate, well-grown, large specimens are useful, as they afford a welcome variety to *Zonals*, *Tuberous Begonias*, etc. For small growers the best way is to put three cuttings into a 3-inch pot in August and shift into a 6-inch pot the following spring. This will give dwarf specimens with foliage down to the pot.

ROCHEA FALCATA.—It is a long time since I have seen this old inhabitant of our gardens mentioned. It belongs to that class of plant which was cherished by a bygone generation of plant growers. Like the *Kalosanthes*, it comes from the Cape, and, therefore, loves sunshine and air, but, unlike it, frequent propagation is neither necessary nor desirable. Plants may remain in the same pots for several years, and retain and even increase their blooming power if well supplied with water and a little stimulant in the growing time. This old Cape plant is quite distinct from any other greenhouse plant, and the big heads of orange-scarlet blooms are very striking.

HABROTHAMNUS FASCICULARIS is showy and of very easy culture. It should be grown on into 8-inch pots and the compost should be generous, loam with a little well-decayed manure suiting it best. The great thing is to induce a free, strong growth and mature the same by exposure to atmospheric conditions from July to September. With this treatment full-sized heads of bloom will be obtained. J. CORNHILL.

NOTES AND REPLIES.

Phyllocactus fruiting.—Is it rare for a *Phyllocactus* to bear fruit? I have one the size of a hen's egg, dark reddish-purple.—OLD WOMAN.

[It is by no means unusual for *Phyllocacti* to bear fruit; indeed, most garden varieties have been raised from seeds.]

Adiantum with long stems (p. 424).—The best form of *Adiantum cuneatum* for producing long stems is *A. c. elegans*, and the best method of ensuring them is to raise young plants periodically from spores and grow them in brisk heat and moisture. Growing them under Vines, whether in small or large pots, is starvation to them; the heat is not brisk enough, the moisture insufficient. The length of the fronds given not only proves this, but shows also that the plants are more or less exhausted. Young plants less than a year old raised from spores, if grown on briskly in a temperature of about 80 degs. would produce fronds of three times the length stated. Market growers, who are constantly picking the fronds of these as they are ready, know that there is a limit to endurance, and, realising this, raise fresh stock periodically to replace that exhausted. The low, well-heated houses are fairly heavily shaded, and in the growing season reek with moisture. Of course, there are long-stemmed varieties of *Adiantum*, but, lacking the grace of the above-named, are not in demand. I once saw the *British Maiden-hair* with fronds 18 inches in length in rather exceptional circumstances. The greenhouse stage rested on brick arches, and the plant, becoming established at the back with the growth constantly drawing to the light,

fronds several times the length of those ordinarily produced had resulted. The exceptional circumstances of their production were interesting rather than otherwise and of little practical use to the gardener.—E. H. JENKINS.

Pelargonium Unique.—There is certainly a revival in favour of the various scented-leaved *Pelargoniums*, in some of which the blossoms are remarkably showy. Among them the variety *Unique*, represented by different forms, occupies a prominent position. The least showy of them is what is usually referred to as the old *Unique*, whose flowers are of a deep lilac tint. Surpassed by none of the others is *Rollisson's Unique*, with rich violet-crimson blossoms. *Mrs. Kingsbury* (magenta-crimson) is also in the same way, while in *Scarlet Unique* the flowers are scarlet, but of a somewhat dull tint. It has a decided blotch of maroon. All of these are what may be referred to as of a straggling habit of growth, but there are several ways in which they can be utilised in the greenhouse. They may be treated as wall or pillar plants, under which conditions blossoms will be freely produced throughout the summer and well on into the autumn. At this season they are, from their bright colours, particularly attractive. Good examples may also be grown if the flexible branches are trained round a few sticks, and, as they will flower freely in this way, they afford a pleasing change from the Zonal varieties. In bygone days they were at times grown as specimen plants. In this way, if carefully attended to, they soon covered a good-sized trellis. Like all the rest of their class, *Pelargoniums* root readily from cuttings, and their cultivation is simple, provided they are kept clear of aphides. Other scented-leaved kinds whose blossoms are also particularly showy are *ardens*, said to be a cross between *P. fulgidum* and *P. lobatum*. The flowers of this are bright scarlet, blotched inside with a deeper tint. Also worthy of mention are *Clorinda* (deep rose), *Lady Mary Fox*, also known as *Scarlet Pet* (soft red, maroon blotch), and *M. Nonin* (bright scarlet).—W. T.

Aphelexis humilis.—Though the *Aphelexis* are now included in *Helichrysum*, the older name still holds good in gardens. At one time a considerable number of species was catalogued, but now most of them are regarded as varieties of *Aphelexis humilis*. It, or at all events one of its forms, was much grown as specimen plants when these were so generally cultivated and largely exhibited. *A. humilis* forms a bushy specimen from 18 inches to 2 feet in height, the branches covered with white tomentum. The flowers, which open only during sunshine, are of a clear satiny-pink, and if gathered before they are too far gone and dried will retain their colour and shape for a very long time. The type and its varieties need much the same treatment as *Cape Heaths*—viz., a compost consisting mainly of peat and sand pressed down firmly, a well-ventilated structure, and careful watering.—W. T.

Freesias have started into growth and the material used for covering has been removed. They are exposed to all the light and air possible to ensure a sturdy growth, and when the cooler weather sets in the plants will be removed to a shelf in a light, well-ventilated house. Watering must be done with great care, for *Freesias* are very impatient of too much moisture, rarely succeeding well if this happens. As support becomes necessary, provide neat stakes. The plants require to be kept growing steadily, but at no time must they be subjected to excessive heat. An atmospheric temperature of 50 degs. to 55 degs. is quite sufficient during the winter.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

SAXIFRAGA OPPOSITIFOLIA SPECIOSA.

THE experiences which have recently been exchanged between growers of alpine plants as to the likes and dislikes of this particular section of the genus, variable as they undoubtedly are, should go a long way to tempt those who have not tried them to grow some of the more beautiful of a very desirable race. The measure of success attained under varying conditions in diverse localities goes to show that the plant is not fastidious in the majority of instances, hence one to garden with on a generous scale. Sheeting the earth with countless blossoms in white, crimson, and purple in a way comparable to no other, and giving of this wealth when not many hardy plants are astir—much less in flower—invest them with a value which cannot be denied, though to these must ever be added the good attributes of complete hardiness and comparative immunity from

weeks. Division is best done directly flowering is over. In this connection the prostrate habit must be borne in mind, the units so planted as to be half-buried by the soil. Unless this be done, failures will assuredly occur. The species varies considerably, and there are some good varieties. The most brilliant—a vivid crimson indeed—is *W. A. Clark*; next to it, *coccinea*—intense crimson. *Speciosa* (here figured) is one of the largest, and, with *splendens*, two of the richest of the crimson-purple set. *Maxima*, major, *pyrenaica*, and *grandiflora* are other names found in catalogues. Those first mentioned are the best. *Alba* is pure white and quite distinct, its smaller flowers having the petals widely separated to their bases. It is, however, beautiful and very desirable.

E. H. JENKINS.

SOME ROCK GARDEN PLANTS.

[To the Editor of GARDENING ILLUSTRATED.]

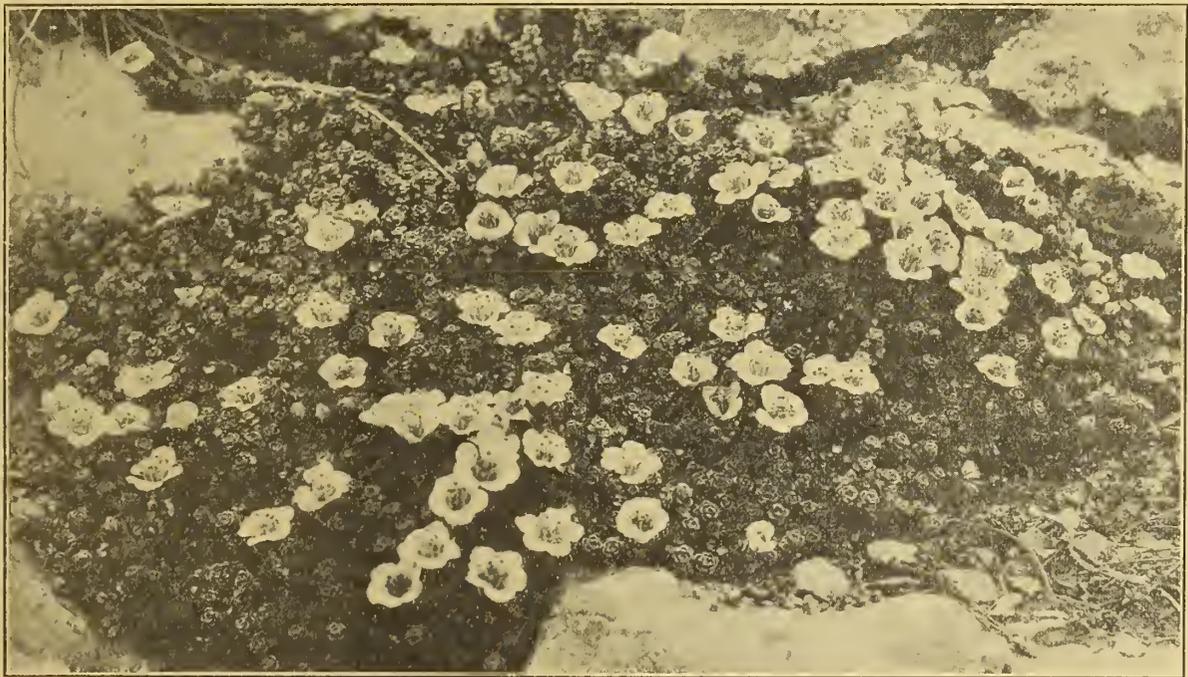
SIR.—In addition to the two dwarf Fuchsias mentioned in your columns a short time ago, there are at least two also worthy of a place in the rock garden.

just above the foliage. They consist of a flat calyx of concave petals, of a soft lavender-blue, resting on a smaller epicalyx of the same shape. From the central ring of white anthers springs the white stigma, with a spreading base. Immediately behind the flower, at the top of the stalk, there are generally two or three diminutive infertile inflorescences of dull purple, at once proclaiming kinship with the Hydrangeas. It is obvious that in one long course of evolutionary change these inflorescences are being discarded altogether, as sometimes there is only one, and occasionally a mere rudimentary attempt. *Deinanthe cerulea* should be planted in a fairly moist situation. A shady spot is imperative, for if the direct rays of the sun fall upon the leaves they speedily become bleached and unsightly; in fact, a fairly dense shade is, as doctors say, indicated for its perfect health and beauty.

T. A. HYDE.

Avonwick, S. Devon.

Cobweb Houseleeks.—Will "E. H. Jenkins," who writes about "Cobweb Houseleeks in pots" in your issue of October 14th, page 515,



Saxifraga oppositifolia speciosa in the Royal Gardens, Kew.

slugs. From the cultural standpoint, soils which are best avoided are those of a hot, sandy nature, and those of an opposite extreme, which are cold and tenacious. Between these the grower will be able to fix a midway line which will bring him a fair amount of success. Aiming at a cool-rooting medium in a position removed from the ill-effects of parching summer heat—always the more to be dreaded where the plants are not under a watchful eye—such a soil would be assisted by a free incorporation of broken sandstone or limestone and firm planting. Very gritty soil and even pure sand are helpful with moisture. Sun and exposure will not harm if the plants are attended to, while sun and partial shade will play a helpful part by extending the season of flowering in any one variety. Mulching, too, is important for permanently planted groups, and done soon after flowering gives new life and assures a growth that will be dowered with blossom in its turn. Propagation by cuttings in spring also ensures increased vitality and a prodigality of blossoming not excelled. In a close, cold-frame, 1/2-inch long bits or rather more root in a few

FUCHSIA PROCUMBENS, from New Zealand, has yellowish, tubular flowers, whose lobes are tinged with purple at the tips. Its leaves are round and small. The entire plant lies close to the ground and stones. Nestling amid the foliage are the remarkable fruits, like a medium-sized Gooseberry, which remain on the creeping twigs for months. They are crimson as they ripen, later on taking a rich, almost turquoise-blue bloom. Another is

FUCHSIA MICROPHYLLA, with tiny bell-like flowers held well away from the red stems, and small green leaves. These are almost upright, of a deep crimson-magenta, with a white stamen. It leads a more or less herbaceous existence in this part of South Devon, springing afresh each season to little more than a foot in height. One of the most interesting and as yet very rare plants comes to us, with so many new treasures, from China—

DEINANTHE CERULEA, a near relative of the Hydrangeas. It is a herbaceous plant, forming a thick tuft of wrinkled, hairy leaves, extremely rough to the touch, and grows about 9 inches high. The flowers are each an inch in diameter and are lifted

kindly say if for rockwork they should remain in the pots which should be sunk in the ground?—CECIL A. P. OSBORNE.

[No; the intention of the note in question was to bring into prominence the special value of these plants to those having very small gardens and probably no other way open to them of growing these very interesting subjects. On rockwork they are seen to the best advantage threading their way, as it were, through large, specially-conceived crevices, or furnishing a sunny, dry slope or ravine composed of half rock, half soil. In these and like places the whiteness of their web—the chief garniture of these plants—is emphasised to the full. On level ground or on rockwork, with too much soil about, much of this characteristic beauty is lost, and in winter is non-existent. Dry overhead conditions and the general absence of soil-damp as felt at ground-level bring out the best attributes in these Houseleeks. In planting break them up or plant single rosettes freely and await results.]

Primula pubescens alba and Daphne Genkwa.—I would be greatly obliged if "E. H. Jenkins" will tell me where I can pro-

cure *Primula pubescens alba* he refers to; also *Daphne Genkwa*? I cannot find either plant in the many catalogues I have by me. I am just now starting a rock garden, and also, if possible, a Heath garden. Can you tell me of any really good work published on Heath gardening?—CECIL A. P. OSBORNE.

[The *Primula* you can get from any hardy plant specialist, while any grower of greenhouse plants would no doubt be able to supply the *Daphne*, which is not hardy. There is no really good work that we know published on the Heath garden. You will find an article on the subject in our issue of August 19th (p. 410), while hardy Heaths are also dealt with in "The English Flower Garden." In your anticipated work in the rock garden you will be well advised in getting outside help and thus avoid the pitfalls into which many amateurs fall.]

Polygonum affine.—The *Polygonum*s are not very choice subjects for the rock garden, being for the most part somewhat coarse, but this species looks quite pretty just now—a pleasing effect being produced by the contrast between the old flowering spikes, which are of a rich reddish-brown colour, and the younger ones, which are pink. It spreads very fast, and needs to be watched carefully to prevent its swamping other things. It is not at all particular as to soil or situation.—W. O.

VEGETABLES.

NOTES AND REPLIES.

Greened Potatoes.—I have been unfortunate as to some King Edward Potatoes. I dug them up, and was called away from home, and they have been lying two weeks on the ground. A man has just got them under cover for me. I would like to know whether it is true that Potatoes are poisonous for table use after they have got a bit green. I do not want to use them as seed as I am getting new Potatoes for seed next year, and I do not want to give them to the pigs when Potatoes are so dear.—HENRY C. W. TOWNEND.

[The greened Potatoes may be safely used. If you lay them out thinly in a dark place and cover them with mats or sacking the green colour, which is due to the exposure to light, will disappear, or you may clamp them in the ordinary way, when the normal colour will again return.]

Brussels Sprouts.—In autumn it is no unusual thing to see growers remove a portion of the lower leaves with a view to induce the plants to produce sprouts. On several occasions I have tried a few plants in a batch, but have never seen any good results from so doing. It is worthy of notice how some plants produce sprouts early compared to others. The many so-called sorts are nothing but selections. Everyone who has grown "Imported" must have noticed how varied the plants are. I am convinced no green crop pays to rogue more than Brussels Sprouts. During September I could not notice how early some plants were developing sprouts. I sowed where they were to stand to avoid labour in planting out. The plants have short glaucous leaves, with nothing of the Savoy kind of foliage. For years I have observed all of this type produced early sprouts of that nice, hard, close kind which are of so much better flavour than the big ones. During the past two seasons I have found that by sowing early in March in the open where they are to remain the sprouts come much earlier into use. If the soil is not rich the growth is firm. Removing the tops and the foliage I consider a mistake, seeing both help to protect the stems in severe weather.—J. C. F. C.

[This idea of sowing Cabbages, Brussels Sprouts, etc., where they are to stand is quite opposed to all the tenets of good gardening. From our correspondent's

note, it seems that all the plants are allowed to stand, no thinning being done, or are we to understand that he sows single seeds in lines at the same distance apart as would be done were the seedlings planted out in the usual way.—ED.]

Potatoes are badly diseased in this locality. If not already completed, the lifting of the tubers should be pressed forward with all the speed possible, there being nothing to be gained by leaving them longer in the ground. As wet weather may now be expected, the effects would be disastrous. Those that were clamped some time ago have become diseased, and it is necessary to examine the tubers in the clamps and reject all that are unsound. Keep the ridges protected from heavy rains by means of tarpaulins or other suitable material. Sprinkle lime freely amongst the tubers, as advised in former notes.—F. W. G., Northants.

Late Potatoes.—Of these there is but a very moderate crop—moderate, that is, as regards the size of individual tubers. Disease, although present, was not alarmingly noticeable; and the best returns during the present year have been given by Up-to-Date and by British Queen. A long line of Langworthy, planted from home-grown seed, hardly repaid the labour of lifting. This variety was planted experimentally. It has previously failed here, but was given another trial, but will now be permanently dispensed with.—KIRKCUDBRIGHT.

GARDEN FOOD.

WHY EAT MEAT?

THAT the vegetable kingdom does furnish a diet of sufficient quality to keep the body at the highest point of efficiency is witnessed by more than half of the human race and almost the entire animal kingdom. Most of the manual work in the world is performed by men and women whose food is obtained from plant life, with a total or nearly total absence of meat. This proves that vegetable foods are force and heat producers and tissue builders.

Many of the cereals are not only rich in proteid and starch, but some of them contain considerable fat. Oats have over 6 per cent. of fat, and Corn about 5 per cent.; while Wheat, Rye, and Barley have about 2 per cent. The fat of the body is estimated at about one-fifth of the total weight. It is evident that this indispensable foodstuff is abundantly supplied in Nuts, ripe Olives, and some of the cereals. Furthermore, Nature has lavished upon mankind a marvellous variety of the most delicious fruits, which are indispensable to the healthy body. While with a few exceptions they do not possess a high nutritive value, they are rich in acids, sugars, and mineral salts, all of which are needed in the body.

Plants are the natural food builders. In these natural foods there are no products of disintegration or waste such as are found in flesh foods. Furthermore, plant foods are always built up under healthful conditions, whereas meat may be diseased during the entire life of the animal, or made so by the conditions incident to slaughter. The process of life in the animal tears food down or breaks it up into its elements again, and then forms it into a more complex molecule, but more unsuitable for food, because of the waste products held within its structure. Vegetable foods tax the excretory organs less than a meat diet, and require less oxygen in their oxidation, and hence have a tendency to increase the duration of life, as their conversion into brain, bone, and muscle is accomplished at a less expenditure of energy. A flesh diet increases the quantity of urates, sulphates, and other waste products, hence increasing the work of the kidneys.

The consumption of meat increases the

function of uric acid and its antecedents in the blood and tissues of the body, which are well-recognised factors in many chronic diseases. Moreover, meat diminishes the alkalinity of the blood and increases the acidity of the urine. Fruits and cereals increase the alkalinity of the blood and also of the urine, an important factor in the prevention of disease. Sir Henry Thompson says, "It is a vulgar error to regard meat in any form necessary to life." Again, "To many it (meat) has become partially desirable only by the force of habit, and because their digestive organs have thus been trained to deal with it." Then he says, "A preference for the high flavours and stimulating scents peculiar to the flesh of vertebrate animals mostly subsides after a fair trial of milder foods when supplied in variety." This variety can be found in the list of cereals, vegetables, fruits, and Nuts. When a well-balanced diet of these foods is partaken of there is no desire for meat. Usually, when there is a craving for flesh foods after once having given them up it is because the body is not receiving sufficient proteid, fat, or salts.

Nature amply furnishes man with food of sufficient quality, quantity, and variety to meet all the needs of the body under all circumstances and conditions, and when he wisely subsists upon such food he is better off physically, mentally, and morally.—*Herald of the Golden Age.*

NOTES AND REPLIES.

Plum Coe's Golden Drop.—The value of the Plum for dessert is so great that the season ought to be prolonged as much as possible. This can be done by planting suitable varieties, and one of the best—if not, indeed, the very best—of late Plums is Coe's Golden Drop. This excellent variety needs a wall, and as it ripens well in such a position during late September and early October its value is evident. Of moderate size, the flavour is first-rate, and it is, in addition, a free-stone, which makes it more valuable. It is a consistent and heavy bearer. I cannot recall a failure with this variety during the past twenty-one years. The tree is of moderate growth, and does not need anything severe in the way of pruning. There is a red variety which is equally useful. Other good late Plums are Reine Claude de Bavay and Wyedale, the latter hanging until November. Pond's Seedling is also useful when thoroughly ripe, but, strictly speaking, it is a cooking Plum.—KIRK.

Squashes as food.—Have any of your readers grown these as the Americans do? In their nature like a large Marrow, they are more fitted for winter storing, and give a fine supply of food. Will our climate perfect their growth? The French make a good use of a like series, of which the Potiron rouge is the largest. Are we not mistaken in neglecting such valuable and easily grown sources of food? Some cottagers use old Marrows in a like way. Can any of your readers kindly tell us of any trials in this way?—HANTS.

Honey as a flavouring addition.—One of my friends recommends honey for sweetening when making jam. The other day he told me that a little touch of honey, eaten along with Black Currant jam, gave a delicious result. An Apple which is somewhat too sharp for the palate when eaten raw may be made quite acceptable when just tipped with honey. I recently tried raw Tomato with a touch of honey, eaten with brown bread-and-butter, and liked it.—J. N.

The Potato Onion.—This should be more generally grown. It has a mild, agreeable flavour, and would be welcomed by many people who like the Onion but who for various reasons avoid it. The Potato Onion has such a mild flavour and is so easily digested that many prefer it.—J. N.

TREES AND SHRUBS.

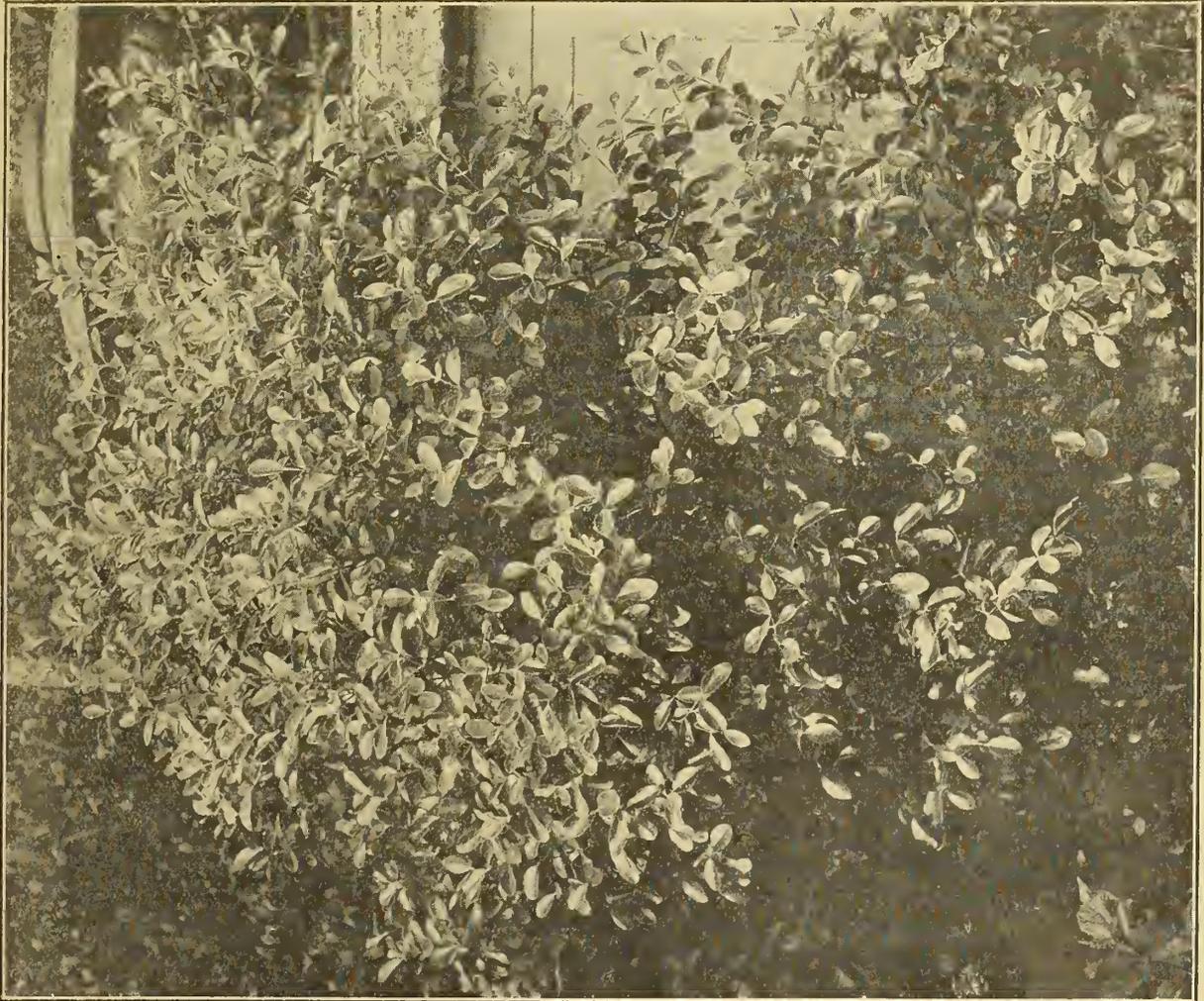
FEIJOA SELLOWIANA.

This handsome shrub has created a good deal of interest, for, although a native of S. Brazil and Uruguay, it is quite hardy when planted against a wall with a south, west, or east aspect, in many parts of the British Isles. Originally discovered in 1819, little appears to have been known of the plant in this country before 1895, but it is now fairly common. In Brazil it forms a large bush, its chief interest lying in its edible, Guava-like fruit. Here it grows 10 feet or more high when planted against a wall, and is of interest as an evergreen, for its dark green, oblong leaves, with white under-surface, are re-

flavour. It is well worth growing for the sake of its flowers, which are each about 2 inches across, and composed of four fleshy petals of a curiously hooded shape. These petals are purplish inside, and almost white on the exterior, but owing to their hooded shape the interior is almost hidden by the incurving of the edges, thus exposing the paler tinted outside. Like many other members of the Myrtle family, the long, slender filaments in the centre of the flower form a notable feature of the inflorescence. In the case of this Feijoa they are bright red tipped with yellow. The temperature of a warm greenhouse or intermediate structure suits it best. A native of Brazil and Uruguay, Feijoa Sellowiana was introduced by M. Edouard André in 1895.

leaves were unfolding, they were attacked by myriads of aphides, which, if left undisturbed, would soon disfigure them. A syringing with a mixture of soft soap and an infusion of quassia chips made short work of these pests. Strange to say, I never saw these aphides on any other plants except this Fatsia. The value of the Fatsia as an ornamental plant for the dwelling-house is considerable, as, owing to its hardiness and the stout, leathery nature of its leaves, it stands exposure to draughts well. When too large for this purpose it can be planted out. This should be done in early summer, so that the plants may be well established before winter.—W. T.

Hydrangea Sargentiana.—The most remarkable feature of this plant is the huge size of



Feijoa Sellowiana at Myddelton House, Waltham Cross, N.

tained throughout the year. Moreover, it bears handsome flowers freely. Each flower is about 2 inches across and produced singly from a leaf-axil. The sepals are white, as also are the outsides of the petals, the inside being blood-red. The stamens are each an inch or so long and red. Altogether it is a very showy flower. Unfortunately, the fruits are not perfected, or only on rare occasions here. It thrives in ordinary good garden soil, but likes a little peat about its roots. Cuttings of young shoots root readily in a warm and close frame in summer. In some favoured localities it can be grown as a bush in the open ground. D.

—This, a member of the Myrtle family, is very nearly related to the Guava (*Psidium*). The fruit is said to be egg-shaped, and of a delicious, aromatic, spicy

NOTES AND REPLIES.

Fatsia japonica.—In a note on this shrub in GARDENING ILLUSTRATED, October 14th, attention is directed to the fact that it is of considerable value as a hardy evergreen. It has another recommendation, and that is its value for smoky towns. I was long resident in a congested district of London, and, having a couple of plants that had become too large, they were planted in a front garden where little sunshine or fresh air fell to their share. Still, they did remarkably well, and pushed up numerous suckers. For some years before I left, the creamy-white flowers were each autumn freely borne. The atmosphere, being so smoke-laden, I used to sponge the leaves over in the spring when the fogs were over. A singular feature was that each year, just as the crowns of young

the leaves on the barren or non-flowering shoots. These are each 10 inches or 12 inches long and 7 inches or 8 inches wide, dark green and densely hairy above and paler and bristly below. The shoots, too, are thickly furnished with hairs and bristles, giving the plant altogether a remarkable appearance. On the flowering shoots the leaves are smaller, but the large flat corymb of flowers compensates for this. The fertile flowers are lilac-coloured and occupy the centre of the corymb, while an outer fringe is formed by the sterile flowers composed of large showy petals of a pale pink colour.—*Irish Gardening*.

Garrya elliptica.—Looking round the other day I was struck by the excellent promise given by a piece of *Garrya elliptica* upon a wall. The piece in question usually does very well, but it seems to have been suited in a special degree by the damp season. One of the most attractive of the catkin bearers, it ought to be borne in mind by intending planters

that there are two forms of *G. elliptica*. Of these, the male form is much more attractive than the female, the catkins being not only larger, but much more graceful than are those of the female plant.—W. McG.

ROSES.

Treatment of Cabbage Rose in pot.—Please tell me how to treat a Cabbage Rose slowly recovering from accidental over-watering in July. It is in a 12-inch pot. It was doing well, and had fourteen buds showing colour when I had to go away for a week, early in July. On my return it was covered with black-fly and every bud was yellow, soft, and rotten inside. I stirred a little ground lime into the top-soil, and kept this well open, and it recovered enough to emit fresh leaves (all the old ones fell) and to make some new shoots, but they are thin. I am anxious to keep it in a pot, as I have only a little, walled, flagstone garden, and only five or six hours' sun from March to end of October. Before this accident I was feeding it with liquid artificial manure. I have had to fight caterpillars, and have managed to keep it fairly clear of them.—M. DE C.

[Many reasons might be urged against growing this in a pot at all, but that is not the point. You say it "was doing so well," though the puny-sized growth you sketch proves it to be in a very poor way. Planted last November, if in good soil and properly done—these are important items in this connection—and all had gone well, it should require nothing more than top-dressing now. Being now so feeble we should have it repotted in good, loamy soil, shaking away the bulk of the old soil which frequent waterings may have rendered stale or even sour. Add a dusting of bone-meal to the soil or some old mortar-rubble if available, and make sure the drainage is perfect. When potted it would be best plunged in ashes or Cocoanut fibre to the rim. At the end of March next have it pruned hard back to good dormant eyes to induce a new and more vigorous growth. As the plant is suffering from overwatering, repotting in fresh soil is the only remedy.]

Repotting Orleans Rose.—Please tell me whether I should shift now or in March a half standard Orleans Rose which came established in a pot during this summer? It is in an 8-inch pot, and has done well. Would a 12-inch pot be too big a shift? I have only a little, walled, flagstone garden, and should like to keep it in a pot. Please tell me how best to protect it from frost? I have no shelter of any kind, and the garden only gets an hour's sun in the mornings from November to February; but the rest of the year a good five or six hours.—M. de C.

[Shift, *i.e.*, repot, the standard Orleans Rose now, reducing the old ball of earth at least one-half and repotting in good, fibrous loam to which well-decayed stable-manure and a little bone-meal and sand have been added. Healthy Roses like rich food. Good drainage and firm potting are essential. The 12-inch pot will not be too large. Let it be perfectly clean and dry. Place it in a sheltered corner of the garden, plunging the pot to the rim in ashes or other material. It will need no other protection. Take care, however, it does not suffer from root dryness in consequence. October is the month of new root production in the Rose, and at this season, or near, the plants readily respond to intelligent treatment. If you do not possess the right soil get a nurseryman to supply some or pot the plants correctly for you.]

The Orleans Rose and mildew.—This Rose has proved practically immune to mildew, which has been troublesome this year in many gardens, and has deprived the plants of much of their value and beauty. The Orleans Rose has done exceedingly well, and has produced a wealth of excellent flowers of that glowing red often called "Geranium red."—S. A.

OUTDOOR PLANTS.

FROM NEW ENGLAND.

ABOUT your creeping Fern. I wrote the specialist in our native Ferns, who took my order last April to pot and properly root some plants and to send them to me at once, as I wished to carefully re-pack them for their long journey to England. Can you imagine my feelings when he replied that, owing to the very bad season, he had not been able to get plants that were sufficiently strong to survive the journey. Do not despair, you shall have them. That you may be assured of my interest, there is being sent to you by the ship that takes this letter a box containing the following plants, which I hope will reach you in good condition and thrive in their new home. They are as follows:—*Cypripedium acaule* (showy Lady's Slipper), plant under thin Pine woods in a rather dry and mossy place in leaf-mould; colour, lovely pink. *C. pubescens* (yellow streaked with purple, very handsome). *C. Regina* (pink and white, large and beautiful), these last in partial shade near the foot of a bank; also in leaf-mould. Blackberry Lily (*Belamcanda chinensis*), a Chinese plant escaped from cultivation, probably brought to New England from China by sailors in the last century; blooms here in late July and August. Give it a dry situation. It does well in rock crevices. *Hepatica*, one of our loveliest little spring flowers. Plant also among rocks. Jack-in-the-Pulpit (*Arisaema triphyllum*), shady place in leaf-mould.

I wish you could see the autumn flowers in the meadow, about 8 acres in extent, with two brooks running through it, great trees surrounding it, and Grass paths crossing it. These are some of the flowers in full bloom at present and growing by the thousand:—Blue Veronica, Iron Weed (*Vernonia*), Joe Pye Wood (*Eupatorium purpureum*), Golden Rod in twenty varieties, many varieties of hardy Asters, Bone Set (*Eupatorium perfoliatum*), many varieties of *Heleniums* and *Helianthus*, *Boltonia*, *Phlox* (naturalised, white, dull pink, and purple), *Turtle-head* (*Chelone*), *Giant Arrow-head*, *Pickrel Weed* (*Pontederia*), *Red Lobelia* (*Cardinal Flower*) and blue *Lobelia*, white *Snake-root* (*Eupatorium ageratoides*), *Purple Loosestripe*, *Jewel Weed* (*Impatiens biflora*), *Tansy*, *Water Forget-me-not*, *Fringed Gentian*, *Bottle Gentian*, *Deptford Pink*, *Wild Carrot*, *Bouncing Bet* (*Saponaria officinalis*), with *Cacti* and *Sedum spectabile* on the rocks.

P.S.—Just after writing the above I have been informed by the forwarding agents to whom I took the box of plants referred to above that Great Britain had passed a law forbidding the importation of all "luxuries" during the war, and that plants came under the head of "Luxuries," and could not be imported. This, because there are so few ships at present, and all possible space needed for necessities.

The plants will be cared for and sent on when the war is over. They will be planted in a little corner and called "Your Garden." H. R. F.

NOTES AND REPLIES.

Carnations failing.—Two months since my Carnations were in a frame, looking very robust and healthy. A fresh gardener moved them a month ago into unheated conservatory. They are gradually becoming light in colour and drawn. Can you suggest the treatment they should have and if any stimulant is necessary? I cannot say if they have had any feeding.—K. B.

[If you are referring to hardy border sorts layered a few weeks since and recently potted up, the plants would have

been infinitely better in the far more congenial conditions of a cold frame, where, on a cool ash bed near the glass and with ample air available, they would be more likely to receive correct treatment. A "moderately cool house" is quite unsuitable, and a cold frame in sunny aspect is to be preferred to even a cold house. For these the treatment is obviously wrong, and the remedy is to return them to the frame, where a more rational treatment could be meted out to them. If, however, you are referring to perpetual sorts grown for winter flowering, you had better send fuller particulars, among which size and age are important. You should send full name—see rules.]

Iris not flowering.—Please tell me what can be the reason of the common purple Iris not flowering with me, while it does so well in every London garden? Five years ago I bought three or four of these, and one pale primrose one. This latter flowers regularly and well, but the more ordinary purple has refused to do so for the last three years. In the autumn of 1914 they were all transplanted nearer the sunny end of my little, walled, flagstone garden. Can it be that the soil here is too light? It is near some Orange Lilies, and these and the primrose Iris and a deeper yellow *Antirrhinum* should have made a charming group. The purple Iris looks exceedingly healthy, with great, strong leaves, of a beautiful grey-green, with a kind of shimmer on them. Do these Irises like lime or not?—M. DE C.

[This is most unusual and not possible of determination from your letter. We should, indeed, look for a good flowering next year from plants that now look "exceedingly healthy" and have "great, strong leaves of a beautiful grey-green," all of which is quite consistent with health and vigour. As a rule, the plant is so indifferent to soils, not liking those of a very retentive nature, however, but succeeding well in most others. Lime is favoured by all the Flag Irises, and many other species and hybrids like it, too, and you will not err in adding some to the soil, scattering it thereon and pricking it in with a hand-fork. It may be given in the powdered form or by way of bone-meal, well dusting the surface over with either and pricking it in. Ordinarily light soils suit the plant well—the good growth you speak of proves this—hence we imagine there is not much wrong here. Do not disturb the plants.]

Ceratostigma Willmottianum.—This flowers freely from August onwards until cut by frost, which in sheltered positions may not be until November or December. It is also valuable cultivated in pots for the cool greenhouse, growing the plants outside during the summer, and bringing them under glass when flowering commences. The colour of the blooms may be likened to that of *Plumbago capensis*. It is a much more robust species than the older plant, *C. plumbaginoides* (syn. *Plumbago Larpente*). Plants in Miss Willmott's garden have reached a height of 5 feet, but at Kew the growths were cut back last November. The plants, however, pushed up young shoots freely from the base in spring, and are now very bushy plants, 2 feet to 2½ feet in height. The soil should be well drained and comparatively light, a mixture of peat, leaf-mould, and coarse sand mixed with most garden soils being suitable.—*Irish Gardening*.

The European Dog's-tooth Violets.—May I put in a plea for the European Dog's-tooth Violet, which may still be planted and is one of the prettiest of our dwarf hardy flowers? It is cheap, easy to grow in sun or semi-shade, and, when it does well, gives many of its charming flowers above its mottled leaves. I like to plant with the crowns about 2 inches below the

surface and in any common soil. By the way, some people plant the tubers the wrong side up. They should be set with the broad or blunt end up, the sharp one below. *Erythronium Dens-canis* is to be had in various colours, purple, pink, almost red, rose, and white. Mixed varieties can also be bought. The grandiflorum strain is the finest, and selected varieties under name may be procured at a small additional cost.—S. A.

LILIUM GIGANTEUM.

This fine species from the Himalayas is worth the attention of all hardy plant lovers. When in flower no finer or more handsome plant could be found in any garden. The weak point of the plant is that one can never say when a good flowering may occur. To this uncertainty has to be added the fact that the plant flowers

depends upon individual size and progress. Those who do not mind waiting should raise seedlings and plant them when three years old into their permanent positions, selecting a place among low shrubs, as *Kalmias*, *Heaths*, *Andromedas*, etc. When planting, the bulbs should be inserted about 6 inches deep in the soil, which should be first deeply trenched and heavily manured. The finest development of the plant is seen in the more sheltered and warm districts, but it is not unusual for the plant to reach the same perfection in localities quite the opposite. Where the more mature bulbs are being planted, those of three years or four years old are best, and such as these will take three years more before the flowering stage is reached. This lapse of time permits the bulbs to become fully established, and only when this is the case does the plant attain to its

raer, Wigton, who kindly sent us the photograph from which our illustration was prepared, writes as follows:—

The plant produced from the one bulb a stem branching near the base into ten perfect stalks. It produced forty flowers, all normal, as shown in the illustration.

Van Tubergen's Tulip.—This gorgeous species from Bokhara is worth mention for the benefit of those who admire Tulips. The big cup-like flowers, produced in May, are each about 9 inches across and of the most vivid crimson-scarlet, with a big black spot at the base. It received an Award of Merit from the Royal Horticultural Society, and thoroughly well deserved the distinction.—S. ARNOTT.

Epilobium Hectori.—This tiny little carpeter is a native of New Zealand, and has rounded, bronze-coloured foliage. The flowers are white, but insignificant, the whole charm being in the foliage. Where doing well, it runs about and also seeds freely, but with me it does not seem very hardy unless planted in very stony soil.—N. L.

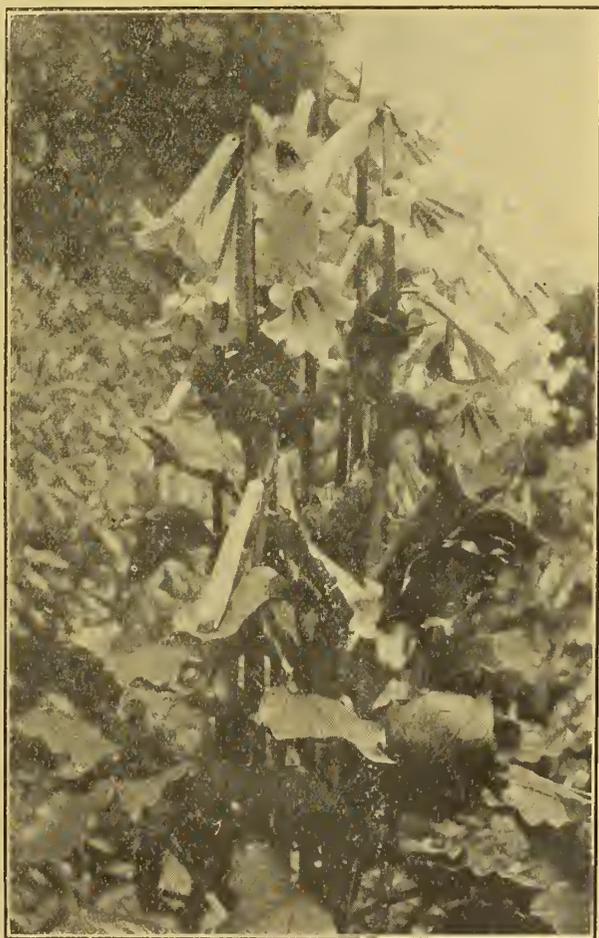
Lychnis Lagascæ.—This, once established, goes on blooming all through the summer. I am still getting plenty of its beautiful delicate pink blossoms at the beginning of October.—N. L.

GARDEN PESTS AND FRIENDS.

NOTES AND REPLIES.

The Wood Leopard Moth (*Zeuzera æsculi*).—I am sending you a piece of a Crab Apple-tree, in the centre of which I found the caterpillar I enclose. I should be glad if you can give me the name of it and how it became embedded in the tree. I first noticed some small, sawdust-like particles near the base of the tree, and on examining it I found a soft cavity under the bark full of fluid and eggs.—JAMES DENHAM.

[The piece of wood of the Crab Apple tree you send is bored by the caterpillar of the Wood Leopard-moth (*Zeuzera æsculi*), a by no means uncommon insect. The presence of one of these caterpillars in a branch or stem may be detected by finding small sawdust-like particles sticking to the tree where a little moisture is oozing from the bark; on closer examination a small hole will be found from which these particles (which are composed of small pieces of the wood gnawed off by the caterpillar and its droppings) are exuding. The easiest way of killing the inmate is to pass a sharp-pointed wire as far as possible into the hole, which will usually be found to proceed upwards, so as to stab the caterpillar. It can usually be seen, from the appearance of the wire, whether the insect has been reached or not; if by any turn in the tunnel it has not, the entrance to the tunnel should be slightly enlarged, and some cotton-wool or tow soaked in tar or paraffin oil should be pushed in as far as possible to stifle the caterpillar, and the mouth of the hole should then be closed tightly with a plug of clay, so as to keep the smell in. If it is possible to cut off the branch without injury to the tree, you can then, by splitting it open and killing the insect, make sure that it is destroyed. The caterpillar lives for three years before it attains its full growth and becomes a chrysalis, which it does near the mouth of its burrow. The moth is a fine and very elegant insect. The females are considerably larger than the males, and are 1½ inches in length, and measure 2¼ inches across the wings, which are white and almost transparent, with yellowish-brown veins, between which are rows of roundish bluish-black spots. The body is white, with black markings. They may be found in July or August.]



Lilium giganteum at Logan, Stranraer, Wigton.

but once and perishes, and while as a sort of compensation producing offsets to propagate its kind, these latter must be grown for three or more years before they reach a size at which they may be expected to bloom. This, then, is the seamy side of this noble species; but as a set-off against all this there is that unique beauty in the plant when in flower which commands the attention of all, and which renders it so conspicuous an object in the garden.

A good depth of soil, a cool rooting medium, and shelter from frosts for the huge heart-shaped leaves that appear in early spring are among the chief essentials to success. As a rule, the plant produces seeds quite freely, and these may take from seven to ten years to reach the flowering size. The offsets left by the blooming of a plant may, with good treatment, arrive at the flowering stage in three or four years. Much, however, de-

noblest proportions. When fully grown the strongest spikes will tower to a dozen feet in height, and in such instances the giant stature, usually accompanied by a flowering proportionately good, appeals to all. A more frequent height is 7 feet to 10 feet, and then a group or colony in the garden is a most imposing sight. The plant itself is quite hardy—i.e., the root and bulb—but the fresh leaf growth which develops quite early in spring is apt to be cut by frost or by biting winds. In these circumstances, therefore, it is advisable to plant where shelter to the leafage can be given, and a western exposure with banks of shrubs or evergreens sheltering from the north and east is the best position in which to grow the plants. This question of position is important, inasmuch as if the foliage be much injured by frosts the plant will take longer before it flowers.

Mr. Kenneth McDouall, Logan, Stran-

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM OCTOBER 18TH.—*Abelia rupestris*, *Choisya ternata*, *Hydrangea paniculata grandiflora*, *Ceanothus* (in variety), *Escallonia* *Edinburgh*, *E. mon' idensis*, *Hardy Fuchsias* (in variety), *Osmanthus ilicifolius*, *Berberis nepalensis*, *Laurustinus*, *Genista tinctoria*, *Spartium junceum*, *Solanum jasminoides*, *Magnolia grandiflora*, *Jasminum nudiflorum*, *Hamamelis virginica*, *Veronicas* (in variety), *Myrtle*, *Spiræa Thunbergi*, *Lavatera Olbia*, *Polygala Chamæbuxus purpurea*, *Polygonums*, *Senecio Greyi*, *Nierembergia frutescens*, *Phygelius capensis*, *Michaelmas Daisies* (in great variety), *Acanthus*, (*Enocheras* (in variety), *Anemone japonica* (in variety), *Plumbago Larpentæ*, *Sedum Sieboldi*, *S. spectabile*, *Lobelia cardinalis* (in variety), *Achillea Eupatorium*, *Linum arboreum*, *Tritomas*, *Francosas*, *Pentstemons* (in variety), *Antirrhinums*, *East Lothian Stocks*, *Scabiosa* (in variety), *Nemesis*, *Petunias*, *Pelargoniums* (in variety), *Ageratum*, *Cannas*, *Begonias*, *Salvia azurea grandiflora*, *S. Greigi*, *Tufted Pansies* (in variety), *Gazania splendens*, *Ethionemas*, *Heeria elegans*, *Convolvulus mauritanicus*, *Potentillas*, *Helianthemums*, *Tropæolum speciosum*, *Clematis* (in variety), *Polyantha* and *Climbing Roses*, *Ericas* (in variety), *Menziesias*, *Erigeron mucronatus*, *Polyanthus*, *Myosotis*, *Hardy Cyclamens*, *Sternbergia lutea*, *Crocus speciosus*, *Belladonna Lilies*, *Violets* (in variety).

Many trees and shrubs are now conspicuous for their coloured foliage, among them being: *Azaleas*, *Berberis Thunbergi*, *Rhus* (in variety), *Parrotia persica*, *Cockspur Thorn*, *Liquidambar*, *Cornus* (in variety), *Viburnums*, *Ame-lanchier*, *Akebia quinata*, *Vitis* (in variety), *Actinidia arguta*, *Maples* (in variety), *Quercus coccinea*, *Willows*, *Canadian Poplar*.

WORK OF THE WEEK.—Climbers on walls were gone over during the week, cutting out all dead wood, and tying in growths where necessary. These are not tied too tightly, but allowed to extend out from the wall, which gives the plants a more natural appearance. Just sufficient ties to keep them in position are all that are required. The present is a good time to plant such climbers as *Wistaria*, *Lonicera*, *Polygonum*, *Solanum*, *Azara*, *Jasminum*, *Vitis*, *Berberidopsis corallina*, *Forsythia*, and many others. Before planting, the soil should be deeply dug and some manure and fresh soil added. *Montbretias* are now being taken up, stored in boxes, and placed in cold frames for the winter. I do not dry them off, but allow them to grow, dividing them in February, again planting them in boxes, encouraging them to grow as much as possible, and planting out in April. It is impossible to over-rate the value of the *Monthretia* for late summer and autumn. Some late-flowering varieties even extend the blooming season well into October. Seeds of many perennials, alpine, and rock plants, sown as described on page 417, have germinated freely. Many of the seedlings have been pricked out into boxes filled with finely-sifted sandy soil, and placed in a cold frame. The rock garden is being cleaned and weeded. Where the roots of coarse weeds are underneath the cultivated plants it is in some cases necessary to lift the plants to get every bit of weed root out of the soil. Following the cleaning and weeding, a top-dressing is applied to most of the plants, using a mixture of loam, leaf-mould, and granite chippings, first screening all these through a ½-inch sieve. Plants that are easily injured by damp will now be protected by placing squares of glass or small hand-lights over them to keep off the wet. Many of the hardier plants, such as *Dianthus* species and varieties, *Saxifrages*, etc., raised from cuttings this season, will now be planted in their permanent positions. Others will be kept in cold frames through the winter and planted out early in the spring. As some plants become overgrown after a few years, it is necessary to replant them. For this purpose young plants raised from cuttings are much better than pieces obtained by division. *Michaelmas Daisies* have been a great attraction for the last month. The best varieties may be increased by division as soon as the plants have

finished flowering, or they may be propagated from the young growths which the clumps freely produce in spring. The plants should be examined when in flower, selecting the best and most distinct varieties, discarding all inferior kinds. F. W. GALLOW.

Lilford Hall Gardens, Oundle, Northants.

SOUTHERN COUNTIES.

Late Potatoes.—These must now be lifted as the tops are decaying fast. If the weather continues wet much loss of tubers is likely to ensue. The crop, as far as can be ascertained, is good. The ware, or those tubers intended for eating, should either be put into the Potato store or be clamped outdoors in a conveniently situated and dry spot. The seed-tubers, which should be picked up after the ware has been stored, should be laid out thinly in a cool, dry, frost-proof place, where they can remain dormant until the time arrives for placing them in boxes to give them a start prior to planting in spring.

Spring Cabbage.—There being an abundance of plants on hand, a further large breadth of varieties such as *Harbinger*, *Ellam's*, *Matchless*, *Johnson's First-crop*, and *Nonpareil* is being planted. Previously set-out breadths require constant attention, as slugs are very numerous and destructive. Rings formed of ashes and lime, round, but not touching, the stem of each plant, act as a good preservative, but need to be renewed frequently until the plants start growing freely. To keep down weeds is a troublesome matter just now, as the surface is too wet for hoeing to be profitably done. Until the weather allows of hoeing taking place, the largest of the weeds must be pulled up by hand, paying particular attention to *Groundsel* in this respect.

General work.—There is much that wants attending to now in the kitchen garden to render it tidy until digging commences. All exhausted crops, such as old Cabbage and Cauliflower stumps, need pulling up and the ground afterwards cleaned of weeds, etc. Peas which have finished cropping should be pulled up, and if the sticks are of no further use they and the haulm and weeds can be burnt on the spot. French Beans no longer serviceable should be got rid of, Carrots lifted and stored for the winter in dry sand or soil in the root store, *Ruhharb* and *Seakale* for early forcing cleared of decaying tops, and *Globe Artichokes* made ready for affording protection as soon as it becomes necessary. Winter Onions need to be hand-weeded and the ground between the rows afterwards hoed through, and the same with regard to Lettuces, which will remain in the drills throughout the winter. A good quantity of plants raised from the first sowing must now be planted at the foot of walls facing south and west, or in any other sheltered position to stand the winter. The *Hardy White* and *Bath Brown Cos* are very hardy, and will stand a fair amount of frost with impunity. Cauliflower plants to stand the winter must now be pricked off into frames where this has not already had attention.

Outdoor Peach-trees.—Shortage of labour having prevented these from being attended to as they should have been during the summer months, the young wood is now being fastened back to the wall so that it may receive the full benefit of autumnal sunshine. As the work proceeds surplus growths are dispensed with, and a distance of at least 6 inches allowed between the shoots retained, with a view to giving them a chance to become properly ripened. The few fruits now remaining on the late varieties are best utilised for the making of compotes, etc., as it is doubtful if they will ever become sufficiently ripe for the dessert. Other fruit-trees will now receive a final look over, cutting back all secondary growths on spurs both on walls and trees in the open. In the former case leading shoots will be lightly tacked in to be finally dealt with when winter arrives; and in the latter case they will be shortened about one-third. Figs must be relieved of partly-developed fruits, as these will not come to maturity this season, neither will they be of any use for next year.

Fruit-gathering.—With the exception of the very latest varieties, Apples and Pears should now be carefully gathered and stored, laying them out as thinly as circumstances permit in the case of Apples, and in single layers only in the case of Pears.

Herbaceous borders.—The beauty of these is fast waning, and work in the nature of rearranging or the formation of others elsewhere can soon be undertaken. In the first instance, all choice subjects and such things as will not be readily recognised after the tops are removed should be labelled before lifting. The plants as they are dug up should be laid in temporarily in some convenient spot. After all are lifted it is a good plan when creeper-covered walls form a backing to the borders to put these in order before the border is dug. If the latter has not been done within the last four or five years it should not only be double dug or "bastard trenched," but be thoroughly well manured. Before replanting, divide the clumps of all subjects which stand in need of it, and select for planting the outer portions only. From five to seven pieces will form a good clump or group of any one subject. A greater number is admissible when good, bold groups are required or when the borders are of a good width and proportionate length. Planting single plants of any one thing should be avoided as a "spotty" effect results and the beauty of the border is spoilt. Spaces for the planting or sowing of appropriate biennials and annuals may be left vacant along the front of the borders. Colour arrangement is, as a rule, governed by individual taste; all the same, care should be taken that when in flower the border forms a harmonious whole.

Michaelmas Daisies.—The plants as they pass out of flower should be cut down and the border made as tidy as possible. Notes should have been made ere this as to any alterations that may be required, also the situations for the planting of the more recent introductions, if such are to be acquired. Replanting may be done after the late-flowering varieties are past their best, but deferring the matter till next February is better.

Border Chrysanthemums.—The borders require much the same attention as the foregoing to keep them tidy. Care must be taken that the labels do not get misplaced or much confusion may ensue next year.

Heath garden.—This requires a general look over, pulling up weeds where necessary, cutting the long Grass between the breadths or beds of each variety and rendering the whole as attractive as possible.

Rock garden.—This needs a general look over, and should now be put in order for the winter. Any replanting or alterations may also be carried out at the present time and the formation of new rockwork undertaken.

Planting.—As there are now many vacancies in the front portions of mixed flower borders owing to the dying off of annuals and biennials, the same should be filled with *Wall-flowers*, *Sweet Williams*, *Canterbury Bells*, *Myosotis*, *Arahis*, *Aubrietias* in variety, *Silene*, etc. As the beauty of hedging plants is fast fading, the beds should be gradually filled with their winter occupants. Planted in good time, these have a much better opportunity of getting established before winter sets in than when not set out till the beginning of next month. Pansies for making a display in the spring should be planted without delay about 9 inches apart each way.

Belladonna Lilies.—These are now making a fine show, and to prevent wind and rain damaging the hoods, provision should be made for stretching a length of canvas over them when occasion arises for giving protection. This small amount of attention will considerably prolong the display.

Arum Lilies.—If not already housed, the plants should without delay be taken under cover. The forwardest plants—if spathes are wanted early—may be put into slight warmth only for the present. The remainder should be kept as cool as possible.

Hippeastrum.—The foliage having in most cases died down, the pots may now be stood on a shelf or stage in a vinery until the time arrives for shaking out and re-potting the bulbs in spring. A. W.

MIDLAND COUNTIES.

Peach-houses.—In houses where the wood is still green, a little fire-heat is afforded to assist the wood to ripen. In the early house the wood is sufficiently well ripened, and preparations will now be made for a fresh start. As the shoots were thinned at the time the fruits were gathered and only sufficient retained for furnishing next season's crop, the pruning will merely take the form of removing a few of the older branches to make room for younger shoots. The trees are loosened from the trellis, and the base of the stems well scrubbed with Gishurst compound. For the smaller branches a soft brush is used, taking care not to damage the buds. The trellis and the wood work are cleansed with soapy water, and the wall washed with hot lime. The borders will then receive attention, removing the top soil to a depth of about 3 inches, replacing it with a top-dressing composed of fresh fibrous loam mixed with lime rubble and a moderate quantity of Le Fruitier.

Tomatoes.—Old plants which have nearly finished cropping have been thrown away, cutting off the few remaining fruits that will ripen. Plants which are swelling their fruits are liberally fed with stimulants, such as liquid-manure from the farmyard, soot-water, and an occasional sprinkling of an artificial manure. Side shoots are removed regularly, and leaves which are likely to prevent the sun ripening the fruits are cut back. Attention to the setting of the fruits on the later plants is necessary, as the flowers do not set freely at this time of the year. In bright weather a sharp tap on the stem is sufficient to distribute the pollen, but when the weather is dull and cold the flowers are dusted with a rabbit's-tail. A free circulation of air is maintained avoiding cold draughts, and sufficient artificial heat is employed to keep the temperature about 60 degs.

Strawberry beds.—The plants should be looked over once more, and any runners found upon them should be cut off. Lightly hoe the surface soil between the plants and remove all weeds and rubbish. Afterwards apply a good mulch of decayed manure. It is essential that this work be done early, in order that the autumn rains may wash the manurial properties from the mulch down to the roots, and so assist the plants to complete the maturing of their crowns before winter sets in.

Planting fruit-trees.—It often happens that planting, rendered necessary by the exhaustion of old trees, is deferred until another season on account of the difficulty in getting the work done. This neglect should be avoided wherever possible, as time and space are wasted on the cultivation of old, exhausted trees. Thorough preparation of the ground is necessary to obtain the best results in fruit culture, and this should be done without delay, so that the trees may be planted during November if the weather is favourable. Trees planted early, while the ground is still warm, will commence root-action at once, and will soon become established. Where young trees are planted in the place of worn-out specimens the soil should be removed entirely and replaced with fresh compost, as the ground will have been exhausted by the older trees. Do not plant in heavy, cold land if it can be avoided. Where the soil is naturally unsuitable, much may be done to improve it by adding road scrapings, lime rubble, wood ashes, and similar materials to render it more porous. In the case of Apples and Pears, manure should not be used at the time of planting, but it may be freely incorporated in the soil when Gooseberries, Currants, and Raspberries are planted. Stone fruits require plenty of calcareous matter in the soil. In the case of wall trees, a layer of lime rubble, broken bricks, or similar material should be placed at the bottom of the trench, which should be from 18 inches to 2 feet deep. As the varieties of Apples are very numerous, only those that succeed in the particular district should be selected, this also applying to Pears. It is a common mistake to plant too many varieties. The first batch of cuttings of

Perpetual-flowering Carnations has been inserted in boxes of washed silver sand. The cuttings are made of strong side shoots, taken off with a heel attached. The sand is

thoroughly soaked with water and the cuttings are simply pushed into it. The temperature of the pit in which the cutting-boxes are placed is about 60 degs. The sand is kept thoroughly moist until roots are formed, when the plants will be transferred to thumb pots filled with a sandy compost. In this locality cuttings rooted at this time of year give better results than those rooted in January or February. In the south, those rooted in January or February are preferable. Pelargonium cuttings which were rooted in boxes out-of-doors have been removed to a cool house, the boxes being elevated as near to the glass as possible. Abundance of air is given in favourable weather.

Late Cauliflowers of the Autumn Giant type should not be exposed to the weather or their value may be considerably lessened. The usual method of protection by placing a few of the plant's own leaves carefully over each head will be sufficient to keep off a few degrees of frost. If unheated pits or frames are available, the very late plants should be lifted with a good ball of earth attached to the roots, and planted fairly close together in them. Give a good watering immediately after the planting has been done. In favourable weather admit all the air possible to the plants. Under this treatment good Cauliflowers may often be obtained until the middle of winter.

Autumn Broccoli.—Owing to the mildness of the season the plants are "turning in" earlier than usual. These need to be closely watched, it being necessary to protect them from frost by covering the curds with leaves and by tying up closely together the outer leaves. In order to keep up a supply as long as possible some of them may be lifted with a good ball of soil and replanted at half their usual distance apart, taking care that a covering of some kind is at hand in case of severe frost. By lifting some of the plants carefully when the curds are about the size of a hen's egg the supply of Broccoli may be kept up for some time after the ordinary crop is over. Be careful to lift the plants with a good ball of soil. Clean mats will be found a suitable protection against frost. Cabbages planted four or five weeks ago have been given a dressing of soot and the soil stirred.

Runner Beans.—The supply of these is practically exhausted. Any young pods that are left upon the plants and are fit for use will be picked and preserved by placing the ends in a little water. Pods that have been saved for seed are laid out on mats in a vinery to dry.

F. W. GALLOP.

SCOTLAND.

Stove.—Unsettled weather may, as a rule, be expected about this time, and when it is impossible to further the work out-of-doors advantage may be taken of wet days to clean out and rearrange the stove. The majority of the plants which bloom in this house during late summer and early autumn are now past their best, and as the autumn plants generally and those which will provide a display up till the New Year have made good progress, nothing is gained by delaying to get them into their places. All woodwork, ironwork, and glass ought to be thoroughly scrubbed down with hot water, and in the case of permanent plants in large pots, which are not easily moved, the soil should be removed to the depth of 3 inches and replaced by fresh compost. Such things as Gloxinias, now ripened off, can be shaken out of their pots and stored in boxes among Cocoa-fibre. Many plants can be discarded, such as supernumerary pieces of Eulalias, Panicum, Begonia Rex, Abutilon Savitzi, Tradescantias, and small pots of Coleus, or similar things which can be readily replaced. A feature can now be made of the commoner Orchids, Cyripediums of kinds, *Ceoloyne cristata*, and the like. Late pieces of *Hymenocallis* are always effective, so, too, is a good batch of *Pentas rosea* or of *Justicia carnea*. The winter-flowering *Begonias* may be got into position, and *Libonia floribunda* makes a good display in 5-inch pots. Edging plants may comprise *Ceropegia Woodii*, the finer forms of *Tradescantias*, and *Selaginellas*; *Panicum variegatum* is always useful, and well-furnished plants of *Begonia Rex* in 3-inch

pots will break the monotony of the edging stuff. *Crotons*, *Dracænas*, *Acalyphas*, *Dieffenbachias*, *Sanchezia nobilis* var., *Pandanus Veitchi*, and such like give variety. At the same time climbing plants ought to be considerably reduced in order to admit as much light as possible. Successional batches of stove flowering plants will, of course, be kept in a cooler temperature for some time yet. As regards such things as *Eucharis Lilies*, it is largely a question of heat as to when they may be had in bloom. If they can be plunged in a bed of Cocoa-fibre through which some heat is run, not only will they bloom at an earlier date, but the foliage will be more luxuriant and the flowers of superior quality. Certain hard-wooded plants are yet resting, and until growth begins let them be kept sparingly supplied with moisture. Careful and regular firing is now indispensable. This ought to be in trustworthy hands, for fuel is very expensive, and the utmost value should be extracted from it. A small, clear fire will give quite as much heat as one which is carelessly and wastefully stoked, and will maintain a more regular temperature. In all cases the outside thermometer will prove a safe guide to follow. Night temperature at present, round about 65 degs.

Ferns under glass.—During the summer, Ferns are, in a general way, dispersed among various houses for different purposes. Now, however, they may be assembled in their proper quarters for the winter. Any shabby pieces may be cut over. Young fronds will soon push in a genial, moist atmosphere. In other cases, decayed or ripened fronds ought to be cut cleanly out, the pots scrubbed, and, if necessary, a little top-dressing can be afforded. *Adiantum Farleyense*, *Phlebodium aureum*, some of the *Davallias*, and a few of the *Nephrolepis* family will do better during the winter if room can be found for them in the stove. No shading is now permissible. Occasionally, hosts of seedling Ferns from self-sown spores make their appearance on the surface of the pots. If these are not needed they ought to be promptly suppressed. The commoner forms of *Adiantums* and (especially) of *Pterises* are confirmed offenders in this respect. Only sufficient moisture to maintain good health ought now to be given. Temperature, 58 degs. to 60 degs.

Housing Chrysanthemums.—This important work cannot now be longer delayed; indeed, the earliest varieties ought to have been under cover before this date. The housing of Chrysanthemums means a general overturn in the structure in which the bulk of these plants is grown, and—in the majority of cases, at any rate—there is a tendency to grow rather more plants than can be comfortably accommodated. I started the season with the determination to make a considerable reduction in the numbers grown. As a matter of fact, one way and another, there are actually more than were grown in 1915. Nevertheless, if a little crowded at first, there is soon space made when cutting begins. The plants which occupied the house have had to find other quarters—pits and shelves, in some instances cold-frames having been requisitioned. In housing, all withered foliage is removed before the plants are staged, the stakes are regulated, ties adjusted, and the pots are thoroughly scrubbed. When the house is washed down and staging completed it is advisable for a night or two to run rather a brisk heat through the pipes in order that superfluous moisture may be dried up. At the same time full ventilation ought to be given at the apex of the house. One point is worth drawing attention to: No matter how carefully the bottoms of the pots are inspected when staging is going on, it is almost certain that snails will be introduced. These soon give signs of their presence, and ought to be hunted for, with the aid of a lamp, after dark. This must be done in rather a hurried way in districts such as this, where the lighting regulations are very stringent. On completing the staging, if the house be lightly vaporised on two successive nights, and again in a week's time, it will be found that very little trouble will afterwards be experienced from the attacks of aphides.

W. MCGUFFOG.

Balmie Gardens, Kirkcudbright.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Begonias, keeping (D. G. Buchanan).—Your best plan will be to stand the plants in a frame in order that the growths may dry off, of course, giving no water. When the shoots have all fallen away, you may either shake out the tubers and lay them into dry sand or keep them in the pots. Any spare room or dry cellar into which frost cannot penetrate will do as a store. The boxes must on no account be closely covered up.

Romneya Coulteri buds injured (R. F. H.).—It would seem from the injured buds that you send that earwigs are the cause, and if this is so, then your best plan will be to lay some hollow Bean-stalks among the leaves, and when the pests congregate therein to shake them out into a pail of water on the top of which some paraffin is floating. It may be that caterpillars are responsible for the damage, and a few visits to the plants at dusk may give you a clue.

FRUIT.

Air-roots on Vines (P.).—There is nothing unusual in the Vines producing air-roots; but it is not a good sign, as their presence betokens a want of proper action on the part of the true roots running naturally in the soil, and they are frequently the precursors of shanking. To prevent their formation, or to recover Vines subject to this evil, the border must be seen to, and, if necessary, the Vine roots should be taken up when the crop of fruit is cut, and be replanted in well-drained turfy soil, containing plenty of old mortar rubbish and broken bones.

VEGETABLES.

Celery diseased (H. R.).—Your Celery is badly attacked with the maggot or leaf-miner, and your best remedy, though a tedious one, is hand-picking the affected portions and burning them. You see the maggot is encased inside the skin or leaf-covering, therefore very difficult to get at with insecticide. After removing the worst plants attacked, well dust over with soot, and this will kill the larvæ. By repeated dressings you will at this season soon get a healthy growth, as only the older leaves are attacked, and the new ones, kept free, will soon develop, and strong plants are less liable to attack.

MISCELLANEOUS.

Poor lawn (E. D. Prichard).—Top-dress the lawn with a mixture of loam, rotten manure, and wood-ashes. Let this lie on the surface during the winter, then in the spring break it down fine and brush it into the roots of the Grass. A dressing of sulphate of ammonia or nitrate of soda in the spring, when growth is starting, at the rate of 3 lb. per rod, will do good. If you can get good turf, by all means use this, but if not, then you may sow it down in the coming April, using only the best Grass seed, and not that from a hayloft, which is full of weed seeds, and will cause no end of trouble later on.

SHORT REPLIES.

A. A. Thornton.—The only plants likely to do any good in such a shaded position are hardy Ferns, among which you could plant Narcissi, Blue Bells, Chionodoxas, and other spring-flowering bulbs.—**H. M. W.**—1, Impossible to say why your Celeriac has failed to bulb, as you give us no idea as to how you have treated

it. Only the root is used, as the hollow leaf stalks are so bitter that they are quite unfit for table use. 2, All the Roses you mention should have been dealt with after flowering, cutting out the old and worn-out wood and laying in the vigorous shoots of this year. It is not too late to do this now.

NAMES OF PLANTS AND FRUITS.

Name of plant.—*Rosemary.*—*Leycesteria formosa.*

Names of fruits.—*C. L.*—1, Mère de Ménage; 2, Blenheim Orange; 3, Golden Spire; 4, Golden Noble.—*A. R. Scott.*—Apples: 1, King of the Pippins; 2, Claygate Pearmain; 3, Adam's Pearmain; 4, Court Pendu Plat.—*W. A. S.*—Apples: 1, Red or Winter Hawthornden; 2, Cox's Pomona; 3, Cellini.—*S. M.*—Apples: 1, Ecklinville; 2, Bramley's; 3, Mère de Ménage; 4, Alfriston.—*A. M.*—Apples: 1, Rymer; 2, Yorkshire Greening; 3, French Crab; 4, Wellington.—*S. L. May.*—Pears: 1, Beurré d'Amanlis; 2, Brown Beurré. Apples: 3, Stone's; 4, The Queen.—*W. Wright.*—Pears: 1, Marie Louise; 2, Louise Bonne of Jersey; 3, Beurré Bosc; 4, Beurré Clairgeau.—*N. M.*—Pears: 1, Glon Morceau; 2, Nouvelle Fulvie. Apples: 3, Bess Pool; 4, Cox's Orange Pippin.—*F. G. M.*—Pear: Doyenné du Comice.

Hon. Mrs. Cross.—Apple: Cellini, so far as we are able to say from the single fruit you send us.—*A. B. C.*—1, Cox's Pomona; 2, Tower of Glamis; 3, Mère de Ménage; 4, Claygate Pearmain.—*R. E. 2.*—Apple is, we think, American Mother, a dessert variety in season during October, but it is very hard to say with any certainty from a single fruit. Kindly read our rules as to the naming of fruit.

The Royal Horticultural Society and exemption from rates.—At the Surrey Quarter Sessions (Sir Chas. Walpole, K.B., presiding) the solicitors of the Royal Horticultural Society put forward an office copy of a certificate of the Registrar of Friendly Societies that this society is entitled to claim the benefit of the Scientific Societies Act, 1843, allowing exemption from county, borough, parochial, and other local rates in respect of lands and buildings occupied by scientific or literary societies. The exemption was claimed in respect of the gardens, laboratories, etc., of the Royal Horticultural Society at Wisley. The certificate had to be laid before the Quarter Sessions, who were required by the above Act, without motion, to allow and confirm the same. Sir Chas. Walpole said that the society was entitled to the exemption claimed and the matter was thus disposed of *nem. con.*

LIST OF AWARDS AT THE R.H.S. MEETING ON OCT. 10, 1916.

ORCHID COMMITTEE.

Awards of Merit.

Sophr. Lelio-Cattleya Lutetia, from Messrs. Charlesworth and Co., Haywards Heath; **Odonoglossum perculum**, var. **Nicator**, from Mr. E. J. Mocatta (Gr., Mr. Thomas Stevenson), Woburn Place, Adestone; **Cattleya Venus**, **Orchidhurst var.**, from Messrs. Armstrong and Brown, Tunbridge Wells.

Medals.

SILVER BANKSIAN.—Messrs. Charlesworth and Co.; Messrs. Armstrong and Brown, Tunbridge Wells; Messrs.

Sander and Sons, St. Albans; Messrs. Hassall and Co., Southgate, N.; Messrs. J. and A. McBean, Cooksbridge; Messrs. Stuart Low and Co., Jarvis Brook.

FLORAL COMMITTEE.

Awards of Merit.

Pelargonium General Joffre, from Mr. W. H. Robbins, Leves; **Gemm Borrisi**, from Mr. C. Elliott, Stevenage; **Aster J. S. Baker**, from Messrs. Baker, Codsall; **Nerine Rothschild**, from Messrs. Chapman, Ltd., Rye; **Aster King of the Belgians**, from Hon. Vicary Gibbs (Gr., Mr. E. Beckett), Aldenham House, Elstree, Herts.; **Viburnum dasyanthum**, from Hon. Vicary Gibbs; **Colechium ibyricum superbum**, from Messrs. Barr and Sons, Taplow; **Chrysanthemum Lichfield Pink**, from Mr. J. W. Thorpe, Lichfield; **Dahlia Elaine**, from Mr. J. T. West, Brentwood; **Dahlia Autumn Tints**, from Messrs. Stredwick, St. Leonards; **Dahlia J. A. Jarratt**, from Mr. J. A. Jarratt, Anerley-road, S.E.; **Dahlia Anerley Yellow**, from Mr. J. A. Jarratt.

(All the Dahlias above mentioned also received the First Class Certificate of the National Dahlia Society.)

Medals.

SILVER GILT BANKSIAN.—Mr. J. B. Riding, Chingford, for Dahlias.

SILVER FLORA.—Messrs. Cheal and Sons, Crawley, for clipped trees and shrubs; Messrs. Piper, Bayswater, for Chinese shrubs; Mr. J. J. Kettle, Corfe Mullen, Wimborne, for Violets; Mr. L. R. Russell, Richmond, for Tree Ivies.

SILVER BANKSIAN. Messrs. Allwood Bros., Haywards Heath, for Carnations; Messrs. Bakers, Ltd., Codsall, for hardy flowers; Messrs. W. Cutbush and Son, Highgate, for hardy flowers; Mr. Elisha Hicks, Twyford, for Roses; Messrs. H. B. May and Son, Edmonton, for Ferns, etc.; Mr. G. Reuthe, Keaton, Kent, for hardy plants; Mr. Geo. Prince, Longworth, for Roses; Messrs. Waterer, Son, and Crisp, Twyford, for Asters, etc.; Mr. W. Wells, Junr., Merstham, for hardy flowers.

BRONZE FLORA.—Rev. J. H. Pemberton, Romford, for Roses.

FRUIT COMMITTEE.

Medals.

SILVER HOGG.—Mr. C. A. Cahn (Gr., Mr. T. Pateman), The Node, Welwyn, Herts, for collection of fruit.

SILVER KNIGHTIAN.—The Barnham Nurseries, Barnham Junction, for collection of Apples.

SILVER BANKSIAN.—Mr. J. Chivers, Wychfield, Cambridge, for collection of fruit.

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Double Orange Phoenix	8d	5/-
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Larentia, pink and gold carun.	1/-	8/-
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Margaret, rosy blush pink	1/-	8/-
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Mrs. J. Laing, H.P., rose	6d	6d

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GARDENING ILLUSTRATED.

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NOTES OF THE WEEK.

Aster St. Egwin.—This is still one of the best, with its large pink flowers, which show to best advantage in artificial light. Of neat habit of growth, it is not nearly so tall as most of the *Novi Belgii* section, averaging from 2 feet to 3 feet, and, if grown from a single crown, will make a compact rounded bush covered with flowers.—N. L.

The blue Hound's-tongue (*Cynoglossum amabile*).—This, to me new and excellent annual flower, is a late bloomer and is pretty in the house in October arranged with yellow or white Roses, or by itself. Easily raised from seed in spring, it is to be hoped it is one of the annuals that endure our winter and that may be sown in autumn. It is almost as good a plant as the blue Cornflower. The colour is a beautiful blue.—W.

Escallonia macrantha.—This deserves all that has been said for it on page 501. I know some parts of Scotland, particularly in the south-west, where it makes quite a good hedge and does not require a wall. In specially hard winters I have known it badly cut, but the recuperative powers spoken of in your note enable this *Escallonia* to resume its former beauty in a year or two. Nowhere have I seen it finer than in the south of Ireland. *E. philippiana*, I find, is the hardiest of the lot.—S. A.

Elsholzia Stauntoni.—This interesting and distinct sub-shrubby plant has been exhibited on more than one occasion lately, and on October 10th was seen in good condition at the Royal Horticultural Society's fortnightly meeting. The plants shown were less than 2 feet high and yet were producing somewhat freely their Veronica-like spikes of pale pink flowers. The serrated leaves are each 3 inches to 4 inches long, very finely pointed, and, when rubbed, not unpleasantly fragrant.

Erigeron strigosus.—I have been delighted with this new annual, which I tried this year, being attracted by the description of it in a seed list. It bloomed all the summer and was a mass of flower the first week in October. Even now (October 18th) it is covered with bloom. It is of rather shrubby habit, with grey leaves and pinky-mauve flowers, with deeper pink buds, and grows about 18 inches high. I sowed it in a cold frame, and put it out in the borders in May in patches of six or eight, and the effect of the cloudy masses of grey and pink was delightful.—E. G. H., *Huxham Rectory*.

Arbutus Unedo in fruit.—I have not noticed whether it is the case elsewhere, but a large, old *Arbutus*-tree in my London garden is fuller of fruit this year than I have ever seen it, the branches hanging down with the weight of fruit, although at present they are only green and not nearly their full size. When they are fully developed the tree will be a lovely sight.—W. O.

Geum Borisi.—This shapely and good form, which attains to about a foot or so high, is among the most brilliant the genus contains, and, by reason of its dwarfness, should be welcomed by rock gardeners generally. The plant is, I believe, of hybrid origin, the well-rounded flowers suggestive of *G. Heldreichi superbum* influence, in some measure at least. The brilliant orange-scarlet flowers are single. It gained an Award of Merit on October 10th last, when shown by Mr. Clarence Elliott, and if a consistent bloomer at that season, or even giving a share of its richly-coloured flowers, the newcomer will be welcome.

Apples in Kirkcudbrightshire.—In a general way the crop of Apples has been poor in the Stewartry. Some growers blame the inclement weather which prevailed when the trees were in bloom, while by others the blame is attributed to a late and severe frost. Be the cause what it may, the fact remains that, all over, the Apple crop is the poorest for a considerable number of years. It is, therefore, the more gratifying to record at least one instance in which the yield has, even in such an untoward season, surpassed the average. At Lauriston, in the garden of Captain Cassady, Bessy's Croft, an excellent crop has been secured all over. Especially is this the case upon a tree of Ecklinville—of considerable age—which bore such a weight of fruit that the branches had to be supported, and from which Apples were gathered by the bushel. The garden at Bessy's Croft is not particularly well sheltered, but the Apples there seem to have missed both the winds and frosts experienced elsewhere. In the case of the tree of Ecklinville it appears that it had practically failed in 1915, although the other trees were heavily laden. Probably the reserve of vigour stored up last year may have stooed the tree in good stead, but, whatever the reason, the crop was phenomenal.—KIRK.

Gentiana sino-ornata.—This is the authenticated name of a brilliantly-flowered species which, when exhibited by Mr. Clarence Elliott at the late September meeting of the Royal Horticultural Society

as *G. ornata* variety, unanimously gained an Award of Merit. A reputedly good doer, this was clear from a solitary-established example in a pan carrying from fifteen to a score of buds and blossoms, while a greater vigour was apparent than is customary with other forms of this welcome and somewhat variable species. Blue-flowered alpine are acceptable at any time. In September and October we are more grateful for them, perhaps, than at other times, because of the scarcity of good alpine with flowers of any colour. Larger flowers with broader, more reflexing corolla lobes than are usual in the species, on first opening they approximate to a good *Gentianella*-blue, which pales later into one of those indescribable blues of which no garden ever has enough. The flowers are solitary, ascending at the ends of decumbent stems, the lighter-coloured tube but enhancing the richer predominating blue. Each flower lasts a week or ten days, hence a succession may give beauty for twice that period. Under cultivation all these prefer a cool, rather moist position in loam, leaf-mould, and peat in about equal parts.—E. H. JENKINS.

The Banksian Roses in Scotland.—It is often said that the Banksian Roses will not bloom in Scotland. This is an error. In certain districts and seasons the Banksian Roses are badly cut by frost and have to be allowed to make fresh growth, which, again, must be thoroughly ripened to induce flowering. I know of one garden where for a number of years the white and yellow Banksian Roses flowered freely every year on a wall. One hard winter these were cut back to near the ground, with the result that it was some three years before they again bloomed. Banksian Roses require at least three years' growth to induce them to flower really well. This means that pruning should be practised very carefully, and in Scottish gardens I know the Banksian Roses require only a few of the shoots which have bloomed to be cut out with some late soft growths. This should be done about July. A warm wall and a sunny position are also essential. Given these conditions success with the Banksian Roses is practically assured in the milder parts of Scotland, but they are not recommended for the colder districts or those where sunshine is much obscured by mists in summer. A wall covered with the white or yellow Banksian Roses is a sight worth going miles to see. Time, patience, and a little consideration would secure this in many a warm Scottish garden.—SUB ROSA.

Lobelia Tupa.—Attention was directed to *Lobelia Cavanillesii* in the issue of September 9th, p. 448, as a brilliant autumn flower not usually met with, and I think the above, a handsome, tall-growing kind from Chili, also deserves attention. Neither may be quite hardy in all localities, though a similar remark may apply to *L. fulgens* and some of its forms. Plants of such well-marked character merit special treatment, even though that occasionally involves slight winter protection to ensure safety. Said to attain 6 feet or 8 feet high, *L. Tupa* commands attention when in bloom by the pyramids of crimson flowers set in downy, maroon-coloured calyces borne on inch-long foot-stalks of like colour. The thick, downy, velvety-inclined leaves on the reddish stems and often exceeding 2 inches in width and 6 inches in length, prove that these are consistent with fine stature; indeed, seen in its best form it is one of the most imposing of its race. Flowering in September and October, very effective when freely grouped, revelling in rich, moist soils and genial atmospheric conditions, it is a valuable plant in favourable localities, or to be indulged in experimentally by those in search of something removed from the stereotyped or commonplace.—E. H. JENKINS.

Gentiana verna.—Will you kindly allow of yet a few more words on the cultivation of *Gentiana verna*, admittedly so difficult and capricious in our gardens? It is obviously one of a class requiring a close imitation of its natural conditions. Given a free, light soil, with lime in some form, moisture, and full exposure to the sun, there, nevertheless, remains yet another condition of success. We recognise that some plants require close association with others in order to grow well. So essential would this seem to be in the case of *Gentiana verna* that some horticulturists have not hesitated to speak of it as semi-parasitic in its habit, a tendency which scientists call symbiosis. Perhaps the French term "commensal" might be accurately applied to its system of growth. The spring Gentian grows in association with Grass, the roots of the two plants freely intermingling. In our lowland conditions Grass grows too luxuriantly, and in time would crowd the Gentian out of existence. Who will report upon its habitat and tell us of another plant in partnership with which the Spring Gentian will be content to live? Possibly *Globularia nana* might be a sufficiently gentle fellow-guest, for even the dwarfest Grasses have, under cultivation, a way of waxing fat and kicking which the Spring Gentian would resent.—T. A. HYDE, *Avon Grove, Avonwick, S. Devon.*

Lychnis Arkwrighti.—I think it was at Holland House Show last year—it may be longer—that I first came across the above name attached to a group of plants in flower claiming to be of recent hybrid origin. The parentage was stated to be, if I remember aright, *L. chaledonica* × *L. Haageana*. The group of plants, however, obviously represented nothing more than the well-known *L. Haageana*, itself of hybrid origin (or seedling variations), first derived from the Siberian *L. fulgens*. The above name has since found its way into some catalogues, and seedlings raised as such are already a source of disappointment. I am reminded of the circumstance by an amateur recently seeking my opinion on the point. He had purchased seed as *L. Arkwrighti*—a supposed novelty—only to find, on its flowering, that he had under this name added to his stock of *L. Haageana*, which he had known and grown for many years. Disappointments of such a nature cause amateurs to be ex-

ceedingly sceptical of much-advertised so-called novelties, while doing not a little harm to hardy plant progress generally. The best strains of *Lychnis Haageana* afford great variety in pink, salmon, scarlet, and crimson, and, in their way, are not surpassed. The whites are dirty-looking and not wanted, even if pure in colour, since there is no scarcity of white garden flowers when the others are at their best. The great enemy of *Lychnis Haageana* is the slug, which in winter devours its crown-buds and, on occasion, its tuberous-inclined roots. In good condition when established in rich, light soil, some of the more brilliant forms will grow 3 feet high.—E. H. JENKINS.

Viburnum Davidi.—The members of the Guelder Rose family are remarkable for a diversity of habit and leaf-development not common among shrubs. Among them *V. Carlesi* is probably unique for its clusters of fragrant white flowers, albeit the plant is of somewhat straggling habit. *V. plicatum*, *V. p. tomentosum*, and others near are equally unique, and on the lawn in bold groups in May or June, when in the heyday of their beauty, they are effective at a long distance. The evergreen *V. rhytidophyllum*, apart from a leaf growth and vigour distinct from all, is effective in autumn when in fruit. *V. Davidi*, also evergreen, is very dwarf and cushion-like in habit of growth. So dwarf and sturdy is it, that it is the only one known to me suited to rock gardening. In such, in a well-chosen position, the hard-looking, handsome, ovate leaves would be attractive at any season, its slowness of growth a guarantee of suitability. The flowers are white, succeeded by small oval fruits of a blue colour. It is, however, for its fine foliage effect rather than for its fruit or flower beauty that I would recommend it.—E. H. JENKINS.

Rhus Toxicodendron poisoning.—Mr. L. P. Shadbolt, F.R.C.S. (Bushey), writes:—

"I have had under my notice during the past month three cases of poisoning by the American Poison Vine or Ivy (*Rhus Toxicodendron*) which have led to the discovery of four very sturdy specimens of this objectionable creeper growing on two houses in this neighbourhood. Last month a patient came to me for advice for a peculiar bulbous eruption on his hands and wrists which was accompanied by intense erythema. Erythema was also present about his face and various parts of his body, notably the genitals. His work was that of a painter. On inquiry, I found that he had been engaged in painting a house in this neighbourhood, and had to clear away certain creepers from the framework of the windows; further, that his 'mate' was suffering in the same way and had been engaged on the same job; also that the gardener at the house in question periodically suffered from the same affection. I went to the suspected house and there found, growing on its walls and reaching to the eaves, two luxuriant plants of the Poison Vine, easily identified by the long stalk of its central leaflet. Further search revealed another specimen growing on a fence in the garden, and on the neighbouring house yet another."

[This plant shows a vicious practice in renaming a well-known poisonous plant as *Ampelopsis Hoggi*, leading some to plant it as a novelty. It retains its virus in England, and should never be in a garden or among climbers. It had also been in gardens under its true name years before.—Ed.]

FRUIT.

STORING APPLES.

THREE things are necessary if one is to keep Apples in good condition for a long time. They must be in the right condition when picked. They must be protected from too much drying. They must be protected from attacks of fungi (rots and molds).

TIME TO PICK.—An Apple is ready to be picked when it is fully mature, but before it is "dead ripe." It should be free from extensive bruises and from diseases. Small bruises where the skin is not broken will dry over and cause no trouble in most cases, but in some varieties (the Northern Spy is a conspicuous example) which have a very juicy, tender flesh and a tender skin, the slightest bruise is likely to allow the rot fungi to enter. In New York State the two most serious Apple diseases are "scab" and "Baldwin spot" or "shot-hole fungus." The latter appears usually on overgrown specimens of many of our Winter Apples, especially where they have grown in the shade on the lower side of the limbs, and in our orchards it sometimes seems to be, perhaps, associated with slight aphid injury. This may be accidental, and simply owing to the fact that the large, tender, juicy specimens grow in the same sheltered situations where there is much moisture in the air as are favourable to the life of plant lice. This injury has the appearance of small depressed patches about an eighth of an inch in diameter with a small brown spot under the skin. They much resemble bruises caused by hail except that they are smaller and usually more numerous. In storage the brown area extends through the flesh of the Apple to the core and appears as bitter brown streaks about as large as the lead of a pencil. The Apple scab first appears on the Apple as a small greyish raised spot in the thin waxy outer skin or epidermis. When this gets about an eighth of an inch in diameter the epidermis begins to break and roll back, and the trouble appears as a black spot. When this gets about one-quarter inch in diameter the centre usually begins to heal up and we have the condition sometimes called "fish eyes." In some varieties, notably Ben Davis and Gano, the healing may be complete and the scar appear as a golden wart, which is one of the usual marks of these varieties. In storage, scab spots which have not developed enough to show when the Apples were picked may grow and injure the appearance of the fruit greatly. The scab fungus itself does not injure the Apple for use, but it gives a chance for various rot fungi to get through the epidermis and destroy the fruit.

Apples stored in a dry cellar without very good protection are almost sure to dry out so much as to be too withered to be very good to eat. The air around each Apple should be as nearly saturated with moisture all the time as possible. Pits and ordinary methods of storage in barrels meet these conditions well, but have other objections. Apples stored in bulk in pits in contact with the earth are likely to lose flavour and become "earthy." Storage in pits and in ordinary barrel methods does not protect the perfect Apples from fungi.

The tough, waxy epidermis of an Apple is a good protection against most of the rot fungi, but if a sound Apple lies against a rotten one sooner or later the fungus will be able to grow through the protection of the good one and destroy it. Wrapping each Apple in paper as it is

placed in the barrel is a great help in keeping the Apples from decay. If

COLD STORAGE is available it is a great help in keeping Apples sound. The temperature should be as low as it can be kept without freezing the Apples. A few degrees below the freezing point of water are usual. This is, of course, the temperature of the air in the room, and the centre of the barrel is always warmer. For this reason Apples can seldom be kept in cold storage more than a few months.—*Rural New Yorker.*

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

A ROSY CLEMATIS.

Rosy Clematises are not common. I grow a good many myself, but not many

very hot and dry summer these Fuchsias are not seen at their best, for, the original species being natives of the Andean region of South America, where moisture-laden fogs prevail, the progeny delights in a good deal of atmospheric moisture. Their partiality for seaside districts is thus accounted for. During the past summer they have been seen to considerable advantage, especially during the comparatively cold, dripping weather that played such havoc with the Pelargoniums. In selecting varieties of Fuchsias for the open air those with small or medium-sized flowers should be chosen in preference to those with large, heavy blooms.—*W. T.*

PLANT VAGARIES.

[*To the Editor of GARDENING ILLUSTRATED.*]

SIR,—Many instructive notes have appeared from time to time in GARDENING

stood still. After three years I lifted it, divided it, and replanted it just on the edge of a pond facing full south, with a rock behind it. It remained there two years, repeating the first phase. I moved it again a distance of, perhaps, 3 feet a year ago, replanting it as near the water as before, after again dividing it, but this time with a lump of rock in front of it. It has never been out of bloom all summer, and there are sprays still showing their lovely colour.

DAPHNE CNEORUM.—In the cultivation of this plant it is generally said peat, or loam, or leaf-mould, or all three are necessary. I had a bank composed of newly-dug clay with a very little top soil. Farmyard manure was incorporated with it, and later, to keep the soil open, a heavy dressing of lime was dug in. On this bank-side, amongst other things, two plants of *Daphne Cneorum* were put in about ten or twelve years ago. They grew with a will from the first. One of them is now roughly oval in shape and measures 7 feet by 4 feet, and every spring the flowers hide the leaves. The other had to be moved to another position on the same bank, which checked the growth, and it only measures 3½ feet by 2½ feet. I planted another in sandy peat and loam. It promptly died.

PAMPAS GRASS.—This is generally said to require rich, light, sandy soil. I have four or five big clumps. One is at the north end of the rock garden in strong loam, into which the roots of trees and shrubs penetrate. It does well. Another is planted at the back of the rock garden in very light, gritty soil, facing full south. It does less well. Another is planted in strong, clayey loam on a bank much exposed, and is an immense clump full of plumes. Another is within a few inches of the edge of the pond in very strong, clayey soil. Its roots are always in the water. It does best of all, and is now carrying forty or fifty plumes each over 7 feet in height. Last year it had over sixty plumes on it.

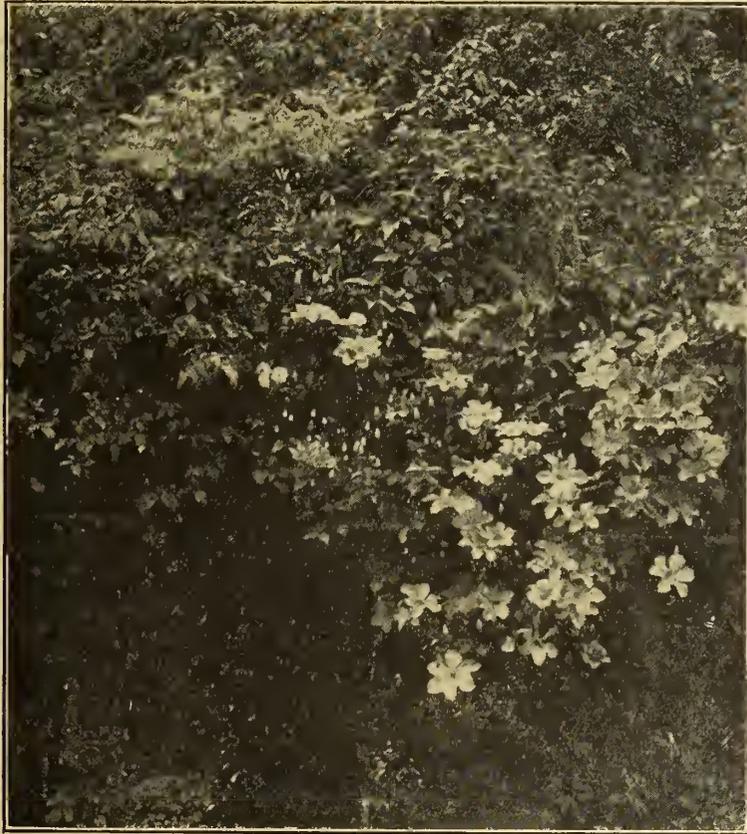
YUCCA FILAMENTOSA.—This is said to require sunny banks and light, well-drained soil. I have one planted in a good position on the rock garden in full sun. It is now in bloom, but has no special vigour. Another was planted at the same time by the water-side in the shade of the Pampas Grass in a pocket of good loam. It grew well and flowered well, but a water-rat ate the flower-stalk and the stump of the plant completely down to the ground two years ago, and I bid goodbye to it. Last year it threw up a number of shoots round about and at some distance from the old stem. These have now grown into strong, healthy-looking plants, but have not yet flowered. The roots are always in water.

PRIMULA JAPONICA.—This is a bog plant, and, it is said, should always have its toes in the water. I have a group in such a position and they flourish. I have an older plant amongst grit and stones on a raised part of the north side of the rock garden. The only moisture it gets is that conserved by the stones. It flowers equally well and is the seed-parent of hundreds of plants growing all over the garden, but it is less gross in growth.

SNOWDROPS were a weed with me fifteen years ago in my garden a quarter of a mile from my present residence. I cannot establish them in my new garden.

MONTBRETIAS.—My present "weeds" are Montbretias, which receive no care or protection, but bloom and spread as persistently as Buttercups.

I might go on enumerating a score of instances, all of which would lead to the same conclusion, viz., that whilst there is



Rosy Clematis on rustic arbour at Warley Place, Great Warley, Essex.

of the character of this. Here is an illustration of one in Miss Willmott's garden as a seedling. It well deserves to be better known. It looks as vigorous as a Clematis should. *W.*

Fuchsias in the flower garden.—In many places old plants of greenhouse varieties of *Fuchsia* are used in the flower garden during the summer. They are mostly kept for this purpose year after year. Their old and gnarled branches when they are devoid of leaves do not, at least to the uninitiated, promise much of a future floral display. With the return of spring, however, if the loose shoots are shortened back and the plants placed under conditions favourable to growth they soon become a mass of young and tender shoots, while a profusion of flowers will make its appearance in due course. These old plants flower more freely than the young and succulent ones. Given a

ILLUSTRATED as to the special requirements of different plants. It is probable that there are an ideal situation, treatment, and soil, but as these are generally unattainable and frequently unknown we are apt to lay too much stress upon securing them. Plants, like human beings, have their likes and dislikes, but equally so many of them can thrive and multiply under quite opposite conditions, and I like to think of them as possessing individuality and able either to rise superior to their environment or to petulantly strike for better conditions. These thoughts arise from a perusal of the contrary advice often given by experts, all of whom I have no doubt write from personal experience. Let me give one or two facts from my own experience.

OURISIA COCCINEA.—I planted a clump in a cool, damp part on the north face of my rock garden. It lived; never flowered;

in the plant world a number of irreconcilables demanding special treatment, the great majority are adaptables and will make the best of what is given to them, and also that some plants seem to have a double dose of original sin and are intractable, whilst others are so amiable that, Mark Tapley like, they will flourish in spite of the most adverse conditions.

NORTH YORKS.

AMONG THE HARDY FLOWERS.

COVERING LATE BULBS IN FLOWER.—It always makes me sad to see the bulbs which are in flower in autumn suffering from the bad weather that then very often prevails. I have found it worth while to have some protection at hand to keep rain off the blooms. Hand-lights, bell-glasses, cloches, etc., are expensive, but I find a piece of flat board useful if supported above the flowers by means of sticks and with a stone on the top to keep the board from blowing off. By this simple means I have prolonged the beauty of many flowers for quite a considerable time.

TOAD-FLAXES.—I should be glad to get rid of *Linaria repens* from my rock gar-

den. Once it gets hold it creeps under stones and comes up in the middle of some other and, perhaps, choice plant, and it is almost hopeless to attempt to get it out without injuring a more highly-prized specimen. This creeping habit of the Toad-flaxes, present in nearly all that I know, detracts a great deal from their value, unless one has some spare corner or wild place for them. *Linaria Cymbalaria* is a troublesome plant as well. There is one called *æquitriloba*, which creeps over and among other plants in a most insidious way. It is rather a nice little plant with small leaves and tiny flowers, but it wants careful supervision or it will become a perfect old man of the sea. The best of the family, to my mind, is *Linaria alpina*, whose only fault is that in a severe winter it is liable to perish.

MONTBRETIAS.—This has been a good season for the Montbretias, and I have learned the importance of lifting and replanting the corms when at rest if I want to get the best spikes and flowers. When they are left too long the clumps become crowded. By lifting them and planting the larger-sized corms by themselves a little apart much better flowers are ob-

tained. If increase is wanted the small corms may be planted by themselves in a nursery-bed to grow on.

HELIENIUM AUTUMNALE STRIATUM.—A friend gave me a bit of this, which he said he had got under the name of *Helenium grandicephalum striatum*, but that the above was the correct one. I am content, when speaking of it, to call it simply *Helenium striatum*. It is a good autumn-flowering plant, growing to 3 feet or 4 feet high. The blooms vary in their colouring. Some are almost pure yellow, flushed with a little brown or red, but others are more conspicuously marked in stripes with these colours. Others, again, are almost wholly chocolate or warm red, and come nearer to the newer Riverton Beauty.

AN AMATEUR OF HARDY FLOWERS.

MICHAUXIA CAMPANULOIDES.

This is one of the most remarkable plants of the Bellflower order. Eminently well-fitted to free grouping when so grown, it is capable of creating a feature of rare interest and beauty in any garden, a solitary example or even a few giving but little idea of its worth. Meagre-habited

ordinary border. Far better that it be planted in generous groups near shrubs of sombre leafage. Flowering period, July-August. Warm, well-drained soils and sheltered places are to its liking. Seeds are very cheap, and there is no reason why in large gardens it should not be planted freely. Well grown, it may reach to 5 feet or 8 feet high. The flowers are white, tinged purple on the outside, and, appearing from the leaf-axils, are disposed candelabra-like in the upper parts of the plant. Native of the Levant about Aleppo and on Mount Lebanon, it has been known to cultivators nearly 130 years. A goodly group is seen in the accompanying illustration, and, to ensure such displays, seeds should be sown annually.

E. H. JENKINS.

Mr. Chas. Oakford, Mells Park Gardens, Frome, who sent us the photograph from which the illustration was prepared, sends us the following note as to his mode of culture:—

"The *Michauxia* has been much admired here this summer, there not having been much rain to spoil the flowers. I sowed the seed in early spring in a warm house and plant out the seedlings where to flower in April. They make fine, large clumps and stand the winter well in light soil, and flower the following summer. I have had the plants throw side growths and flower the next year, but I prefer to sow every spring."

HARDY FUCHSIAS.

Those who may be seeking for variety in the outdoor garden should try some of the many varieties of *Fuchsia* which succeed well in the open ground and can be relied on to become well established and increase in blooming power from year to year. Such kinds as *Riccartoni* and *globosa* have long been inmates of cottagers' gardens, but there are others equally suitable which have probably been forgotten. *F. gracilis* is very old and very hardy, and old specimens may be found here and there in cottage gardens. *F. macrostemma* is robust and one of the hardiest, and *F. corallina* is free-growing and effective. The miniature *Tom Thumb* is pretty and suitable for very small gardens, and *Dunrobin Bedder* and *Enfant Prodigue* are very ornamental. The gem of the family is undoubtedly *F. Carmen*, which has large, highly-coloured blossoms on a stem which, under the best culture, does not exceed 1 foot and is frequently not more than 6 inches high. That very old greenhouse variety, *Venus Victrix*, which in the earliest days of *Fuchsias* was regarded as a little wonder, does well in the open ground. *Mme. Cornelson*, with white and red flowers, never, I think, grown under glass nowadays, is very showy, and that good old kind, *Rose of Castile*, forms a perfect mass of bloom. I have had these in the open ground for seven or eight years. Sometimes the crowns had the protection of a little leaf-soil, and in late summer and autumn they were a mass of bloom. I have tried some other kinds, such as *Mrs. Marshall*, *Crinoline*, etc., but with partial success only. The question of economical furnishing comes up strongly nowadays, and for beds on the lawn these *Fuchsias* are admirable, and need no annual planting. Some cheap hardy bulbs planted with them would lead the way in the flowering time.

Byfleet.

J. CORNHILL.

subjects are not, as a rule, suited to isolation, but, grouped on a generous scale, their value is apparent. In this, probably, gardeners have not fully appreciated the merits of an exceptional plant. Equally probable, too, is it that its cultural requirements are not understood by all. A biennial for all practical purposes—though in some instances plants may take two or more years before reaching the flowering stage—it is not always accorded at the start those systematic methods of culture—timely seed-sowing and the like—which for plants of a biennial nature are considered essential to success. Where this is so a moderate development only ensues, which does not do the plant justice. Where no artificial heat is at hand seeds should be sown in pans in a frame in autumn or with slight heat quite early in the year. Either of these should result in moderately good plants for planting out in May. If established in pots so much the better, and, with a full season ahead for growth, a representative flowering should follow in the ensuing year.

By reason of its uncertain flowering and tall, spare habit it is not recommended for, or, in my opinion, even suited to, the

Geranium cinereum album.—This beautiful albino form is a most satisfactory plant for the rock garden, as it is of quite easy culture in well-drained gritty soil, never encroaches on



Part of a group of *Michauxia campanuloides*.

its neighbours, and goes on blooming all the summer until quite late in the autumn. Here, at the beginning of October, it is still throwing up plenty of its delicate white flowers, and these, combined with the beautiful foliage, always make a pleasing little picture. I grow it on a retaining wall in a limy soil. It can be easily raised from seed, which it ripens freely. The seedlings usually come true.—N. L.

CROCUS SPECIOSUS.

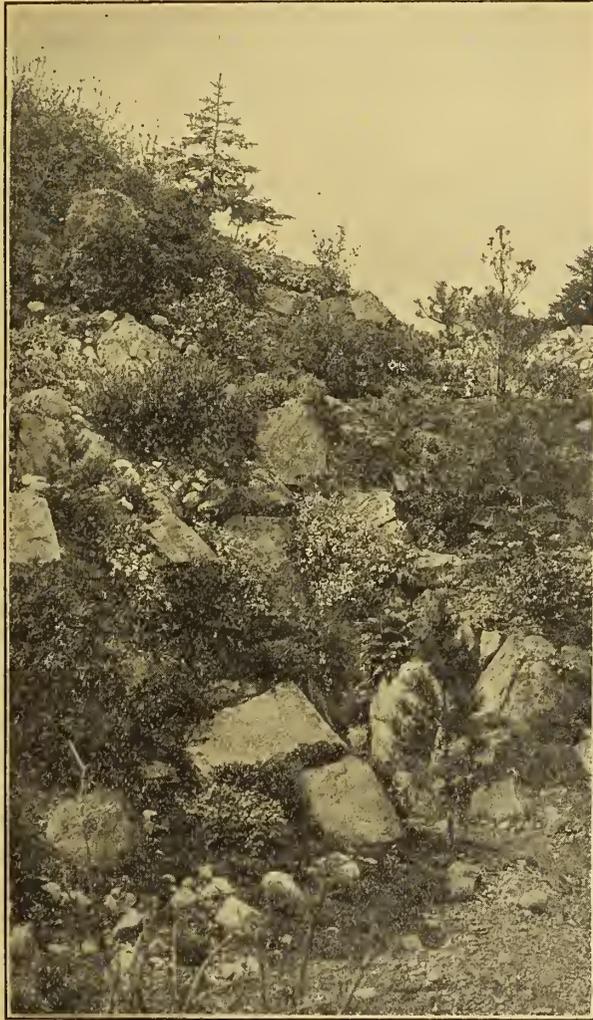
This is more cup-shaped than other Crocuses when fully expanded, and, except in a few well-marked forms with long and narrow segments, seldom opens into a star-shaped flower. The deeper-coloured and bluer forms are the more globular in outline, and the pure white, and some very large forms with outer segments of pale grey tinged with lilac, are the most starry of all. Somewhere and at some time this large form was called variety *Aitchisonii*, but I have never been able to find a description of it or its native locality. The name suggests the most Eastern ranges of the plant's distribution, as most plants named after Aitchison are from the Afghan frontier, and the most Eastern record we have for *Crocus speciosus* is Astrabad, just south of the Caspian Sea. It is a mysterious plant in other ways, and though the first roots I ever had of it, one of Mr. Elwes' kind gifts, seldom flower before the greater number of the darker forms are over, I find seedlings approaching it in colour and equalling it in size now and again among those raised from other forms, and flowering as early as any.

The rich blue of *C. speciosus* gives it its great value in the autumnal flower-beds, for whether rising out of a carpet of fallen leaves of many shades of bronze and orange, or from the bare brown earth, the effect is wonderfully pleasing. Again, as a groundwork under autumn-tinted shrubs, or among brightly-coloured flowers, the drifts of blue are unlike any other effect produced at any season. One of the easiest to grow, and certainly the freest of all Crocuses in its dual method of increase, by seeds and bulbils, it can be allowed to spread about in the borders, and year by year there should be an increase of its colonies. Even digging does not kill them, and they do not mind how deeply they get buried, and after a year or so re-appear as vigorous as ever.—E. A. BOWLES in *Garden*.

Bulb planting.—If any bulb planting yet remains to be done, let it be finished without delay. In planting, a dibber with a blunt end is essential; if a tool with a pointed end be used the bulb does not reach the bottom of the hole, and water is apt to lodge in it beneath the newly-planted bulb. This, naturally, is detrimental to the roots when they begin to push. Should sand be plentiful, a little placed at the base of each bulb will be

found of advantage. There is, as is well known, a shortage of foreign bulbs; but there is a plentiful supply of home-grown material, and at prices which compare favourably with those of foreign origin. Some of the finest *Narcissi* in these grounds came from the Channel Islands a number of years ago; and certainly the finest Darwin Tulips in the garden were bought in Ireland. It ought to be borne in mind that in the woodland—in places where bulbs have been largely naturalised—there is plenty of the commoner varieties of *Narcissi* which may be drawn upon to some extent for forcing, either for the purposes of decoration in pots or for forcing in boxes for cutting.—KIRK.

Michaelmas Daisies.—I do not remember having seen Michaelmas Daisies so freely flowered as they are this year, while the colours of the flowers seem to me to be brighter than



A wild corner in Mrs. Greer's garden at Curragh Grange, Co. Kildare.

usual. The plants will grow in almost any soil, and it is probably owing to this that they do not generally receive the treatment they so well deserve. The outside portion of each old clump always does the best, thus proving the necessity for providing new, fairly rich soil. All ground intended for these plants should be deeply dug, or, better still, trenched.—G. G. B.

Aster Drummondii.—This very late variety is not yet (October 12th) in bloom, but if frosts hold off it may be expected to flower shortly. In seasons when very early frosts are experienced this variety fails to bloom; but even with this drawback, it is worthy of inclusion. Its china-blue flowers, freely produced in sprays, are charming in mid-October; and, in addition, the habit of the plant is quite distinct from that of the generality of *Asters*.—W. McG.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

A WILD CORNER.

The illustration shows a wild corner in Mrs. Greer's alpine garden at Curragh Grange, Co. Kildare. Here alpine plants of all sorts thrive with vigour, as the ground is open and well drained, and the soil is perhaps somewhat better than may be at first assumed by the appearance of all the rough-looking stones.

R. H. BEAMISH.

Stone for rock garden.—Do you know the red Norfolk sandstone? Is it reliable for this work. They build the houses with it near Sandringham, and I can have it fairly reasonable in price. I am also offered blue and brown limestone from Ancaster, both colours in each piece of stone. Can one have all brown limestone and the blue and brown mixed in one stone used for the same garden? They both come out of the same quarry and from one large block. I have been told it would look unnatural.—(Dr.) CECIL A. P. OSBORNE, F.R.C.S.

[We know nothing of the Norfolk sandstone to which you refer, and the "mixed blue and brown," also mentioned, would be simply hideous for the rock garden. The best stones are the weathered limestone and sandstone, these being available in considerable variety in many parts of the country. Their chief value lies in their porosity and their sympathy with plant life. In humid districts or where the rainfall is heavy some of these soon attract lichens and mosses, and, quickly toning down, present quite an old-time look in the space of a year or two. Hard, impervious stone as granite is unsuitable. Cheap stones are often the dearest, and very often are quite unsuitable into the bargain.]

Pentstemon isophyllus, increasing.—I find some difficulty in striking this. Would you use soft wood or not, and would you take the cuttings with a heel? Will "E. H. Jenkins" kindly tell me where I can buy the half pots he writes about in his article on "Cobweb Houseleeks in pots," page 515?—CECIL A. P. OSBORNE.

[There should be no difficulty in rooting cuttings of the right sort, youthful, *i.e.*, soft, cuttings being the best. It is late now to root such in a cold frame, though they would respond to slight warmth. Heels are not desirable and take longer to root than the others. For autumn work a stem or two should have been cut back slightly in July, the resulting growths from which at 3 inches long would furnish cuttings of the right stamp, and, inserted about mid-August, would have been well rooted by this time. If you have greenhouse warmth a plant might be lifted and put into a frame, having been first shortened back. Placed in the greenhouse in February, fresh young growths would soon appear, and which root readily in sandy soil in a closed frame. The half-pots are usually only made to order, and if you require a small number only you would get them best by applying to some of the specialists who grow alpine plants.]

Polygonum affine or Brunonis.—This has been a good year for this Knotweed, and there are still (mid-October) many of the short, crowded spikes of red or pink flowers which overtop the brilliantly-coloured leafage. I grow it on a north-east exposure, which it appears to like. It is easily increased by division, and forms a low trailing or creeping plant only a few inches high.—S. A.

Saxifraga L. C. Godseff.—A capital doer and a really good plant is this Saxifrage. *S. Burseriana* is one of its parents, but it has yellow flowers. It was raised, I understand, at the nursery of Messrs. Bees, and has made its way into gardens by reason of its beauty, its good growth (for a plant of its class), and its free-flowering habit. In March and April it is usually very pretty, its nice yellow flowers

rising above a spiny cushion of grey. It is a grand plant for the moraine or in a dry rockery with lime.—S. A.

Ramondia serbica.—Some like *R. serbica* better than *R. pyrenaica*, while others consider them of equal value. Both may be grown in a shady place, where they will not suffer from drought during the spring, summer, and autumn. They are charming in the crevices of a wall or rock garden facing north. *R. serbica* and *R. pyrenaica* should be planted so that they do not grow on the flat, with their leaves and flowers fully upright.—S. ARNOTT.

CHRYSANTHEMUMS.

PLANTS IN THE FLOWER GARDEN.

EARLY in the season the plants did not make very satisfactory progress. While under glass they grew steadily, but when planted out, the cold weather, especially at night, accompanied by frosts, till about the middle of June, checked growth considerably. At the end of July there was every promise of a rich harvest of blossom. The spell of dry weather in June may in some soils have induced premature flowering of certain varieties. This should be prevented by copious waterings, not only with clear, but also manure, water. The growth will be encouraged, the stems strengthened, and the blooms fresher and of more substance. Furthermore, the plants will be larger, too, and fill up all space in the borders. Some varieties are doing remarkably well, notably *Carrie*, a rich yellow, very dwarf. It is classed as a September-flowering sort, but with me it begins to bloom the second week in July. *Polly* is another dwarf variety, whose rich orange-coloured flowers will soon be open. *Horace Martin* (yellow) and *Crimson Marie Masse* are still valuable sorts. *Normandie* (delicate pink) and *Provence* (pink with golden points and centre of bloom) are two that should be grown by every lover of border Chrysanthemums. Others are *Mme. Marie Masse* (ilac-mauve), *Caledonia* (ivory-white), *Belle Mauve* (mauve), *Almirante* (chestnut-crimson), *Gertie* (salmon-pink), and *La Garronne* (terra-cotta).

VARIETIES FOR CUT BLOOMS.—The following are very beautiful and serviceable for cutting in September, October, and early in November. They can be grown and flowered, without the aid of glass, throughout, and are of great use to amateur cultivators who do not possess glass structures. *Roi des Blancs* (pure white), *White Quintus*, *Le Pactole* (bronz-yellow), *Mrs. Roots* (pure white), *Ethel Blades* (chestnut-scarlet), *Source d'Or* (bright orange), *Lizzie Adcock* (yellow), and *October Gold* are only a few of many good sorts, but they are doing very well this year.

The great points in the management of the plants are watering and feeding, not with a view to the forcing of the growth, but to strengthen it so as to obtain the best blooms possible at a minimum of expense and labour. Many plants may be lifted and potted with good results by amateurs and others with very little experience. The time to lift is when the buds have just formed. G. G. B.

Chrysanthemum Mons. W. Holmes.—A good November-blooming Chrysanthemum, now almost forgotten, may be found in the above-named variety. The colour may be described as a rich, dark terra-cotta, turning lighter at the edges of the petals. If planted in the open during the summer, and lifted on the approach of frost, fine pieces may be obtained with the minimum of trouble, and which will give a large amount of material for cutting. Some of these old Chrysanthemums are much more valuable for general purposes than those of more recent introduction.—KIRK.

GARDEN FOOD.

CELERY COOKERY.

APART from its use uncooked and in salad, Celery is precious for winter use in the hands of good cooks. The Turnip-rooted form, hitherto much neglected in our country, is a good winter vegetable, more easily grown than the blanched Celery, and an aid in winter when vegetables are scarce. As a salad, Celery should be more thought of, sometimes using it with other salads, like *Lamb's Lettuce*, which in many gardens is in good use now.

BAKED CELERY.—Parboil and drain eight heads of Celery. Finish cooking in white stock. Season very lightly. Drain, strain, and skim the cooking liquid and thicken with a tablespoonful each of butter and flour cooked together. Take the sauce from the fire and add the yolks of three eggs and half a cupful of grated Swiss cheese. Put the Celery into a buttered dish, cover with the sauce, sprinkle with crumbs and cheese, and bake for ten minutes in a brisk oven.

STEWED CELERY.—Cut cleaned Celery stalks into 3-inch lengths and cook until tender in stock to cover, seasoning lightly with salt, minced Parsley, and grated Onion. Drain, strain the liquid, and thicken with flour browned in butter. Re-heat the Celery in the sauce, and serve.

CELERY IN BROWN SAUCE.—Clean and trim three heads of Celery and cut into 4-inch lengths. Cover with boiling water, let stand for ten minutes, drain, and rinse in cold water. Tie in bundles and put into a saucepan with three cupfuls of hot stock. Add one-fourth cupful of butter or dripping, half a Carrot, half an Onion, a little salt. Cover and simmer until tender. Drain the Celery, strain the liquid, skim off the fat, and thicken a cupful or more of the cooking liquid with flour browned in butter.

APPLE AND CELERY SALAD.—Two or three crisp, juicy Apples, one head Celery, salad dressing, and a little Lettuce. Use the inner portion of the Celery. Wash it, cut it into fine shreds, and let it lie in cold water for half an hour. Then drain and dry it well in a cloth. Peel, core, and with a silver knife cut the Apples into very thin slices. Put the Celery and Apples into a basin, pour over enough salad dressing to moisten them, and mix together very lightly. Line dish with a few fresh salad leaves.

SAVOURY CELERY AND MACARONI.—Take three heads of Celery, milk, and water, Bay-leaf, 2 oz. macaroni, $\frac{1}{2}$ pint white sauce, white pepper, nutmeg, salt. Trim and wash the Celery, boil till tender in the milk and water, seasoned with salt and Bay-leaf. Drain the Celery, and cut into 2-inch lengths. Cook likewise macaroni in salted water, and when done drain on a sieve and cut into short pieces. Heat up the white sauce, put in the Celery and macaroni, season to taste with pepper and a grate of nutmeg, and let the whole simmer gently for about fifteen minutes or longer. Care must be taken not to mash up the Celery or macaroni. Dish up on a hot dish, and serve.

CELERY SOUP.—Trim and wash two heads of Celery and cut into small pieces and boil in salt water or stock for thirty or forty minutes. Boil a blade of Mace and a small peeled Onion in one pint of milk. Mix an ounce of flour with a little cream or cold milk. Add this to the boiling milk and cook for ten minutes. Now add this to the cooked Celery, and season with pepper and salt. Then put all through a fine sieve, reheat the soup, add a little cream, and serve with some fried croûtons.

BRAISED CELERY.—Trim and wash six heads of Celery and cut them into 3-inch or 4-inch lengths. Tie up, blanch them in salted water for five minutes, and drain. Next place the Celery in a stewpan, a sliced Onion and a small bouquet garni—i.e., Parsley, Thyme, Bay-leaf, and Marjoram. Moisten with stock, cover and braise slowly in the oven for about thirty-five minutes to forty minutes. About ten minutes before serving add a gill of rich brown sauce. Take up the Celery carefully and dish up. Strain the sauce, boil up and then pour over the Celery. Serve hot.

NOTES AND REPLIES.

Celeriac.—In these days of want of labour this crop is welcome, as it requires none of the earthing-up necessary for Celery. It is always well worth growing and an aid to the good cook. It is commonly and well used in French kitchens. It grows best in the coolest and best parts of the garden.

In preparing it wash the root well with a vegetable brush, and peel it. Cut in halves and quarters, or in slices an inch thick. Melt a lump of butter in a saucepan; when it frizzles put in as many pieces as the saucepan will hold, letting them lie flat to brown all over. Take the pieces as they are browned on to a plate, until they are all fried; then put back all the pieces, cover close, and stand the saucepan on the stove, where they will not burn, for twenty minutes. Turn them out carefully on a hot vegetable dish, season with salt and pepper and a little finely-chopped Parsley. Another way is to melt a lump of butter in the saucepan with half a teacupful of water, put in the root, cover close until tender—from twenty minutes to half-an-hour if quite fresh, but when a little stale it takes longer. When tender, mix quite smooth with a little cold milk a teaspoonful of flour, dish up the root, pour the thickening into the water and butter, let it boil for five minutes. Season very lightly and add the juice of half a Lemon; pour over the vegetable, and serve. It can be served in brown sauce; also made into fritters, after being first cooked until tender, and served with Parsley sauce, Fennel sauce, soubise sauce, or any sauce you fancy.

CELERICAC AU GRATIN.—Plainly boil and drain, put into a gratin dish and cover with sauce made with two tablespoonfuls of cream or Bechamel sauce. Add two tablespoonfuls of grated cheese, some red pepper and salt, bring to the boil, and cover Celeriac. Sprinkle some breadcrumbs and put small pieces of butter on top, and brown in moderate oven.

CELERICAC IN BATTER.—Dip Celeriac in plain batter made with two tablespoonfuls of flour, a few drops of salad oil, yolk of an egg, and a little water. Mix well together, add the whites of two eggs whipped stiffly, and fry brown. Serve with Tomato or Hollandaise sauce if liked. To Celeriac plainly boiled and drained add egg and breadcrumbs and fry in butter to a light brown. Serve with light Bearnaise sauce.

The Canteloup Melons.—A trial of these for the first time has turned out well, in spite of the cold season and the absence of the gardener at the war. They were planted in cold frames often not in use in summer. The kinds are those grown out of doors about Orleans and Paris in open beds with a start under a cloche. In England, with a slightly cooler climate, we put them into frames and get a fair record in fruit. To some the flavour is more agreeable than that of the English green-fleshed Melon.—W.

Cauliflowers.—I have met with a good many instances of mid-season Cauliflowers doing badly this year, and can confirm what "W. McG." says on this point on page 501. Further east in south Scotland the failure is not universal, but frequent. It is a great disappointment, and probably the unfavourable weather has had a good deal to do with the trouble.—A.

I was very much interested in reading the note on Cauliflowers by "W. McG.," *Balmae*, Kirkcudbright, October 7th, page 501. In Hampshire the same condition of things prevails, some of the early varieties being equally unsatisfactory; I never saw plants grow so slowly. Many plants of the mid-season varieties bore a number of heads instead of one, these in many cases becoming purple before they were half developed. Late sorts are doing much better. Some plants grown in a warm, light soil were quite normal. I think the cold spell of weather was responsible for the failure.—BOURNE VALE.

Apple Bramley's Seedling.—This fine Apple realised 11s. a bushel, equal to more than 3d. lb. wholesale, at Covent Garden on Wednesday, October 18th.

TREES AND SHRUBS.

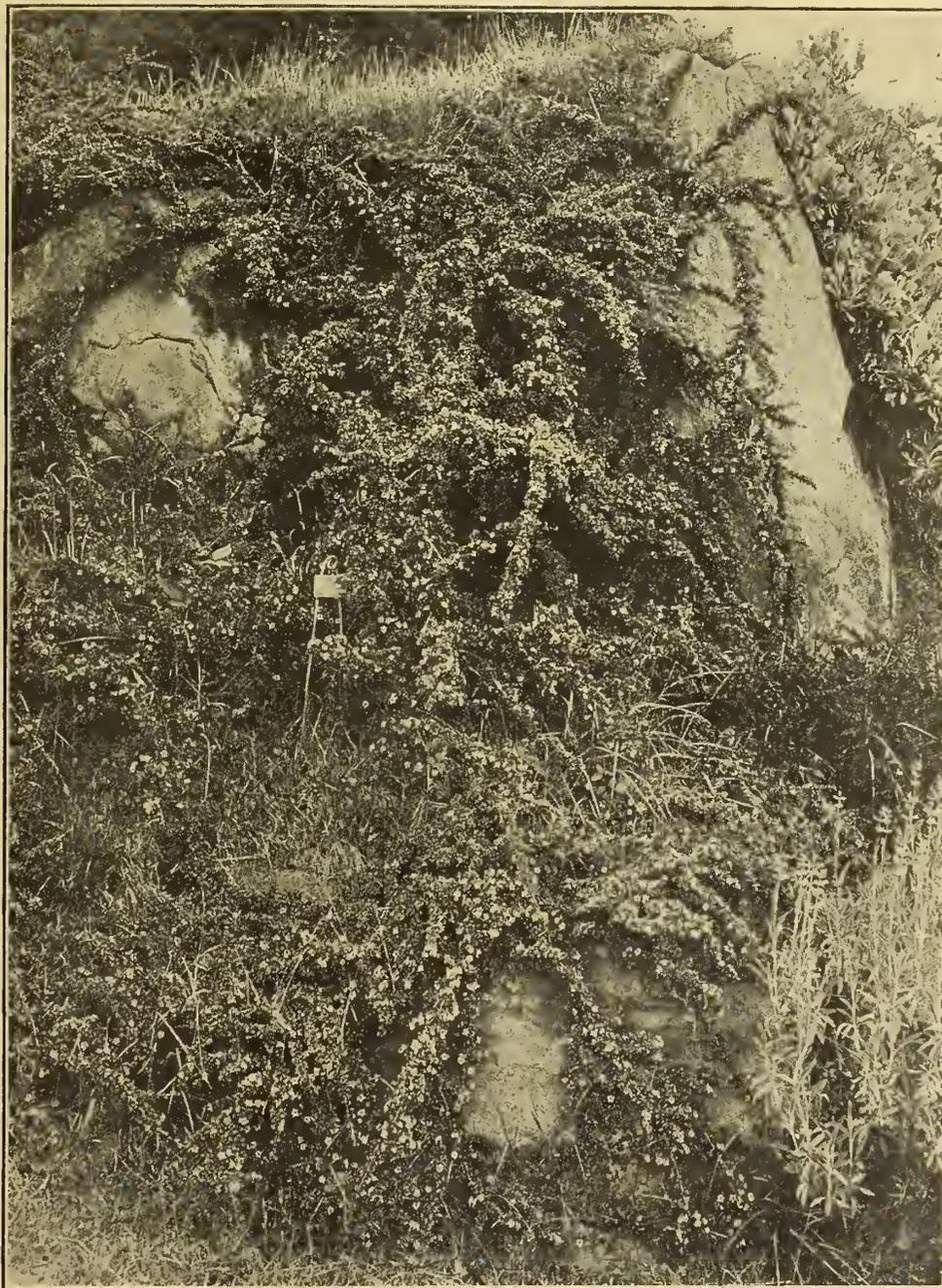
COTONEASTER MICROPHYLLA.

This evergreen Rock-spray has tiny deep green leaves, and in the spring is crowded with whitish blossoms, the berries crimson, and, if untouched, remaining on the plants for a long time. There are some well-marked varieties of *C. microphylla*, one of which—*thymifolia*—is smaller in all its parts, while *congesta* has even more of a procumbent habit. *C. microphylla* is useful for sloping banks or like positions,

grown in British gardens for over 200 years, although it is now by no means common nor well known. It does not grow very tall, and at maturity may be any height between 15 feet and 30 feet, usually forming a wide-spreading, flattened head. The leaves are somewhat like those of the better known *C. orientalis* in appearance, though rather less hairy, and the two species have often been confused. The fruit, however, of *C. Azarolus* is much larger than that of *C. orientalis*, the larger ones being an inch in diameter, usually

THE SUMACHS.

The Sumachs or species of *Rhus* form an attractive group of plants, whilst in their native countries several species are of considerable economic importance. They are widely distributed, for they occur in Europe, Asia, and N. America. Their principal value as ornamental plants lies in their foliage; a few, however, bear showy fruits. They vary a good deal in habit, some forming low bushes, others having more or less scandent branches; whilst others, again, grow into big bushes



Cotoneaster microphylla.

while it will cover a wall with such a dense mass that nothing else can be seen. Again, in the lower parts of the rock garden a place may be found for it, the variety *congesta* being more at home when draping a large stone than in any other way. On the lawn the spreading shoots dispose themselves in a very pretty way when planted as a small group.

The Azarole (*Crataegus Azarolus*).—This is distinct by reason of its large, edible fruits. A native of the Orient, it has been

yellow or orange in colour, but often marked with red on the sunny side, and sweeter than the fruits of *C. tanacetifolia*, which is another Oriental species quite distinct from *C. Azarolus*, both by its more hairy leaves and by the yellow fruits bearing curious green bracts upon the skin. *C. Azarolus* should be given a sunny position in good loamy soil, for in shade it is not likely to fruit freely. Although the fruits are used regularly in some continental countries, they do not appear to be put to any good use here.—W. D.

or moderately-sized trees. Their economic value lies chiefly in their leaves and sap, and in large galls that are formed on the leaves after they have been punctured by a tiny insect. It is from the sap of a *Rhus* that the varnish which is used in the manufacture of the famous Japanese lacquer ware is prepared. The leaves and galls are rich in tannin, and they are used extensively for tanning various kinds of leather. In addition to these uses a waxy substance, which is used for candle-making and for other purposes, is obtained from the fruits

of one or two species. Unfortunately, the sap of two or three species of *Rhus* is poisonous to many, though not to all, and if it comes into contact with the skin an eczema-like eruption follows, which is attended by considerable irritation. Attention is directed in the following notes to the two—*Rhus Toxicodendron* and *R. venenata*—chief offenders, and though both are beautiful shrubs it is wise to banish them from the garden. A few of the Sumachs are not very hardy, but the majority of the ten or twelve species in cultivation can be grown in many parts of the British Isles. They succeed in ordinary garden soil, thriving best, perhaps, in that of a rather light, loamy character. Propagation can be effected by means of seeds or by cuttings or layers, root cuttings in most instances being successful.

R. CANADENSIS is a rather dense but rambling shrub usually 3 feet or 4 feet high, with three-parted leaves and yellow flowers produced from the leafless branches a little in advance of the leaves. The fruits are red, but they are rarely borne in sufficient numbers here to attract attention. In autumn the leaves colour well before they fall, the colours being orange, bronze, and red. The variety *trilobata* is, if anything, more attractive in autumn. The type is from Eastern N. America and the variety from the western side of the same Continent.

R. COTINOIDES is known as Chittam Wood in the South-Eastern United States. It sometimes grows into a tree 30 feet high in its native habitat, and is of interest by reason of its pale green, oval leaves in summer, and by the beautiful colouring of its leaves in autumn, the colours being then very delicate shades of yellow, orange, and scarlet. It appears to give the most satisfactory results on rather poor, firm ground, growth on loose, rich soil being gross and late, whereby the best autumn colouring is not obtained and the branches are too soft to successfully withstand severe frost.

R. COTINUS is a well-known species from Southern Europe, where it is known by the popular names of Venetian Sumach and Smoke Plant. It grows into a bush 8 feet to 12 feet high and as far through. Though smaller, the oval leaves are very similar in outline to those of *R. cotinoides*. They are, however, darker in colour and are often of a decided blue-green shade. The most remarkable feature of the plant is the large, feathery inflorescences. The flowers are very tiny, but after they fall, the thin, thread-like stalks continue to develop until the seeds are ripe, by which time the network of tiny stalks forms a very conspicuous object, particularly in the variety *atropurpurea*. The combination of feathery plumes and blue-green leaves has led to the common name of Smoke Plant. Another common name is "Wig Tree." The leaves of this bush are used largely for tanning.

R. GLABRA forms an attractive object by reason of its long, pinnate leaves, which, except that they are not hairy, are very similar in shape and outline to those of *R. typhina*. When planted in good soil the leaves sometimes attain a length of 3 feet, and in some gardens it is a favourite plant to cultivate it for its large leaves. Young plants are given good soil and cut down to the ground-line each year, one shoot only being allowed to develop from each stalk. That shoot becomes very strong and the leaves correspondingly vigorous. When seen in a mass, plants grown in this way are very imposing. The variety *laciniata* differs from the type in having very finely-cut leaflets; it is one of the most beautiful of ornamental-leaved shrubs. *R. glabra* is a native of N.

America and grows about 8 feet high. The leaves of normally-grown plants are each about 18 inches long. In autumn the foliage turns to brilliant shades of red and yellow.

R. HENRYI is a comparatively new species from China which promises to form a small tree. It is chiefly remarkable for its pinnate leaves, which often exceed a foot in length, and for its rather large panicles of green and brown flowers. The red fruits are also ornamental.

R. OSBECKI is a small tree upwards of 20 feet high in its home in China and Japan. Here it may be found as a large bush or small tree. The leaves are very large and handsome, particularly on plants that are cut down to the ground each year. The species is easily distinguished by reason of the winged appearance of the stalk from which the leaflets spring. Like the previous species, it bears large inflorescences, the flowers being yellowish and small, but attractive by reason of their numbers.

R. TOXICODENDRON, the Poison Ivy of N. America, ought to be known to everyone, for it is one of the most dangerous shrubs grown in our gardens, the sap being of an extremely poisonous character when it comes into contact with the skin. It is found as a bush, and also, in the variety *radicans*, as a trailing plant, and it bears, usually, rather large three-parted leaves which in autumn colour brilliantly. Sometimes included in gardens as an unnamed shrub the leaves are collected in autumn and are used for house decoration. A short time afterwards persons who have handled it are troubled by an irritating rash for which they are unable to account. Where this rash has occurred steps should be taken to find out whether *Rhus Toxicodendron* is growing in the garden, and, if it is, the plant ought to be destroyed. It is sometimes known as *Ampelopsis Hoggi*, but has really nothing to do with the group of Vines known under the name of *Ampelopsis*. The second poisonous species is *R. venenata*, or *R. vernix* as it is now called.

R. TRICHOCARPA is a Japanese tree recently introduced to our gardens. It grows 20 feet to 25 feet high in Japan and produces long, pinnate leaves which turn to a rich orange-scarlet in autumn. So far as can be judged at present it is likely to become one of the most useful species for garden culture.

R. TYPHINA, the Stag's-horn Sumach, is, perhaps, the commonest of the strong-growing species, and fine examples may often be noted in suburban gardens. In height it may be met with between 8 feet and 20 feet, with a spreading head of branches, the younger ones being densely hairy. The leaves are pinnate, each 1 foot to 2 feet long, or on cut-back plants 3 feet to 4 feet long. The female plant bears dense, erect heads of fruit which are bright red when ripe. It is a native of Eastern N. America and is easily increased by root cuttings. The variety *laciniata* has beautifully-cut leaves. Both this and the type are sometimes planted in rich soil and cut to the ground each year for the purpose of encouraging fine leaves. The leaves often colour well in autumn.

R. VERNICIFERA is the Lacquer-tree of China and Japan. In its native country it forms a large or moderate-sized tree and the sap is extracted by cutting into the bark as is done when rubber is extracted from various rubber-producing trees. It has handsome leaves up to 2 feet long.

Although these do not exhaust the hardy species of *Rhus*, they include the most useful, and a selection would form a useful asset to any garden. D.

STERILE-FLOWERED VIBURNUMS.

ONE group of the Viburnums is peculiar by reason of their possessing varieties which produce sterile flowers only, or a mixture of fertile and sterile flowers. The sterile-flowered forms are usually the more ornamental, the attractive part of the flowers being petal-like bracts, which are developed in the same manner as in the sterile-flowered Hydrangeas.

VIBURNUM MACROCEPHALUM (here figured) is an example of this group, and the inflorescences are perhaps more like those of *Hydrangea hortensis* than are those of any other species. It is a native of China, and it is doubtful whether the type with fertile flowers is in cultivation. Growing in China to a height of 20 feet, it grows quite 12 feet high against walls in this country. In the south-west counties it may retain its leaves for the greater part of the winter, but in colder places it is usually quite deciduous. Its growth is rather slender, especially when the plants are grown against walls. The flower-heads are often as much as 6 inches across, the colour white. It is one of the most ornamental of all the kinds, but is, unfortunately, tender. Another species which produces sterile flowers is

THE GUELDER ROSE (*Viburnum Opulus*), a European species which is found wild in Great Britain. It forms a large shrub up to 15 feet in height, and bears flat heads of white flowers in which fertile and sterile flowers are intermixed, the blooms being followed by rich red fruits. In the sterile variety the flowers are arranged in globular heads. Another species,

V. TOMENTOSUM, is of Chinese and Japanese origin and grows about 8 feet high. It is easily recognised by its ribbed leaves and flat heads of white flowers, in which fertile and sterile blooms are combined. In the variety *Mariesi* the same combination of flowers occurs in a glorified manner, but in *plicatum* the flowers are all sterile and produced in ball-like masses. *V. t. grandiflorum* is a particularly fine form of this variety.

GARDEN PESTS AND FRIENDS.

THE RASPBERRY-MOTH.

(*LAMPRONIA RUBIELLA*, BJERK.).

THE small red caterpillars of this moth, often called the Raspberry stem-bud caterpillar, are most destructive to Raspberries. On many fruit-farms the crop has been reduced by one-third or one-half in consequence of the attack of this insect, and much mischief is also often occasioned by it in gardens and allotments where patches of Raspberry-canecanec are cultivated. Upon close examination of the attacked Raspberry-canecanec it will be seen that the soft, juicy part at the base of the buds has been eaten away, so as to injure the buds and prevent their foliage and sometimes the blossoms from being put forth. The larvæ also feed on the pith inside the terminal shoots; the attacked shoots flag and then die away in very characteristic manner. A hole in the cane at the base of the buds may often be noticed, in which the pupa will be found ensconced, and sometimes the pupa may be found in the tunnel of the shoot.

DESCRIPTION OF THE MOTH.—The *Lampromia rubiella*, or Raspberry-moth, belongs to the group *Tineina*. It is a most beautiful moth, of a light brown colour, with a series of yellow dots and spots upon its forewings, the two most prominent being on the inner margin. The hinder wings are slightly lighter in colour, with light fringes. The head is yellowish-grey, and the antennæ dull brown. It is barely half an inch across its wings, and its body

is only about the fourth of an inch in length. It may be seen in the end of May, but is most common in June, flying round the Raspberry-canes.

LIFE-HISTORY.—The moth places its eggs upon the flowers of the Raspberry-canes from the end of May to the middle of June. After five or six days the caterpillar may be found in the raised white receptacle upon which the fruit (or, more correctly, the collection of little fruits composing the Raspberry) is formed. The caterpillar does not appear to injure the fruit, nor, indeed, to feed at all at this time. In time the caterpillar makes its way out of the receptacle, either by crawling or by letting itself down by silken cords to the earth beneath the canes, and passes the winter in a flat white silken cocoon about one-twelfth of an inch in diameter. These

what in individuals, and becomes more red in most larvæ as they get older. The head is black, and there is a patch of black divided in two on the first segment. It has three pairs of black feet on the thoracic segments. The pro-legs number four pairs, and there is a pair of anal feet. The pupa is about the fourth of an inch long, tapering somewhat unusually, and has a curious spine upon the back on the last segment; it is reddish-yellow in colour, the wing covers paler, the abdomen somewhat pink.

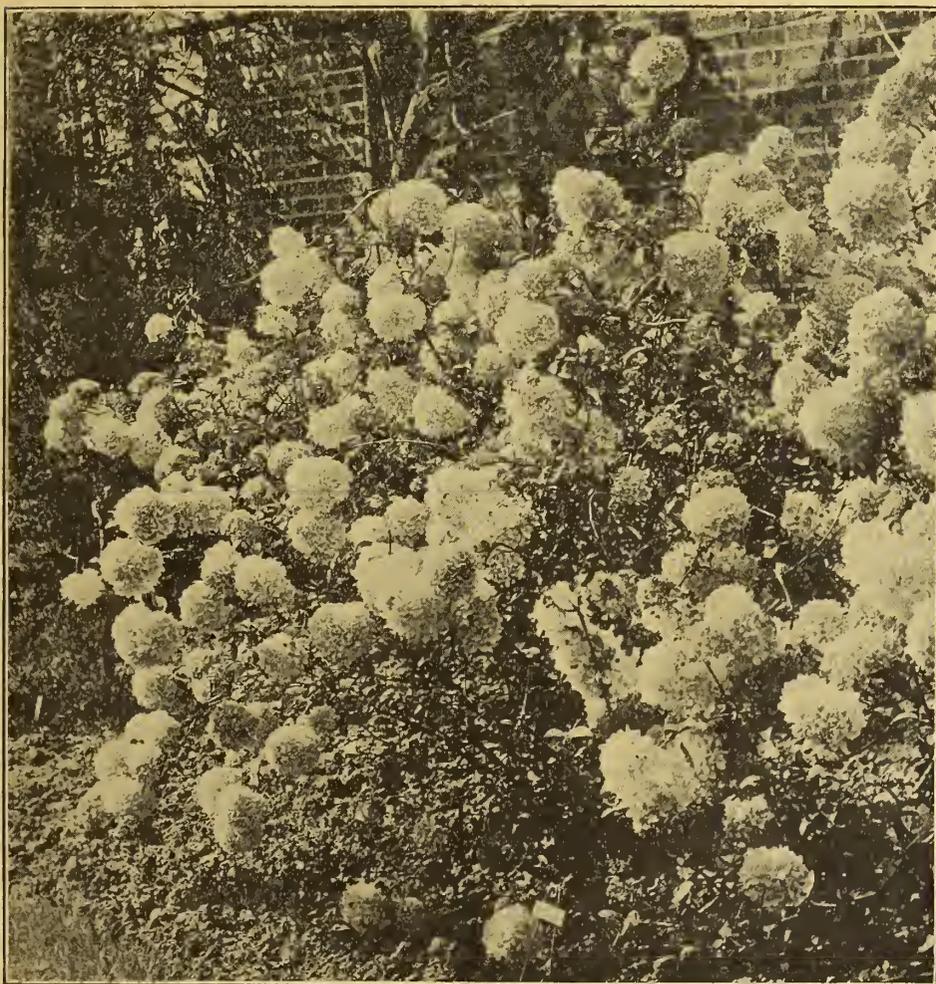
METHODS OF PREVENTION AND REMEDIES.—The caterpillars hibernate just under the surface of the ground, around and among the stocks of the Raspberry-canes, and in crevices in the poles, etc., and, as has been shown, they remain there from about mid-summer until March. Therefore, deeply

would be easy to put some thick soft-soap composition containing paraffin-oil, or some other offensive stuff, with a large paint-brush, at the beginning of March, upon the lower part of each cane that is left, in order to prevent the caterpillars from crawling up, and it would also damage those that may hibernate there. Cutting off and burning the infested canes while the caterpillars are in the buds between April and the beginning of June, would destroy many caterpillars and pupæ. This may be very freely done, as Raspberry-canes throw up plenty of shoots to take the place of those cut away, and infested canes bear little or no fruit. —*Leaflet of the Board of Agriculture and Fisheries.*

VEGETABLES.

PRESERVING SEED POTATOES.

THE aim of all growers ought to be the careful preservation of the seed-tubers, now being stored, in as dormant a state as possible. Nothing in the shape of a heap should be formed. At lifting time let them be separated from the ware and quite the smallest Potatoes—good medium-sized uncut tubers being the best for planting—and kept stored thinly till next spring. Greening Potatoes by exposure to the light and air is so far advisable, inasmuch as it slightly retards sprouting, but this ought not to be brought about by leaving them for several days or weeks lying on the ground or on paths, boards, or mats in the open, as by planting time not a few of the tubers may have taken disease between the lifting and storing times, this being effectually hidden by the coat of green. Tubers thus diseased do not decay rapidly, and perhaps the first indication of its presence is in many cases the weakly growth of the sprouts. Diseased sets cannot support a strong growth of haulm till it has time to become self-supporting, and ought never to be planted. Disease germs are far more plentiful in the air than most of us are aware of, but if they cannot reach the tubers before their skins are dry and well set they will not affect them afterwards, always provided the Potatoes have been properly stored. Dig all tubers that are to be stored in dry weather, and while also the ground is in a semi-dry state. This admits of the tubers being placed under cover or in heaps, and lightly covered up almost as fast as they are dug. It is a mistake to leave a lot of newly-dug Potatoes on the ground to dry all night. Sprouting must be prevented as much as possible by storing thinly as well as exposing the tubers to light and air. Keeping them in single layers, resting in the case of Ashleaves on the smaller end or that previously attached to the plant, cool and fairly light, is the best preventive of premature sprouting and also the surest way of having the sprouts stout and strong when the proper time arrives for growth to be made. Shallow trays with the corner blocks 2 inches higher than the sides are very handy for storing seed-tubers in, as these can be packed one above another and yet not unduly shade each other. Any kind of flat box or shallow basket blocked up well one above the other is preferable to storing in deep boxes, hampers, and such like. The tubers should at planting time be quite firm and the sprouts short, yet how often do cottagers turn them out from a spare room or elsewhere all matted together and shrivelling. Protection must be afforded during severe frost, and if the room or outbuilding when closed cannot be depended on to protect sufficiently, then mats, blinds, strawy litter, or even several coverings of paper, should be used as well.



Viburnum macrocephalum. (See page 558.)

cocoons may also be found in crevices in the poles and under the rough rind of the stems. It emerges from this state of hibernation on the first approach of spring; according to Dr. Chapman it leaves the cocoon early or late in March according to the season. (In 1892 caterpillars of the *Lamproloma rubicella* were first found in Raspberry-buds on April 10th.) It crawls up the Raspberry-canes, and, getting to the bud, worms itself into these at their base, and, feeding upon them, makes up for its long fast during the autumn and winter months. When the time arrives for pupation, the caterpillar scoops out a hole in the pith of the canes, below the base of a bud, in which it turns to a chrysalis, the moth coming out in about twenty-one days. The larva is close upon a quarter of an inch long, decidedly pink in colour for the most part, though the shade varies some-

forking the ground round and between the stocks with a pronged fork, or even hoeing it with a three-toothed hoe, would destroy some and bury others so deeply that they could not get out. Cutting back the canes after an attack, and, as far as possible, doing away with stakes, will have a good effect.

Dr. Chapman has suggested the following practical method of prevention: "The caterpillars are in the crown of the stock, or near it, and under rubbish there collected. Rake this away, and earth the stock up again, and you will thus bury them, and most will perish." Soot, lime, ashes, or soot and lime mixed, which form a pungent compound, might be forked or hoed into the ground in the autumn or winter. When Raspberry-canes in field culture are nearly all cut away, so that there are but few canes or stems left, it

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM OCTOBER 25TH.—*Abelia rupestris*, *Choisya ternata*, *Escallonia montevidensis*, *Grevillea sulphurea*, *Solanum jasminoides*, *Hamamelis virginica*, *Myrtle*, *Jasminum nudiflorum*, *Genista tinctoria*, *Laurustinus*, *Ceanothus* (in variety), *Hydrangea paniculata grandiflora*, *Osmanthus ilicifolius*, *Andromeda floribunda*, *Viburnum coriaceum*, *Hardy Fuchsias* (in variety), *Hypericum*, *Clerodendron Fargesii*, *Lavatera Olbia*, *Phytolius capensis*, *Veronics* (in variety), *Eupatorium Weinmannianum*, *Roses* (in variety), *Clematis* (in variety), *Desmodium penduliflorum*, *Chrysanthemums* (in variety), *Pentstemons*, *Michaelmas Daisies* (in great variety), *Linum arboreum*, *Helianthus* (in variety), *Anemone japonica* (in variety), *Lobelia cardinalis*, *Salvia azurea grandiflora*, *Salvia Greggii*, *Geranium sanguineum*, *Acroclinium*, *East Lothian Stocks*, *Scabiosa* (in variety), *Polyanthus*, *Violets* (in variety), *Gazania splendens*, *Antirrhinums*, *Clematis* (in variety), *Pyrethrum uliginosum*, *Chrysogonum virginianum*, *Sedum spectabile*, *Aubrietias*, *Androsace lanuginosa*, *Shamrock Pea* (*Parochetus communis*), *Gysophila muralis*, *Heeria elegans*, *Ethionema coridifolium grandiflorum*, *Lithospermum prostratum Heavenly Blue*, *Linarias*, *Dwarf Campanulas*, *Corydalis thalictrifolia*, *C. lutea*, *Meconopsis cambrica* (Mexican Poppy), *Mesembryanthemums*, *Armeria Lauchean rosea*, *Convolvulus mauritanicus*, *Polygala Chamæbuzus purpurea*, *Omphalodes cappadocica*, *Valerian*, *Ononis natrix*, *Hardy Cyclamens*, *Crocus speciosus*, *Sternbergia lutea*, *Amaryllis Belladonna*, *Erigeron mucronatum*, *Tufted Pansies* (in variety), *Menziesias*, *Ericas*.

WORK OF THE WEEK.—The planting of spring-flowering plants and bulbs is now completed. The weather has been ideal for planting, and such as Wallflowers, *Myosotis*, *Arabis*, *Alyseum*, etc., lifted with good balls of soil, never flagged after planting. In certain borders that are filled exclusively with Wallflowers the soil was made very firm at the time of planting, as this causes the plants to make slow, but steady, growth, thus enabling them better to withstand severe frosts. The present weather is most favourable for the transplanting of shrubs, particularly evergreens. This is the best season of the year for the work, as the plants will have time to recover from the disturbance before winter sets in. If the soil is in the least dry it will be necessary to give a good soaking of water after planting, making a basin around the stem of each plant for the purpose. Periodical thinning out is a necessity among thriving trees and shrubs, and is much to be preferred to continual clipping and pruning, for, treated thus, neither trees nor shrubs have the least chance of developing their full beauty. Of course, cutting out or shortening an occasional strong or misplaced shoot should, and must, be done. The replanting of hardy herbaceous plants may now be proceeded with. Planting at this season has many advantages, for, whether new borders are to be formed or the plants in those already existing merely divided and rearranged, it is best done when the weather is open and the nature of the various subjects may be still identified. Most herbaceous plants need replanting about every third year, and where it is intended to renovate already existing borders or to plant fresh ones, the ground should be thoroughly well trenched and enriched, as, unless they are given a fairly rich, deep-rooting medium, they suffer during prolonged periods of drought. Before trenching is attempted, care must be taken to dig up and lay by in a convenient place near at hand the whole of the plants, taking every precaution to preserve the labels of the various kinds. The plants should be laid in the soil temporarily or well covered with mats or some other material that will protect the roots. F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Primulas, Chinese.—These must no longer be left in pits. They require a rather warmer temperature than *Cinerarias*, otherwise the same kind of house suits them well. Those

which will soon be coming into flower should be placed at the warmest end of the house, and the same with regard to double varieties, particularly the old Double White variety, if the plants cannot be accommodated elsewhere. If the roof glass is at all dirty it should be washed before housing the plants, as it is essential that they receive all the light possible. Younger plants coming on to form a succession should have their flower-spikes pinched out as they push up to induce them to become of good size before being allowed to bloom.

East Lothian and other Stocks.—These, if not yet potted, should at once have attention, putting one plant into a 3-inch pot, and, after watering, standing on a shelf in a greenhouse well up to the light. Failing such a position, a pit containing a bed of ashes near enough to the glass to prevent the plants becoming drawn, will, if frost can be excluded when necessity arises, answer, as they require but little warmth.

Mignonette.—Seedlings raised in August should be finally shifted into the pots in which they will bloom and be returned again to the same position near the roof glass. The second batch of plants now needs to be thinned down to five in each pot.

Cyclamens.—The earliest flowering batch of plants must now have careful attention, both in regard to airing, watering, and in maintaining the bed on which the pots are stood in a moist condition. As the flower-stems are now pushing up, stimulants must be afforded. The nature of these should be varied. A course of soot-water, followed by Clay's fertiliser, and the latter by liquid-manure, answers well, or the last two may also be given. In any case, whatever is used should not be given in too strong doses, otherwise the tender, fleshy roots will be quickly destroyed. Keep a careful watch on the foliage, and vaporise at once should thrips be detected. Admit air from the front by the ground ventilators only, in order to avoid draughts, also sufficiently at the top so that the temperature ranges between 55 degs. and 60 degs. A higher temperature than this will lead to the foliage and flower-stems becoming drawn and the flowering period considerably shortened.

Onions.—Wet weather having given weeds an opportunity to go ahead and partly smother the young plants in the drills, the beds have been hand-weeded and the ground between the rows afterwards hoed through.

Cauliflowers.—These should be looked through daily when all that are not sufficiently advanced for cutting must be protected from frost by breaking the outer leaves over the heads. If properly done this is sufficient protection for some little time to come. Autumn Broccoli now turning in requires attending to in the same way.

Vegetable Marrows.—These being over for the season the bine has been cleared away, while the beds can be wheeled out the first opportunity or when the ground is rendered firm enough by frost.

Flower garden.—*Antirrhinums* and *Michaelmas Daisies* are still making a fair display, but with regard to what are known as summer-bedding plants, these are past their best for the season, and should be removed and the beds filled at once with spring-flowering subjects, for which Wallflowers of the *Phoenix* type should be freely employed. Large specimen plants in tubs and pots are no longer safe in the open, and should, therefore, be housed at once. When greenhouse space is limited, many of these may be placed in a disused coach-house or stable, if the same are fairly well lighted. The fall of the leaf has commenced in earnest, and occasions much work in the way of clearing up. Lawns also now need the final mowing and the verges trimmed, after which the machines can be housed until the times arrives for sending them to the makers to undergo their annual cleaning and refiging.

Propagating.—It is not too late to propagate more *Pentstemons*, *Calceolarias*, and *Violas*. The matter should, however, be no longer delayed, and a cold pit or frame with eashes in good repair should alone be used. Such as are leaky from want of paint or loose putty, and are, as a result of so much moisture,

dripping inside the structures and causing great loss among the inmates are unsuitable, and should never be employed. The cutting beds should be made up as close to the glass as is compatible with safety. A. W.

MIDLAND COUNTIES.

Bush fruits can easily be propagated from cuttings, the present being the most suitable time for the work. The shoots of the current year are the most suitable. The cuttings should be made about 10 inches long. Cut square across below a joint, and remove all eyes but four at the top, cutting off the point of the shoot so as to concentrate the sap into the four remaining eyes, from which the branches of the future tree are formed. Insert them firmly 4 inches deep in rows 10 inches apart and 4 inches from each other. Firmness at the base is most essential. A partially shaded spot is the best situation for them. A mulching of coal ashes will, to a great extent, prevent frost lifting the cuttings. The object of cutting away all buds except the few at the top is to ensure clean, straight stems, free from suckers. In the case of Black Currants, the finest and best fruit is produced on young shoots of the previous year's growth, and suckers are an advantage, therefore no buds should be removed from the cuttings at the time of insertion. The present season is also the best in which to make plantations of bush fruit, and to fill up any gaps. When filling gaps, do not plant the young trees in the same place, and among the roots of the old bushes. First remove all the old roots, whether decayed or not, and also a sufficient quantity of the old soil, which should be replaced by fresh, in which the young trees should be planted. If trees large enough to be swayed by the wind are planted, these should be staked immediately after planting. In the case of Apples, Pears, and Plums, a triangle is better than one stake. At the time of writing, the ground is in excellent condition, and the sooner the planting of all kinds of fruit-trees is carried out the better will be the results next spring.

Vineries.—Grapes which are still hanging on the Vines need to be examined two or three times each week for the purpose of removing any decayed berries, also faded leaves. A cool and dry atmosphere is necessary for keeping ripe Grapes in good condition. The vineries are well ventilated during favourable weather, and a little fire heat is necessary in dull, damp weather. Pot plants which require frequent watering should not be placed in vineries in which there are ripe Grapes. Vines may be pruned a month or six weeks before they are required to be started into growth. Generally, the laterals may be pruned to two eyes, but the older the Vines the longer should the laterals be left. After the pruning has been done it will be necessary to thoroughly cleanse the rods and houses. Wash the rods thoroughly with Gishurst compound, being careful not to injure the buds. If the Vines have been attacked by mealy-bug they should afterwards be painted with the following mixture: One pint of gas tar, two wineglassfuls of paraffin, a 60-size pot of flowers of sulphur, and three pints of clay. Boil these materials, adding sufficient water for thinning. In applying this mixture, take care that it does not touch the buds. After the inside of the house has been thoroughly scrubbed with hot water and soft soap (to which a little paraffin should be added), remove the old and loose soil from the surface of the border, and if the soil is found to be dry, water well, then give a top-dressing of new compost composed of rich fibrous loam, adding a 6-inch potful of an approved Vine manure to each barrowload of soil. Apply a good mulch, and the house will then be ready for starting. The roots in outside borders should be protected with a good mulch of stable-litter.

Begonia Gloire de Lorraine.—The earliest batch of this is now in full bloom, and is very useful for decoration. Later batches are growing freely, and require occasional attention in the matter of tying the shoots. Ventilation is afforded with care, the night temperature ranging from 55 degs. to 60 degs., according to climatic conditions. *Salvia azurea grandiflora*, now coming into flower, has been placed

in a light, dry house, where a temperature of 50 degs. to 55 degs. is maintained at night, with a good circulation of air during the day.

Asparagus.—The plants in the permanent beds having completed their growth, the stems will be cut down and burnt. The quickest and best way of clearing the Asparagus growths is to use a pair of hedge shears. Clear the beds of all weeds and give a light mulch of well-decayed manure, which should be covered with a little soil from the alleys. Salsafy has been lifted and stored in sand.

Potatoes that were lifted two or three weeks ago and stored temporarily will be examined at the first opportunity before placing them in pits for the winter. When the tubers are being sorted, those intended for next season's planting will be selected and placed in single layers in shallow boxes. These will be stored in a frost-proof shed where ventilation can be freely afforded in mild weather. Potato "sets" treated in this manner give better results than those left in a heap until spring.

Onions in the store need to be examined at frequent intervals, throwing out any that are likely to decay. If left too thickly, many are sure to go wrong. An occasional turning will be beneficial.

Green vegetables.—Collect all decaying foliage so as to admit as much air as possible between the rows, which will help to harden the plants before winter sets in. The soil between the rows should be stirred and the ground cleared of weeds.

Preparations for next season's crops should be commenced as soon as possible. Advantage should be taken of dry days to wheel manure on to the different plots which are in need of trenching. Before much ground work is carried out the necessary arrangements for next season's cropping should be decided upon. The system of rotating the crops is of the utmost importance in vegetable culture; but, as so much depends on the nature of the soil, the size of the garden, and the different products required, no hard-and-fast rule can be laid down in this matter. As most of the ground that is ready, or will soon be ready, for digging has recently produced root crops, this ground should be next cropped with Peas or some sort of Brassica. Onions may be successfully grown on the same plot of ground for several years in succession, provided it is well prepared each year.

Mushrooms.—Horse-droppings are being collected and placed in an open shed, where they can be turned frequently in preparation for making the beds. It is necessary to turn these droppings, previous to their removal to the Mushroom-house, four or five times, to allow of the escape of gases. The turning is repeated after the droppings have been placed in the Mushroom-house until all danger of sourness is over. This bed will be spawed at a falling temperature of about 80 degs., and the surface of the bed covered with sifted loam to a depth of about 1 inch. An atmospheric temperature of 55 degs. to 60 degs. is maintained in the house without fire heat.

F. W. G.

SCOTLAND.

Cuttings.—It is now time that all cuttings were under cover; therefore, during the week this has been attended to. Such things as Zonal and Scented-leaved Pelargoniums have hitherto been standing in a sheltered place out-of-doors. These have rooted well, and, having been relieved of withered foliage, were placed in pits heated by hot-water pipes. In these pits cuttings winter very well. During the dull months much more damage results from damp than from any other cause, so the pits are freely ventilated on all suitable occasions. Meantime, to dry up the moisture, a slight heat will be found serviceable.

Zonal Pelargoniums.—A good batch of these—intended for spring flowering—has been put near the glass in heated pits. These plants are very serviceable after the latest Chrysanthemums have passed out of bloom, and require but little attention during the winter. Being in robust health, they will require a little top-dressing, and this will be given them at an early date. A little well-rotted loam, with a

sprinkling of soot, always suits Zonal Pelargoniums. During the winter only sufficient water to preserve the plants in good health is necessary. In the course of the week a few dozen cuttings of approved varieties were put in, these making very useful material in the course of a twelvemonth when brought along coolly.

Chrysanthemums.—Housing has now been completed in the case of the latest varieties. The earlier blooms are expanding freely, and promise to be quite satisfactory. Stimulants are now withheld, and in order to keep down damp, no superfluous water is thrown about in the house. It is annoying to find that an outbreak of rust has resulted on plants grown from imported cuttings. We had been clear of this pest here previously, and in order to get rid of it the worst offenders have been burned and those slightly affected have been isolated until the blooms can be cut. No cuttings will be taken from these plants. I fancy that rust is one of the results of over-feeding. Ventilation must be ample in the Chrysanthemum-house, and on dull, wet days, or on frosty nights, a little fire heat may with advantage be allowed. If the house has not yet been vaporised, this should not be longer delayed. Two light vaporisings on successive nights ought to be sufficient.

Fuchsias.—Looking round the borders the other day, I was struck by the fine display made at this late date by the hardy Fuchsias, especially *F. gracilis*, *F. globosa*, and a variety grown—incorrectly, I think—under the name of *F. hybrida*. The thought suggested itself that a batch of these in, say, 5-inch pots, would be very useful at this season of the year for cool greenhouse decoration, more especially in view of the shortage of bulbs. A considerable number of cuttings was, therefore, taken, and to facilitate rooting, these were put into the propagating-case. When rooted, it is intended to pot them off, and keep them moving quietly until late spring, when they can be plunged in the open air until required. The experiment is, at all events, worth a trial, and should it succeed, the display afforded in late October or early November will be welcome.

Primulas.—In the course of discarding plants which were grown on a stage covered with crushed granite, a fine little colony of thriving and sturdy seedlings of *Primula sinensis* was discovered. They were put into pans, and will, no doubt, come in useful round about the end of April. Seedling plants of different kinds have, from time to time, been salvaged from the crushed granite referred to. Among others, a good supply of *Schizanthus wietonensis* was obtained; so, too, was a sufficient number of *Primula malacoides*. *Lobelia* seedlings appear at frequent intervals; and it would seem that the substance and the conditions favour the germination of seeds and the development of seedlings. It is, therefore, intended to experiment by sowing on the granite (at the proper time) such things as *Cinerarias* and *Calceolarias*.

Cleaning houses.—The weather having broken down, a beginning was made with the cleaning of glass-houses. Paint, glass, and woodwork of all kinds are thoroughly scrubbed with hot soapy water to which has been added a little paraffin, which clears out the less harmful insects, such as spiders, etc. In old houses where the woodwork may be beginning to decay, woodlice are almost sure to be present. I would not like to say positively that these insects are injurious to plant life; but they ought, if possible, to be cleared out. Boiling water poured down their haunts quickly disposes of the vermin; and isolated specimens can be trapped by means of slices of Potato and destroyed. Woodlice, too, will eat phosphorus paste, and can be cleared out by the use of that substance. In cleaning houses, all wires, ventilating rods, and so forth may be washed down with paraffin, and when any given house is finished off it ought to be thoroughly syringed down with clean, cold water.

Outdoor work has, temporarily, been interfered with by heavy and incessant rains. The only work which has been done was the planting of a considerable quantity of Wallflowers.

W. McGRFFOG.

Balmæ Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 24TH, 1916.

The fortnightly meeting held on the above date was decidedly small, a result of the recent severe frosts, which had cleared off the Dahlias as well as the majority of hardy flowers. Roses which a few days earlier were full of promise shared a like fate, though quite good flowers came from the Romford district. At the same time there was much to interest, including herried shrubs, while Violets have never before been presented in such quantity or excellence, and they justly merited one of the highest awards given at this meeting. Nerines, too—the hardy *N. Bowdeni*, in particular—were a great attraction. The common *Gentianella* was again good, Carnations being well shown. The great bank of Orchids from Haywards Heath was, however, the chief attraction, and, while rich in variety, displayed considerable taste in arranging. A few bunches of Grapes were also staged.

HARDY FLOWERS.

The collection of Violets presented by Mr. J. J. Kettle has never before been equalled. Rich in variety, embracing both single and double sorts, the wealth of them, as much as their perfect condition, found many admirers. A central mass of the pure white *Comte de Brazza* was very fine, the red lavender coloured *Mrs. J. J. Astor*, the silvery mauve-blue *Mrs. J. J. Kettle* (a recent addition as well as an acquisition to the race), and the rich lavender *Colcroonan* were the best among the doubles, though *Jamie Higgins* (large silvery-mauve), was also excellent. Of singles, *La Bourg Lorraine*, *La France*, and *Princess of Wales* were the pick. Mr. G. Kerswell again had a considerable display of *Gentiana acaulis*, showing how perpetual-flowering this unique plant is in some localities. Plants of considerable interest were shown by Mr. G. Reuthe. These included rare shrubs and some novelties. Notable among them were *Pilostegia viburnoides* (with white cymes of flowers), *Thibaudia acuminata*, with scarlet flowers not unlike those of *Brodiaea coccinea*, the pure white *Escallonia pterocladon*, and *Arbutus Croomei* (which has white globe-like flowers). *Desfontainea spinosa*, the scarlet and gold flowers as good as ever, had not felt the frost. *Saxifraga Fortunei*, *S. cortusaeifolia* with *Crocus pulchellus*, *C. p. albus*, *C. speciosus albus*, and *C. medius* (reliable and good at this season) were, with an excellent lot of Nerines, also on view. Without doubt, the best hardy bulbous plant shown was *Nerine Bowdeni*, which Mr. F. Lilley brought from Guernsey in some quantity. A brilliant successor to the *Belladonna Lilies*, and hardly less hardy, it merits the attention of all who like flowers of rare colouring at this season.

SHRUBS.

We thought *Acer tataricum* *Ginnala* an elegant plant with finely-pointed, deeply-lobed leaves, well staged by Messrs. J. Cheal and Sons, Limited, the most brilliant-coloured subject at the meeting. In the sunlight the intense scarlet would be most attractive. *Cotoneaster frigida* (scarlet fruited), *C. Simonsi* (also scarlet), and *Hypericum Androsæmum* (blackish fruits) were shown among others. *Pernettias* in variety were also on view. A collection of Conifers and other shrubs from Mr. L. R. Russell included the rare *Fitzroya patagonica*, *Ilex Peryni*, and *Daphniphyllum macropodum*. *Retinospora tetragona aurea* was notable and good. A table of *Berberis* and other shrubs from Messrs. Wallace attracted much attention. The most notable plant was *Berberis Wilsonæ*, its branches laden

with brilliant red fruits. It is the best of its set, albeit the seedlings show considerable variety both in fruiting and colour brilliancy. *B. Coryi*, as shown, is not freely fruited. *Stranvassia undulata* also bears clusters of scarlet fruits, and sweeping the ground at first, presently rises to a goodly bush. The two best trailing Junipers for big rockwork or bold groups, *J. tamariscifolia* and *J. procumbens* were also shown.

GREENHOUSE PLANTS.

A novelty in this section was *Solanum aculeatissimum inermis*, a spineless sport from the type. The scarlet fruits are small, deeply corrugated, as in the old strains of Tomatoes. Excellent *Nerines* were shown in groups by Mr. Frank Lilley. The central group was of *N. elegantissima* (of rosy-carmine colour). *Garibaldi* was very brilliant, and not less striking *N. eoruscans major*, which has closely-fashioned heads of flowers. *N. crispa* is a dainty sort apart from these, and of lilac colouring. *N. pudica* and *N. flexuosa alba* (white) were also shown. Messrs. Barr and Sons also showed *Nerines*, the most charming variety being *N. Isolde* (pale salmon-pink with deep rose at the base). It is very beautiful. Choice Ferns from Messrs. H. B. May and Sons included *Adiantum Faulkneri*, *A. Veitchi*, *Pteris Lawrenceana* (with much cut fronds), *Todea Vroomii*, *Litobrochia gigantea*, and a fine group of *Polypodium glaucum crispum* (a plant of high beauty and ornament).

CHRYSANTHEMUMS.

Messrs. W. Wells, Limited, arranged an excellent lot of these, the whole characterised by youth and freshness. Chiefly of the decorative set, they appealed to many. We were struck with the new *Anemone-flowered Aphrodite* (pink in colour, and very good). *Sorcerer* (rich bronze), *Ethel Harvey* (golden incurved), *Cranford Yellow*, *Uxbridge Pink*, *White Hope*, and *Supreme* (large white single) were others. Messrs. Godfrey and Sons staged a collection of singles raised by the firm. Effective (bronze), *Mrs. Harold Philip* (pink), *Golden Crown*, and *Exmouth White* were the more distinct. Exhibition novelties in this section were *Dawn of Day* (a mingling of gold and bronze) and *Mrs. Algernon Davis* (of good pink tone). Each gained an Award of Merit. Mr. Norman Davis was the exhibitor.

CARNATIONS AND ROSES.

Very fine Carnations were staged by Messrs. Allwood Brothers. *Destiny* (cerise), *White May Day* (with all the free-flowering attributes of the original), and *Nancy*, a new American pink-flowered sort of promise, were among the best. *Wivelsfield White* we considered far and away the best of its class. It is large and very pure. *Bishton Wonder* is the most fragrant, and *Triumph* the brightest crimson. The only exhibit of Roses was that from the Rev. J. H. Pemberton, Romford, a district, judged by the flowers shown, that might have been immune from frost. *Lady Pirrie*, *Rayon d'Or*, *Mme. Abel Chatenay*, *Gustave Regis*, *Gustave Grunerwald* (rich pink) were all good for late October. *Damaea*, *Moonlight*, and other cluster-flowered sorts were also of fair quality.

ORCHIDS.

The group of these from Messrs. Charlesworth and Co. was, in these strenuous times, in the nature of a revelation. A hundred or so of plants of the orange-scarlet *Epidendrum vitellinum autumnale*, each carrying three or four racemes of flowers, constituted, with the pure white *Odontoglossum armainvillierense xanthotes*, a fine centrepiece to a group rich

elsewhere in *Cattleyas*, *Laelio-Cattleyas*, *Odontiodas*, *Odontoglossums*, and much besides. *Cattleya Enid Reine Blanche* was very pure and good. *Odontoglossum grande* was also freely introduced. Of special interest was a batch of home-raised examples of *Disa grandiflora*, the brilliant flowers telling and welcome at any season. Orchid novelties from Messrs. Armstrong and Brown included *Brasso-Laelio-Cattleya The Baroness* variety, *Golden Beauty*, *Cattleya Prince John* (Orchidhurst variety) (Award of Merit), *C. Saturn alba*, *C. labiata alba*, and *C. Ajax* (Orchidhurst variety). A dark blotched seedling *Odontoglossum* was named *Doris*. In a group from Messrs. Sander and Sons, *Cattleya Thebes* variety *Britannia* stood out conspicuously—a fine contrast of golden petals and brilliant ruby-erimson lips. It gained a First-class Certificate. Equally conspicuous was the pure white *Laelio-Cattleya Schilleriana* var. *Sanderæ* and *Cattleya Fabia* var. *Memoria Lord Roberts*. Sir Jeremiah Colman, Gatton Park, sent a series of *Cattleya Aleimeda cœrulea* crosses, Colonel Stephenson showing the rarely seen pale-blue flowered *Cattleya Mrs. F. D. Godman*. Mr. E. G. Mocatta, Woburn Park (gardener, Mr. T. Stevenson), had a lovely novelty in *Odontoglossum Menier*, which, save for white-tipped sepals and pure white lip, has a ground colour of rich chocolate. First Class Certificate. Messrs. Flory and Black gained Awards of Merit for *Cattleya Alexandria* (rich ruby-purple and velvet-erimson lip) and *Brasso-Cattleya Mars* var. *xantholeuca*, which is white, pink, and golden-orange. Messrs. Hassall's contribution included *Cattleya Iris*, *Brasso-Cattleya Queen Alexandria* (white), and *B.-C. Nestor*, of rosy-mauve colouring.

A complete list of the plants certificated and medals for groups will be found in our advertisement columns.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Phyllocactus, insects on (*Old Woman*).—The two growths of *Phyllocactus* you send have been attacked by scale and mealy-bug, the best remedy for which is to wash every shoot with paraffin emulsion or Gishurst compound, following carefully the instructions sent with the insecticides. Very probably you will find that one application will not get rid of the pests, and you will have to watch they do not reappear. Should this happen, then one of the above remedies should be again applied.

Verbena venosa (*A.*).—This is the name of your plant. It is a perennial kind, 12 inches to 18 inches high, with heads of purple-violet blossoms, hardier than ordinary *Verbenas* and not so liable to mildew. It is easily kept through the winter, and if its fleshy roots are stored thickly in boxes it may be easily increased in spring from the young growths. When the plants have to be lifted in the autumn place them into boxes, keeping them during the winter in a cool place until the spring, when they may be started in heat. If allowed to remain in the ground a covering of ashes or fibre placed over them will be quite sufficient for them.

Dahlias, lifting and storing (*R. T. Codd*).—When the frost has cut down the *Dahlias*, cut off the stems 9 inches from the ground, then, with a fork, lift the roots carefully, taking care not to break the fleshy tubers. Shake off some of the soil or remove it with a pointed stick, turn the roots bottom upwards to allow any water that may be in the hollow stems to run out, and when the roots are fairly dry place them in shallow boxes as closely as you can, and cover them up with dry soil or ashes well shaken in, and then stand them in some place where frost cannot reach them, and where it is fairly dry—not under drip. So cared for, the roots should keep well all the winter. Next spring stand them on a hothead, so as to provide cuttings should you wish to

increase your stock of any of the sorts you have. If not, after being well started and hardened off, you can plant out the old tubers.

FRUIT.

Treatment of Fig-trees (*W.*).—A wall with a south aspect is the best place for Fig-trees, and with good cultivation they ought to bear freely. Many persons allow the shoots to become too much crowded, so that they cannot ripen; and unripened wood of any kind will not bear fruit well. Stopping the shoots early in the year will cause the formation of many more, which will further crowd the tree with wood. The shoots may be stopped with advantage late in the season, which will throw them into fruit instead of into growth. Thin out the wood well now, and if there are any long shoots stop them; they will not now start into growth.

MISCELLANEOUS.

Worms in lawn (*Moreton*).—Lime-water is the best remedy. Place 12 lb. of unslaked lime into a barrel and pour over it 30 gallons of water or a like proportion, stirring it well up and allowing it to stand for 48 hours. Water the lawn with the clear liquid during damp weather using a rose pot, giving a good soaking of the lime-water on the evening succeeding that on which rain has fallen or after a good soaking of water has been given. This will bring the worms to the surface, when they may be swept up and cleared away. There are now on the market several worm-killing powders, which, no doubt, can be had from some of our horticultural sundriesmen.

SHORT REPLIES.

L. S. Sweeney.—1, Your best way will be to leave the plants as they are until they flower, when you can then destroy all inferior kinds and layer any that are worth keeping. 2, *Spiræa Anthony Waterer* may be moved now, while, as regards *S. Queen Alexandra*, you can, if you wish, lift it and pot it to be forced gently. In the spring, when done flowering, you may then break it up and replant it.—*H. P.*—Yes; you can procure seed, but the seedlings are a mixed lot, containing many plants with inferior flowers. Hence, the best way is to purchase plants, and save seed from the best forms.—*G. W.*—*Nepeta Mussini* is quite hardy, and can be divided up to any extent. The cuttings will take no harm if they are put out at once—that is, provided they are well rooted.

NAMES OF PLANTS AND FRUITS.

Names of plants.—*J. P.*—1, *Aster Amellus* var. *bessarabicus*; 2, *Aster Novi Belgii* var.; 3, *Helenium autumnale grandiceps*; 4, *Euphorbia Lathyris*.—*R. T. W.*—1, *Francoa ramosa*; 2, *Leycesteria formosa*; 3, *Aster ericoides*.—*Inquirer*.—1, *Begonia ascotensis*; 2, *Begonia metallica*; 3, *Sedum carneum variegatum*; 4, *Berberis Aquifolium*.—*Mrs. Bertonshaw*.—A white form of the annual *Larkspur*.

Names of fruits.—*A. H. W.*—Pears: 1, *Marie Louise*; 2, *Glou Moreau*. Apples: 3, *Cellini*; 4, *Emperor Alexander*.—*Arrow*.—Apples: 1, *Ecklinville*; 2, *Bramley's*; 3, *Cox's Orange*; 4, *King of the Pippins*.—*B. M.*—Apples: 1, *French Crab*; 2, *Tower of Glamis*; 3, *Wellington*; 4, *Warner's King*.—*W. A.*—Apples: 1, *Hawthornden*; 2, *Blenheim Orange*; 3, *King of the Pippins*; 4, *Lane's Prince Alhert*.—*J. S.*—Pears: 1, *Brown Beurré*; 2, *Doyenné du Comice*.—*C. S.*—Apples: 1, *Leathercoat Russet*; 2, *Rymer*. Pears: 3, *Louise Bonne of Jersey*; 4, *Durondeau*.—*T. M. Y.*—Pears: 1, *Beurré Claireau*; 2, *Beurré Bosc*; 3, *Forelle or Trout Pear*; 4, *Doyenné Boussoch*.—*M. H. E.*—Pears: 1, *Marie Louise*; 2, *Fondante d'Automne*. Apples: 3, *King of the Pippins*; 4, *Bramley's*.

PEMBERTON'S ROSES

What people say of them:—"The Finest Plants I have ever received."—"Both lots were splendid."

Price List and Guide to Selection post free for Two-pence.

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GARDENING ILLUSTRATED.

No. 1966.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

NOVEMBER 11, 1916.

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FLOWER-GARDENING AT KEW.

A LETTER sent as to the article on the state of the flower-garden at Kew is so far off the issue that we cannot insert it. To give an idea of the value of some of the things said, I quote what is said about pergolas:—

The pergolas at Kew are as satisfactory as any I have ever seen in England, which is not saying much for them. Pergolas are nearly always ugly, and they certainly would be an outrage in front of the Palm-house at Kew.

The pergola is the best thing ever introduced in our time to the British garden, and far better than the old nailing to the wall or any other way of growing the noble climbers of the world, from the Wistarias to the great coloured Vines. It can give shade, as it does in the south of Europe, but also because we can grow more climbers upon it than can be grown in the scorching sun of Italy or Eastern America. We can have climbing Tea Roses, climbing China Roses, and other fragile creepers that will not put up with a hot sun. I write looking at one which goes from a house and garden on the south side of a hill leading directly to the fruit and vegetable garden, and in so doing in the pleasantest way it also shelters the garden from the north wind in a position where a wall would be out of place. Climbing plants of high value take their natural toss and form as in no other way in gardens.

The writer says he does not know a better pergola than that wretched thing of wire and tinker's stuff at Kew. I could show him half-a-dozen better. Having had some experience of such things I have learned the danger of meddling with them, and that to give the best result one must have an architect to design one of an enduring and very strong nature. The weight of Wistaria and other great climbers before the wind is such that only a well-built structure will survive it. A pergola to lead from the Palm-house to the water (now abandoned to ducks) would be the finest thing ever put up at Kew for growing and showing the beauty of the great climbers.

There is a pergola in Herts designed by Sir E. George and nobly covered with climbers which would open the eyes of all interested in the growth of climbers.

W. R.

NOTES OF THE WEEK.

A handsome Torch Lily (*Kniphofia Gunton Park*).—I enclose you a bloom, which I consider very good. The flowers are not at their best, having been nipped by the frost. The best are now over.—A.

[A large and handsome flower at end of October. We suppose it was raised at Gunton.—Ed.]

The Blue Lettuce.—I am pleased to see what a good picture was made of the Blue Lettuce, at page 531. The plant figured is not *Lactuca Plumieri*, but *L. Bourgei*, the handsomest of all, with stiff stems of good tufted habit. Please put this right. It would be so wrong to lead people to plant *L. Plumieri* in the hope of getting the effect shown in the picture.—E. A. BOWLES.

Osmanthus armatus.—This is a remarkable evergreen species from Western China, the firm, leathery leaves of fine substance, each 4 inches to 6 inches long, armed with curved spines at the margin. The creamy-white flowers are fragrant and produced in autumn. Though of slow growth, good plants were noted among shrub exhibits at a recent meeting of the Royal Horticultural Society.

Montbretia Star of the East.—Those who wish to have the finest *Montbretia* in commerce may confidently purchase *Star of the East*, although it is still high in price. It is a magnificent flower, 5 inches round when well grown, and of a glorious colour—pure orange-yellow with a lemon-yellow eye, and of fine substance. It remains still the best of Mr. Davison's new *Montbretias*.—S. ARNOTT.

Nerine Bowdeni.—From the Exeter Nurseries of Messrs. R. Veitch and Son, who say, "Our outdoor border of *Nerine Bowdeni* is a sight worth seeing," comes a bunch of flowers of this handsome Cape plant grown in the open ground. This very fine addition to our open-air flowers seems hardy at Exeter, and we hope it will prove so in many other places. Warm and sheltered borders are the most likely to lead to success. It would be charming to have such a graceful group of plants in the open garden.

Verbena radicans.—Those who like trailing greenhouse plants which are not generally met with might give a thought to *Verbena radicans*, a native of the Andes. It is altogether distinct from the usual forms of the flower, the foliage being much cut, the trailing stems producing their pale lilac blooms at their terminals. Of comparatively rapid growth, *V. radi-*

cans is easily increased from cuttings, and, apart from its value as a plant for draping, it might possess a further value as a basket plant, a purpose to which it would seem to be specially adapted.—KIRK.

The nobler Fuchsias in the flower garden.—In my flower garden now the ordinary hybrid varieties make a brave show, and are precious for those who enjoy their gardens in October; but handsomer far, both in foliage and flower, are some of the wild kinds, as *F. corymbiflora* and *F. fulgens*. Of the former I have a white variety. Both are charming in the graceful, drooping flower-tassels, both kinds have beautiful leaves, and both thrive in the same way as hybrid kinds—in slight shade and good cool soil.—W.

Berberis Darwini.—Now (October 21st) we are having a fairly good display, for the second time during the season, of the orange sprays of Darwin's Barberry. This is not uncommon in these gardens, but during the present year, when cold and wet have been so conspicuous, it was thought that the second bloom might not appear. However, in spite of drawbacks, there is quite a cheerful display—more welcome at this time when everything is assuming a wintry look. It may be said that in open years *B. Darwini* has bloomed uninterruptedly until after the New Year.—W. McG., *Balmoe*.

Rose Charles E. Shea.—This new "H.T." is one of the "gold medal" Roses of the year, having gained that honour in June last, when shown by the raiser, Mr. Elisha J. Hicks. We do not expect Roses so good in October as in June or July, yet a stand of it on the 10th of that month at the fortnightly meeting of the Royal Horticultural Society proved its excellence. It was, indeed, the finest of many Roses shown on the date mentioned. Large, shapely, of clear pink colour and fragrant, it caught the eye at once. Exhibited forced early in the year, in June, and in October it promises well all round. It will not be sent out till next year.—E. H. J.

Aster Novi Belgii Brightest and Best.—This we thought highly of when recently shown. There is a warm, rosy-red effect about it that would prove cheerful in the garden in autumn, when Sunflowers, Golden Rods, and blue and lavender coloured Michaelmas Daisies hold sway. The nearest in colour to Brightest and Best are Sirius and Lustre, and while the latter is the more richly coloured of the two, the newcomer constitutes an advance. Those requiring brilliant effect under arti-

ficial light at small cost should cultivate Asters of this shade, either in pots or otherwise. Like the cerise tones in the Carnation, they light up well, an enhanced beauty not theirs in the light of day resulting.

Rose Marquise de Sinety on own roots.—Led by the nose by the trade in grafting every Rose on the Brier, we have long lost many of the best and most beautiful Roses. The question is a little difficult from the fact that many kinds appear to thrive on the ordinary trade stock. Going into the garden on October 20th, I gathered some striking flowers from a vigorous plant, and wondered what it was, until, on looking closer, I found it was a plant struck from a cutting of Marquis de Sinety two years ago. In the same garden the worked plants are ugly stubs, neither growing well nor flowering freely.—W.

Aster Novi Belgii J. S. Baker.—This novelty was shown in excellent condition by Messrs. Baker, Codsall, on October 10th, when it gained an Award of Merit. It is, so far as I remember, the first double white Michænas Daisy, and, as shown, quite pure and good. As seen, it would appear a fitting companion to the first double blue, Beauty of Colwall. The doubling in these so far, however, is not complete, and both, at maturity, are liable to show a yellow disc or centre. This notwithstanding, the newcomer is likely to be in demand by florists, quite apart from its value to the hardy plantsman.—E. H. J.

Solanum jasminoides at Sheffield Park.—The most picturesque wall plant I have ever seen at the end of October was this beautiful rambling shrub in huge masses on the house at Sheffield Park. Trained on the house, the shoots hang free, with enormous masses of flower, 40 feet or so high. It is in a narrow border, no doubt well nourished, but in front of this is a stone-paved path, where the roots are kept cool. A native of Brazil, probably in some cool mountain region, as it thrives so well in our climate and on the cool side of the house. I found a pale azure form in cultivation in France, and grew it for some years on too hot a wall. It did not seem so good as the white form, but deserves a trial. No plant I know is so nobly "decorative" in late autumn. In hot soils it thrives on the north side of the house.—W.

Ourisia coccinea.—I fear I have unwittingly been the cause of some heat being engendered in connection with the discussion on this plant. Knowing the long experience and keen observation of Mr. Jenkins, I am always unwilling to differ from him on the question of the treatment of hardy flowers. My desire was to show, virtually, that there is no "royal road" to success with it, and I hope I stated my position in a temperate way. I am amused at the suggestion that I am taking shelter behind Mr. Cornhill. It is surely justifiable to cite the opinions of another without being accused of taking "shelter." Even in such a small matter as the cultivation of flowers one may be allowed to quote the words "magna est veritas et prevalebit." The verdict of experience will show who is right.—S. ARNOTT.

Aster ericoides Desire.—This I look upon as the most beautiful and graceful of the modern varieties of this elegant species. It is not sufficient praise to refer to it as a pure white form of the type, its outstanding merit demanding more than this. Endowed with the grace and charm common to its class, it is still of a superior character, the sprays as welcome when cut as the whole plant in the garden. Of moderate height—3 feet or so—it is well suited

to small gardens or for filling large beds, where, if not bundle-tied to a single stake, it will attract everybody fond of a good plant. All the ericoides forms possess a neat stay-at-home root-stock, and from a 5-inch ground tuft may, with due consideration, produce a floral display 3 feet across. Hence they need different treatment from the majority if they are to give of their best. Notwithstanding the restricted nature of the root-stock this Aster can be readily divided and pay for it in common with other sorts. A. e. Desire makes one of the prettiest pot plants I know, whether raised from cuttings each year or grown from small divisions. Potted and plunged their full depth, occasional waterings will be all that are necessary to bring about good results.—E. H. J.

A rosy Sage (Salvia Greggii).—I saw this beautiful Sage in good condition during mid-October; indeed, so bright and fresh were the abundant rosy-erimson flowers that it struck me as being a valuable plant for summer beds. It is a native of Texas. A warm and not too rich soil suits it admirably, and small plants struck from cuttings in February make useful stuff for planting in the open about the end of May. These commence flowering almost immediately, and so continue until quite late in the autumn. I do not know what amount of frost this fine Sage will endure, but a plant came through unprotected last winter in Sussex and is now 3 feet high, producing long, slender sprays of its charming and distinct flowers.—E. M.

—Among novelties of the year, this native of northern Mexico is good, a dwarf Sage, with deep rosy flowers and a distinct and neat habit. That is how it looks in the flower garden. In another place in the Azalea beds it forms a shrub about 18 inches high. It has been out-of-doors all last winter, untouched by frost. It is among the best of the Sages, flowering in good time and lasting until the end of October. Some of the Southern Sages (*S. azurea*) are of little value owing to their flowering so very late in autumn, and then never opening well with us, though they do better in S. France.—W.

Tuberous Begonias in the flower garden.—Like "E. B. S." (page 516), I thought that "Kirk" underestimated the value of the tuberous Begonia for the flower garden. As pointed out by "E. B. S.," they present a bright and cheerful appearance when such subjects as Pelargoniums are very bedraggled. With the amount of wet that we have experienced during the present autumn this has been particularly noticeable. One point more in favour of tuberous Begonias is that they do not occupy much room during the winter. "E. B. S." recommends those with erect rather than drooping blossoms for the outdoor garden. Still, there are a few of these latter with pointed petals, more after the type of one of the original species, *Begonia boliviensis*, that are good. Of them may be mentioned Bertini, Bertini nana compacta, and Worthiana, all with flowers of an orange-scarlet shade. The two varieties referred to by "E. B. S." I do not know, and most probably they are now superseded. Quite a dwarf race of Begonias with double flowers well above the foliage has come prominently forward within recent years. Included among them are Argus (scarlet), Calliope (pink), Gambetta (orange-scarlet), Hollyhoek (deep pink), Lafayette (erimson-scarlet), Mrs. French (creamy-white), Mrs. Langtry (white), Rev. E. Lascelles (yellow), and Washington (bright orange-scarlet). A variety much used for the flower garden is Major Hope, whose double pink flowers have a picotee edge of a deeper tint,

Though not belonging to the tuberous-rooted section, the different forms of *B. semperflorens*, of which there is now such a great variety, are also of great service for the summer garden.—K. R. W.

The white Heliotrope a failure.—Depatures from the natural colour of a flower are not always happy, no more than hybrids are not always real gains; white forms, too, are often failures. I have enjoyed M. Lemoine's seedling Heliotropes now for some years, the vigorous growth and varied purple blooms often striking one as better for the flower garden than the named varieties. But this year I, in some unsought way, got a batch of a white form, also one reputed pink, and the effect of these was wholly bad. I have written to M. Lemoine begging of him to keep on with this noble purple and get us as free of the whites as he may.—W.

GARDEN PESTS AND FRIENDS.

NOTES AND REPLIES.

Tomatoes diseased.—Kindly tell me if the Tomatoes I send you are suffering from Potato disease? The plants have been heavily manured this year, but I had the same diseased fruit last year. I shall be glad of your opinion as to the cause.—G. R. PARKER.

[The Tomatoes sent are affected with black-rot disease, which is present in a more pronounced condition in one specimen than in the other. The fungus germs in this case could have attacked the fruit only through a wound or puncture of the skin. In some cases the germs find an entrance near the style, and the black patch then develops at or near the apex of the fruit. The fungus is also present on the stems and leaves when an attack occurs. All diseased fruits should be burnt forthwith. Another season, if Tomatoes are to be grown in the same house, remove all old soil and thoroughly cleanse and disinfect the house. Then, when fruits are set and swelling off spray the plants with liver of sulphur, whether the disease is present or not, and continue this treatment at intervals right through the season. Use 1 oz. of the sulphide to 4 gallons of water. To make, first dissolve about 2 oz. of soft soap in 1 gallon of hot water, then add the sulphide, and finally dilute to make up 4 gallons with soft water. Apply with a spraying syringe. If the solution should not be found of sufficient strength to check the disease, *i.e.*, if it re-appears, increase the quantity of sulphide to 1½ oz. for the same quantity of water.]

Silver-leaf on Plum-tree.—One of my neighbours had a Victoria Plum-tree affected on the leaves with a silvery dew. The gardener told the neighbour that the disease was known as silver-leaf. Now one of my trees has become affected, and I am anxious to take means to stop it. I have asked a leading gardener, but he says it is a new disease, but no cure is known. Can you help me in this matter?—KENDAL.

[We know of no cure for the disease known as silver-leaf, with which your Plum-tree is affected, and the best plan is to root out and burn a tree so soon as it becomes affected with it. If you intend planting another tree in the same place then it would be well to remove the old soil, as there is just the possibility of the root-system being contaminated if you leave it. If you plant any other tree barring a stone fruit you need not remove the soil, but see to it that every particle of the roots of the Plum-tree is cleared out, as such, if left, would engender fungus as they decay. A dressing of lime given a few weeks before planting would do good. Use fresh lime, and well incorporate it with the soil by well forking it in.]

TREES AND SHRUBS.

SOME ATTRACTIVE MYRTLES.

ALTHOUGH the Myrtles are not hardy enough for general cultivation in the British Isles there are many places in the south and west where they succeed, and they there introduce a very pleasing feature into the garden. Three species are usually grown, all being evergreen and succeeding in ordinary garden soil. They can be increased by cuttings of half-ripe

with great freedom during September. The fruits are black and are sometimes borne profusely.

M. Ugni, also known as *Eugenia Ugni*, also from Chile, is as hardy as the last-named and grows as tall, but is less showy when in flower, and the leaves are less glossy. The flowers are often tinged with pink and the fruits, which are sweet and reddish, are edible and sometimes used for jam.

M. communis, the common Myrtle of S. Europe, is a beautiful and popular plant,

HARDY FUCHSIAS.

It is not often that one night's frost causes such a complete collapse of the hardy Fuchsias as was the case on October 21st last, and it was the more regrettable because up to that date they were flowering profusely. It was also rather surprising to note that what one would have supposed to be shelter was of no avail, several plants close under a south wall being badly cut. Although the plants come safely through the majority of winters, there are times when they succumb,



Myrtus Luma (syn. *Eugenia apiculata*).

shoots inserted in sandy soil in a close frame in summer, and good bushes are soon formed.

MYRTUS LUMA (syn. *Eugenia apiculata*), the subject of the accompanying illustration, is, perhaps, the most generally useful of the various species, and is in every way a very excellent shrub whether from a foliage or flowering point of view. A native of Chile, it has long been grown here, where it forms a handsome bush often more than 12 feet high, well proportioned, and well branched from base to summit. The pure white flowers are borne

its oval, dark green leaves being very fragrant. In the warmer parts of the country it forms a large bush in the open; elsewhere it may be grown on walls or in tubs to stand out on terraces during summer, being stored in a cold greenhouse for the winter. The white flowers, borne freely during September and October, are followed by black fruits. The variety *tarentina* is of more compact habit with narrower leaves, and one form with bluish-white fruits is sometimes called *M. communis leucocarpa*. *M. communis* is the hardiest of the three species. D.

notably in the February of 1895, when very few were left, especially where the practice of mulching the roots thickly with leaf-soil or ashes had been neglected. They are such a beautiful race of plants and so acceptable at a time when other flowers are scarce, also, given immunity from frost, the flowering season is so prolonged that it is a wonder the hybridist has not taken them in hand with the view to greater variety. Of course, one gets variation in the way of habit of growth, size, and shape of flowers, and so on, but the colour, alike of sepals and corolla, is prac-

tically the same, and I have often thought what a grand and enduring display could be made if even a few of the different colours of the greenhouse varieties could be obtained in the hardy sorts. There are not many hardy plants of a similar height and season of flowering that associate well with Fuchsias, and so one has to use isolated plants unless the family is grouped, the only variety being furnished by the variegated form of *F. macrostemma* or *F. gracilis*, the variegation in this case being rather pleasing and not very pronounced as in the case of some plants.

When using these Fuchsias in a large bed they can, if deemed advisable, be planted rather thinly on a carpet of, say, Tufted Pansies. I noted above that not many hardy plants associate well with these Fuchsias, but exception might be made in the case of *Yucca filamentosa*. I have seen these used together very effectively. Both show to advantage on a sloping bank among rough stones and the like, there being dwarf forms of the Fuchsia, like *F. pumila*, which can be used towards the base of the slope. Some of the greenhouse sorts can be used in such planting if variety in colour is wanted, but these are different in habit from the hardy sorts and not so well adapted for such situations. E. B. S.

Hardwick.

Cotoneaster humifusa.—I know of nothing to equal this neat-habited, evergreen, trailing kind for clothing a sloping bank in a moderately cool or even partly exposed situation. Discovered growing in rocky places and crevices in Central China, it appears equally adapted to like places in lowland gardens. I have in mind a rocky slope 8 feet or 10 feet deep and of fully the same extent perfectly clothed by the plant. Of ravine-like character, at some little distance from a big waterfall, and with high rock and trickling water near, the position is fairly cool and the plant thrives apace, affording a perfect sward of its neat green leaves bedecked in early autumn with small scarlet fruits. Elsewhere, with fuller exposure and removed from the cooling effects of near-by water, the plant still grows well, and, if of a modified luxuriance, still maintains a characteristic density and neatness. For banks with weathered rocks occasionally in sight the effect would be fine, indeed.—E. H. JENKINS.

Fuchsia microphylla.—While this Mexican species of Fuchsia may prove hardy in the favoured climate of South Devon, as detailed by your correspondent, T. A. Hyde (page 543), it requires in most districts the protection of a greenhouse. It, and the nearly allied *F. thymifolia*, are great favourites of mine, but here, in Surrey, to the south-west of London, neither of them can be depended upon to pass the winter safely out of doors. Trained to the supporting pillar of a greenhouse it will mount up several feet and produce its tiny brightly-coloured blossoms in great profusion. The other species, *F. procumbens*, mentioned by T. A. Hyde, is hardier than the preceding, but with me it is more satisfactory in the greenhouse than it is out of doors. For a hanging basket it is well suited, for the long, slender shoots hang down a considerable distance, the upright, quaintly-coloured flowers being borne freely. Its second phase of beauty sets in when the fruits ripen. I have tried to cross this Fuchsia both with other species and garden varieties, but in no case have I been able to obtain good seed, though, left to itself, fertile seeds from which young plants may be raised are obtainable. There is, however, no need to use seeds, as cuttings root readily.—K. R. W.

PLANTS AND FLOWERS.

INDOOR PLANTS.

IXORAS.

THESE very showy stove-flowering plants may be had in bloom over a lengthened period. They are particularly valuable during the autumn, when comparatively few stove plants are in bloom. Last autumn a splendid group was shown at one of the meetings of the Royal Horticultural Society, and attracted a very large share of attention. Some take exception to Ixoras on the ground that they are particularly liable to the attacks of mealy-bug, but with attention this pest can be kept in check. If the insects have been allowed to make headway a good plan is to syringe the plants thoroughly with paraffin emulsion, and if any stragglers appear after this a drop of methylated spirit will ensure their death. With regard to the potting compost many prefer to use fibrous peat, with a mixture of silver sand, but I have obtained the best results by using one-third loam to two-thirds of peat, and a good sprinkling of sand. In the culture of Ixoras too dry an atmosphere must be avoided, otherwise thrips are very liable to attack the foliage. To obviate this a liberal use of the syringe, especially during hot weather, is necessary. Ixoras are not at all difficult to strike from cuttings if the half-ripened shoots are selected, put into pots of peat and sand, and plunged in a gentle bottom-heat in a close propagating-case. At one time they were largely grown as specimen plants, but they can also be well flowered in comparatively small pots.

Many seedlings have been raised from time to time, but many of the so-called varieties greatly resemble each other. A few good kinds are *acuminata* (white), *coccinea* (orange), *coccinea lutea* (yellow), *Fraseri* (salmon-carmine), *Prince of Orange* (orange), *Pilgrimi* (orange-scarlet, shaded crimson), *Westi* (pink), and *Williamsi* (reddish-salmon). To these must be added the distinct *macrothyrsa* or *Duffi*, a strong, upright grower with long leaves and very large heads of rich crimson-red flowers. K. R. W.

TREATMENT OF HYDRANGEAS.

1. I WOULD be much obliged if you will tell me when I ought to repot my *Hydrangea* cuttings. I have a large quantity, taken in August, in 3-inch pots. They are for cold greenhouse only. 2. What size pots ought I to use for some *Hydrangeas* from cuttings of the summer before (1915)? Would 8-inch pots be right? 3. What do you consider the simplest way of obtaining blue *Hydrangeas*? Is it sufficient to pot in a mixture of one part iron filings and five parts peaty loam? If possible, I do not want to use liquid applications which need to be repeated frequently and for a long time. I suppose by using the iron filings I would not need to use much of any liquid applications?—R. N. F.

[1] If your *Hydrangeas* are well furnished with roots they may be potted now. Pots 5 inches in diameter will be a very suitable size, and a desirable compost may be made up of two parts loam to one part peat or leaf-mould and one part of equal portions of silver sand and dried cow-manure if you have any. If not, it may be omitted. After potting, the plants must be given enough water through a fine rose to settle the soil. Then, during the winter, they should be given sufficient water to keep the soil fairly moist, but not too wet, as they are in a dormant state. In the New Year, when growth re-commences, more water will be required. Any plants not well rooted may be left till February

of next year before they are repotted. (2) Those that were cuttings in 1915 may be put into pots from 6 inches to 8 inches in diameter, according to their strength. (3) The reason of *Hydrangeas* turning blue is by no means thoroughly understood. It is usually put down to the presence of iron or some chemical substance in the soil, but, even if this is the case, the reason of a plant producing some blue and some pink flowers is not explained. You may, with a fair chance of success, pot your *Hydrangeas* in the suggested mixture. We would, however, point out that peaty loam appears to be a poor soil for such a plant. *Hydrangeas* may be turned blue by watering with a solution of alum, but they need persistent attention in this respect, which you do not wish to give. There is a compound known as Azure, the vendors of which give the following directions for its use:—"One heaped teaspoonful (half an ounce) placed on the surface of a 6-inch pot plant just when the bud is showing is all that is required. The usual watering of the plant completes the treatment. For large plants in tubs the surface of the soil should be sprinkled over with Azure in a proportionate quantity, and, with extra large specimen plants, a second dressing in two weeks' time will be necessary. Always water the plant carefully." To this we would add use rain-water if possible, and avoid water with chalk in it.]

HOLDING FAST BY WELL-TRIED PLANTS.

IN a description of a new double Ivy-leaved *Pelargonium* (GARDENING ILLUSTRATED, August 26th) the writer thinks it may be some time before it supersedes one or two old favourites, and this raises the question as to many things among well-tried plants, both outside and under glass, that hold their own against later introductions. In Ivy-leaved *Pelargoniums*, for instance, Galilee, that has been grown for the last thirty years, has few, if any, superiors, either for pots or outside work, whether in beds in the open, in vases, or window-boxes. If one wants a bit of glowing colour in Zonal *Pelargoniums* it can hardly be better supplied than by Paul Crampel and King of Denmark. For beds of a similar character, as noted in the case of Galilee *Pelargonium*, the older Fuchsias and *Heliotrope Piccoli* hold their own against all new-comers. Also for outside planting one is reminded that among semi-hardy things nothing has been found in fine-foliaged plants to supersede or even equal *Grevillea robusta*, which, for a light, graceful effect, is unequalled. Its value, too, as a pot plant was recalled the other day by seeing in a large cottage window a couple of well-grown plants flanking a clean, healthy-looking *Aspidistra* 50 per cent. of whose leaves had pronounced variegation. This latter, by the way, is another of the well-tried things. I always think one of the mysteries of plant life is how the *Aspidistra* preserves its vitality and freshness under circumstances that would be fatal to the majority of plants. I have a plant growing in a 6-inch pot that has been in the same pot and position (a sitting-room window) for the past four years. It has forty-seven leaves, about one-third variegated, and every leaf as near perfection as possible. Whence the nourishment is derived to support all this foliage is wonderful, as there can be very little in the pot except roots, practically no soil, and the only stimulant ever given, and that only a few times in the middle of summer, is a sprinkling of Clay's fertiliser before watering. There is certainly nothing in the way of fine-foliaged

plants that will give to the ordinary householder for room decoration such a good result at a minimum of trouble and expense.

E. B. S.

Hardwick.

CALLOPSIS VOLKENSI.

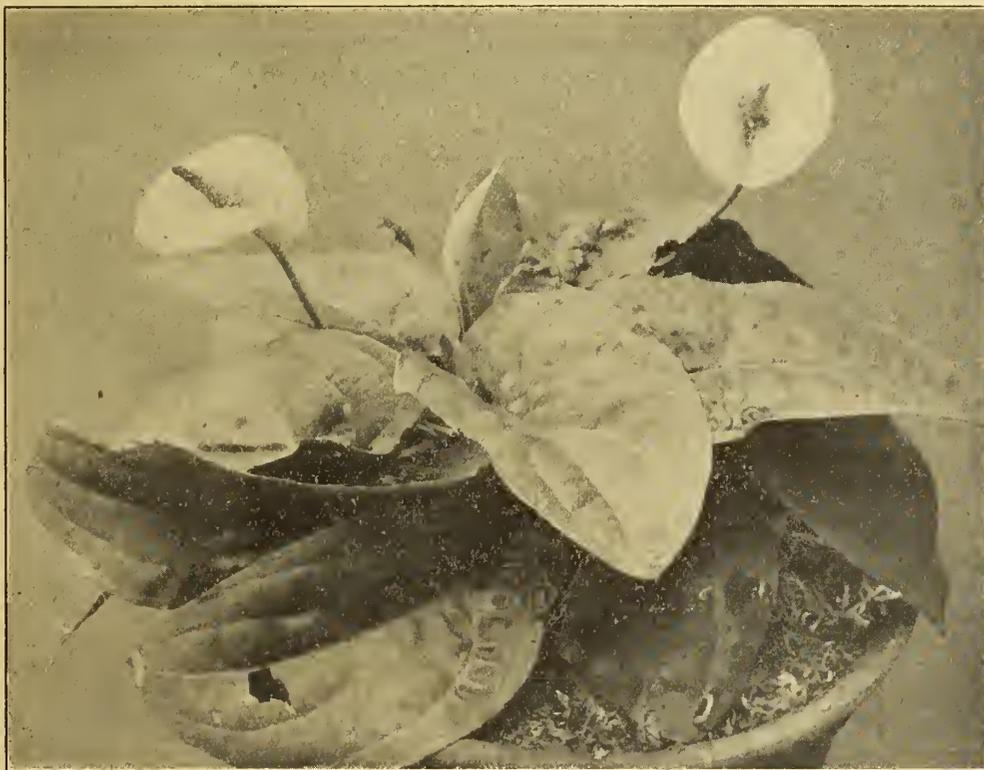
This is an interesting tropical plant belonging to the Aroid family, but it is rare and little known outside botanic gardens. It is a native of East Africa, where it was discovered, according to the *Botanical Magazine*, t. 8.071, by Dr. Volkens, at the foot of trees in the forest on Mount Msasa. It was originally introduced to the Royal Botanic Garden, at Dahlem, near Berlin, and from there a plant appears to have been sent to Kew in 1905. In habit it is a dwarf perennial with an underground rootstock. Several leaves appear in clusters from buds on the rootstock, the leaves being oblong and up to 5 inches long, exclusive of the stalk. The inflorescence consists of a short yellow spadix enclosed in a white spathe an inch

tub, will succeed for years without being disturbed. In this case an occasional stimulant will be very beneficial during the growing season. Cuttings of this *Clethra* are not at all difficult to root if formed of the half-ripened shoots, dibbled firmly into sandy peat and put into a close propagating-case in gentle heat.—W. T.

Winter-flowering Carnations.—Year-old plants are now beginning to yield good blooms in abundance. Disbudding and the keeping of the plants in order as regards tying and picking off older leaves as they become discoloured should receive due attention. To maintain the plants in good health and in a flowering condition Carnation manure is applied periodically. A number of plants which had fallen into a rather neglected condition has been, as they could not be altogether dispensed with for the present, cut back. A gentle dewing with a syringe and keeping the house rather closer than usual have induced them to break well, and in a short time they will be well furnished with

sary. Those required to flower early may now be fed with mild doses of liquid-manure or soot-water twice or thrice in a week. Caterpillars are apt, if overlooked, to greatly disfigure the foliage. Partaking, as they do, of much the same colour as the leaves, it is necessary to well scrutinise the under sides of the leaves to be able to detect them. The shelves in this house provide congenial winter quarters for *Schizanthus Wisetonensis* and the large-flowered hybrids.—K. P.

Potting materials.—There is at all times of the year a certain quantity of potting to be done, and, in view of the approach of the damp season of the year, it is now advisable to get a sufficient quantity of potting materials under cover in order that it may be in a suitable state of dryness when required. Loam may be put in roughly chopped up, leaf soil may be sifted and stored, and while it is not so important to keep sand under shelter, yet it is as well to store a quantity in a shed so that it will not be sodden when it is needed. A wet day or two will provide time for the washing, grading, and storing of dirty pots,



Callopsis Volkensi. From a photograph in the Glasnevin Botanic Gardens, Dublin.

or so long and almost as wide. The flowering extends over a period of about three months. It requires stove culture, and succeeds in rather loose and rich soil.

W.

NOTES AND REPLIES.

Clethra arborea.—Some fine-flowering sprays of this *Clethra* were noted at the meeting of the Royal Horticultural Society on September 12th. It is a native of the Canary Islands, and, unlike most members of the genus, is strictly evergreen; in fact, it is, in general appearance, somewhat suggestive of an *Arbutus*. The pure white flowers, a good deal after the manner of those of the Lily of the Valley, are disposed in spikes freely scattered over the specimen. Summer and early autumn are its season of blooming. Grown in large pots or tubs, it is very useful for lofty conservatories. It may, if wished, be stood outside during the summer. This *Clethra* will do well in a mixture of loam, peat, and sand, and, if in a large pot or

healthy growth. When growth becomes rather more advanced than it is at present all will be given a shift into larger pots. These plants should yield a large quantity of blooms in the spring months.—K. P. S.

Cinerarias.—Unless the pits in which the plants have been grown are heated they should, seeing that frost may occur at any time now, be moved into a greenhouse which can be heated sufficiently to ward off frost when occasion arises. A bed of ashes or a stage covered with corrugated sheet-iron with a good layer of ashes on top forms the best medium to stand the plants upon, for, being cool and damp, such material provides most congenial surroundings for them. The house should be liberally ventilated whenever possible, to keep the plants dwarf and sturdy, and for the same reason each specimen should stand wide enough apart for air to circulate freely between them. The plants should be looked carefully through each morning and the needs of the roots supplied in the way of water as may be neces-

which always accumulate in the autumn. Crocks, too, may be washed and graded. This is generally considered to be superfluous work, but it pays to devote a little time to cleansing them. Unwashed crocks may, quite conceivably, harbour injurious spores or the eggs of injurious insects. When a boiler is handy, if the water is raised to boiling point, the pots which are immersed are not only sterilised, but are made much easier to wash.—W. McG.

Hydrangeas.—Many prefer large pieces of Hydrangeas in pots to smaller plants carrying but a single head. Nevertheless, the latter are very handy in many ways, and I always grow a batch of such plants. During the week stout cuttings of partly-ripened wood, each carrying a plump bud in embryo, were put into the propagating-case. With a little bottom-heat these soon root, and can be grown on until they reach the desired size in respect of pot. Naturally, the more root-run allowed, the better is the bloom; but for general purposes, pots 4 inches in diameter are large enough. Hydrangeas are rather gross feeding and thirsty subjects, so that stimulants may be rather freely administered, and copious supplies of water are needed to keep the plants in health.—W. McG.

FRUIT.

NOTES AND REPLIES.

Apple Ribston Pippin.—It is not often one sees a healthy tree of this old favourite, though, no doubt, soil plays an important part in this respect. A few years since I was asked by a local gentleman to try a stock of Ribston he possessed and which he claimed to be canker-proof. I accepted scions, but the trial has not borne out his theories of canker immunity. The Apple is quite typical in appearance, with the crisp texture of the original stock, but the tree, as remarked, has in our soil been attacked by canker. Held up as it has been as typical of the highest grade of what a dessert Apple should be, it is somewhat strange that raisers have not used the Ribston for hybridising. Cox's Orange Pippin has been largely used as a parent, the aim, presumably, being to get a more hardy and vigorous stock, combining the same favoured quality, but, so far as my experience goes, none of the Cox's progeny has the same flavour as the original. Neither Chas. Ross nor the Houblon can lay claim to the high standard of flavour, though they have exterior beauty and certainly a more vigorous growth.—W. S.

Pear Belle Julie.—A most prodigious cropper, it is not to be expected that the fruit should be of large size, but it has the much more important character of good flavour. In this cold and sunless season, and one which for me is nearly Peerless also, a Pear which will develop its full flavour is valuable, and Belle Julie has this quality. The fruit is of a nut-brown russet, touched with a warmer shade on the sunny side, and attains about 3 inches long by 2 inches wide. The eye, exactly like a Clove, is set in a shallow basin. The flesh is extremely melting, not gritty, sweet, and delicately flavoured, ripening about the middle to end of October. The tree forms a compact pyramid or cordon, and the only special care needed is to thin the fruit when a prolific crop is set. This is one of the many fruits we owe to Van Mons, and it was named after his granddaughter.—*Gardeners' Chronicle*.

Apple Warner's King.—This is always recommended as bearing plenty of pollen, and my own experience bears this out. I have two bushes in a small orchard, and although this season has not been particularly prolific as regards Apple crops, it was remarkable how heavily laden with fruit were the bushes situated in the near neighbourhood of these two trees. James Grieve, Allington Pippin, and Pott's Seedling were the immediate neighbours in one case, and each of these trees was loaded with fruit, the branches of Pott's Seedling being literally weighed down with Apples. Warner's King is a very good Apple for cooking, but it is not a great bearer with me. It is, however, worth planting if it helps its neighbours to bear good crops.—N. L.

Fruit-trees in pots.—Any necessary repotting may be attended to at the present time. In some cases, during the present state of affairs, the annual potting may be superseded by the removal of a proportion of the soil from the pots and the substitution of fresh, mellow loam. It should be borne in mind that Peaches, Plums, Nectarines—stone fruit generally—must have a certain proportion of lime in the compost. Above all, whether potting or top-dressing be practised, the ball must never be allowed to feel the want of moisture, for the slightest dryness at the roots will, beyond doubt, result in bud dropping. If the trees are not yet for any reason out-of-doors, let the house be fully ventilated both by day and by night in order that the wood may be hardened and matured.—W. McG.

GARDEN FOOD.

AUTUMN FRUIT.

AMONG the exquisite fruits now obtainable mention should be made of the delicious Grapes, which are plentiful, good, and cheap. Those of England and the Channel Islands are large, handsome, and luscious. The Black Hamburg is exceptionally fine in quality, and the same may be said of the Alicante. So far as flavour is concerned, those two varieties are easily first in the category of dark Grapes. Both are cheaper than the Gros Colman, which commands a higher price because of its magnificent appearance.

ATTRactions OF SIZE.—It is futile to argue about the payment of extra money for size and colour in fruit. The public have decided long ago that they prefer beauty to flavour, and as they rule in the matter no useful purpose will be served by telling them that they are wrong. A prolonged campaign of common-sense would be needed to teach people that Grapes of large size and deep purple colour are not necessarily the best. The Gros Colman is a very fine Grape, but at this time of year it does not equal in flavour either the Hamburg or the Alicante. It is the best of the winter black Grapes, and only by comparison can anything disparaging be said about it. The Gros Maroc is even better in appearance, but not nearly so good in quality as the Colman.

Specially fine are the two Muscat varieties. If only the public knew how delicious are the cheap Muscats now on the market, but few pounds of those Grapes would remain unsold in the shops. Excellent bunches of the Muscat of Alexandria can be bought for 1s. per pound, and the fact of the berries being small is immaterial. Again, elegance must be paid for, and Muscats, both of the kind named and the Canon Hall, are much dearer when large and handsome than if diminutive in size. All Muscats are good, no matter whether or not they please the eye, so that consumers may buy the Grapes with the fullest confidence that they will be satisfied.

Peaches, though not exactly the fruit of the poor, are comparatively cheap. The early crop of this delicious fruit was not heavy, but the later varieties have come along well. Just now there is a magnificent display of very large Peaches, most of which are excellent in every way. For the benefit of those who like to know the varieties available, the following may be mentioned:—Sea Eagle, Exquisite, Golden Eagle, Lady Palmerston, and Princess of Wales. Prices vary from 6d. to 2s. 6d. each retail, a fair medium quotation being from 8d. to 1s.

TOMATOES.—Large quantities of Tomatoes have appeared at Covent Garden during the week. Amongst the cheapest are those of Jersey grown out of doors. These are of rich, sweet flavour, and in every way suitable for domestic use. There is no justification for a higher retail price than 4d. per pound for Jersey Tomatoes.

[*This from the "Telegraph": A writer could not do a worse turn to fruit-growing than praise fruit for its looks. Fruit poor in quality does harm in all ways to fruit-growing and to fruit-eaters. The Grape Alicante is not worth growing. What makes the great difference in value between a Newtown Pippin and any sour Apple in our market?—the quality only.—Ep.]*

The Potato Onion.—In the issue of October 28th, page 544, the Potato Onion is mentioned. I am an old man and a gardener, and have

often heard of the Potato Onion, but have never yet seen one, and know nothing of its growth. I have wished to try it several times, but have never done so. Would you kindly give in an early issue directions for its cultivation?—POTATO ONION.

[This variety of Onion more frequently forms a cluster of underground bulbs of irregular shape than a single round bulb. It produces neither seeds nor bulbils, and is increased only from the bulbs which are formed underground. If fairly strong bulbs are planted as early in the spring as the ground can be had in working condition, well-grown bulbs may be had from them in the following June. If, however, the bulbs are allowed to attain maturity, instead of a single bulb from each, seven or eight of various sizes will be produced. The strongest of these will in their turn produce a number of bulbs, the weaker ones only growing into a single bulb. The flesh of the Potato Onion being milder than that of the ordinary Onion, it is preferred by many people. We have found it a good plan when the bulbs are growing freely to draw some soil up to them. When it is seen that the bulbs are ripening off, this soil may be removed in order that sun and air may reach them. This Onion likes good, deep, well-manured soil, and single sets should be planted about 9 inches asunder with 9 inches between the rows. If the ground is soft the bulbs may be simply pressed into the soil, but if firm then it is well to draw out a shallow drill and set the bulbs in this. You will find an illustration of the Potato Onion in our issue of April 8th of this year, p. 185.]

Sweet Corn in 1916.—In spite of the cold summer my crop of this was good. I grow the best American varieties, and think the result a great addition to our garden food resources. The Corn is most pleasant in flavour and very wholesome. It is best gathered when of medium size, as when getting on towards ripeness it is not nearly so good.—W.

"**Intilt.**"—I often in my childhood heard the amusing story of the Frenchman's difficulties with "intilt" told of Queen Victoria. She was very young, and went into an old woman's cottage, and whoever was in attendance on her had not the Gaelic. Unlike the Frenchman, I was told, she got into a truly royal rage at the repetition.—R. NOLAN FERRALL.

Food Economy.—Some fatuous suggestions are being made about this. One is that, instead of meat, one should have for a meatless meal twenty oysters. This footing about such a simple matter as a meatless meal makes one suspect that these writers have never heard of the nations of Europe whose food is almost entirely meatless—such peoples as the Serbians, Bulgarians, Italians, and others, not to mention the working Irish, who do not even taste meat once in the week. We see another writer states that "vegetarian dishes and dishes of cereals cannot become palatable with the majority of English people." This is only because such dishes and cereals are badly cooked. Cereal food is not only the best, but is delicious if properly cooked and served. Take, for example, the Italian ways of cooking rice, macaroni, and simple vegetables. It is quite easy to dine and thrive upon such dishes. That strength comes from eating flesh more than from other foods is a delusion, as is proved by the fact that the strongest races in Europe and Africa are not flesh eaters. Also it is well known to students of human physiology that where the healthy peasant—Irishman, Pole, or Italian—settles in and does well in a city, and begins to eat flesh, he soon loses his fine health and drops into gout and rheumatism, and becomes often a creak of disease and misery.

OUTDOOR PLANTS.

A GARDEN SHELTER AT MYDDELTON HOUSE.

I HAVE been asked to write an account of the construction of this little shelter from sudden showers.

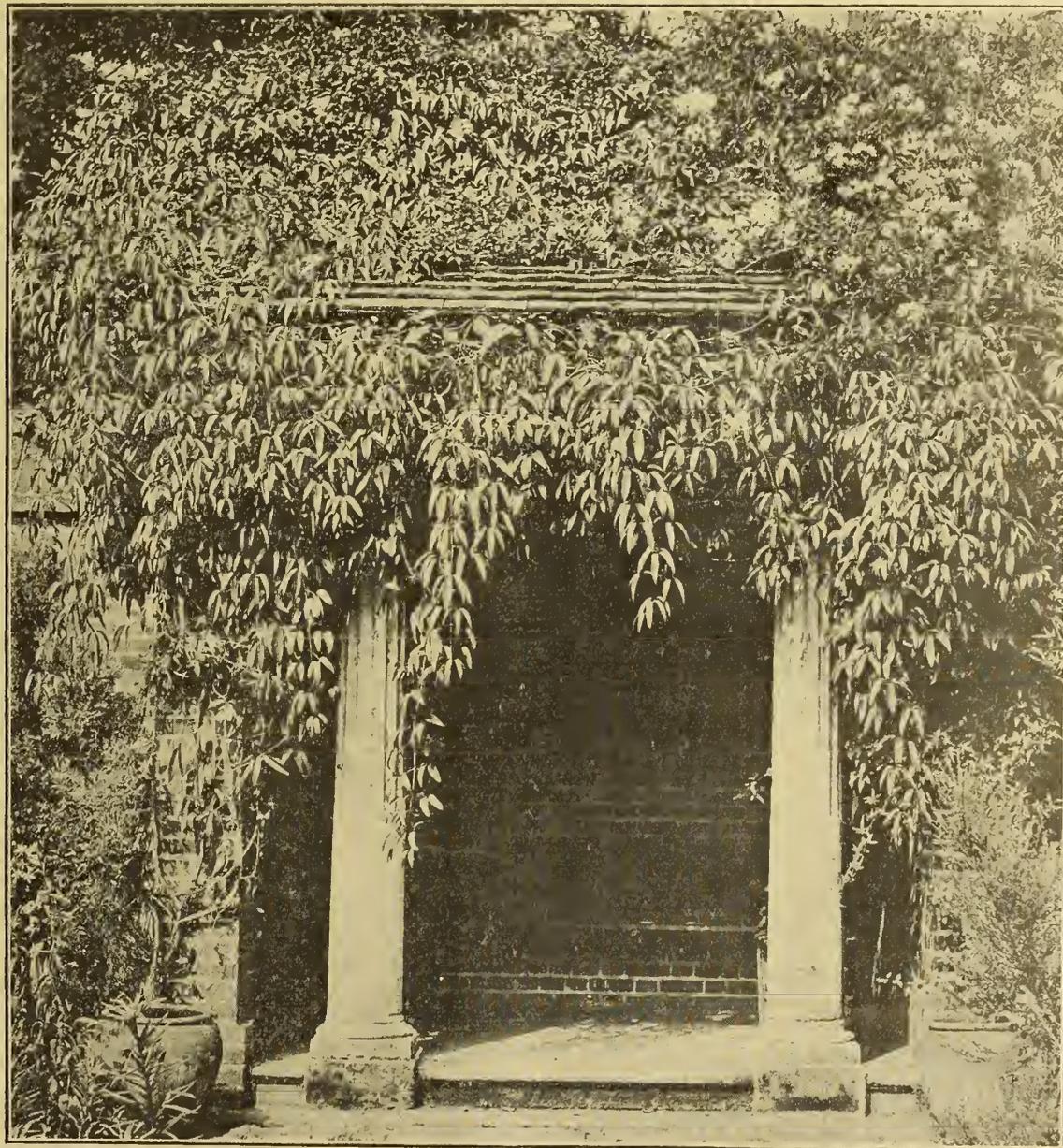
I was building a wall to help enclose a small paved garden, and the idea occurred to me that it would be a good plan to build some sort of loggia in its centre, to hold a few seats and gardening tools and provide shelter from winds and rain. Its

ing on them and the side brick pillars, holds up the rafters of the roof. Some square red tiles from a dismantled greenhouse formed the floor, and some beautifully-weathered old tiles from the stores in the yard covered in the roof, and my shelter looked venerable and picturesque from the first. Some dabs of clay planted with good forms of Houseleeks were the first plants to reach the roof, but now a tangle of a pale pink variety of Clematis montana mixed with *C. Armandii* on the left hand, and *Solanum jasminoides* on the right, covers the roof so fully that I

are followed by bunches of fruits that resemble large green spiders with downy legs.
E. A. BOWLES.

LONG-FLOWERING HARDY PLANTS.

It is in small gardens where the owner or tenant takes a real interest in his plants that one often finds at this season occasional plants, whose recognised flowering season is much earlier in the year, showing quite a nice display of bloom, and that, too, of excellent quality. The above thought was suggested by quite a nice gathering obtained to-day (October 9th)



A garden shelter at Myddelton House.

side walls were built at right angles to the main wall, brought forward some 4 feet, and projecting at the back another 3 feet, ending in front in stout brick pillars. Then I rummaged about in the stores of old stone, tiles, etc., in the various corners where the estate mason hides his odds and ends. A long and low doorstep was my first discovery. This was cut into three parts and used as may be seen in the accompanying illustration. Two pillars that had been lying in a neighbouring builder's yard were acquired at but little cost, divested of the hideous maroon paint that encrusted them, and used to support the Oak beam that, rest-

see I must mount a ladder and so arrange matters that I may see more of my old tiles and Houseleeks.

The handsome trifoliate leaves of *C. Armandii* are well seen along the front, forming the hanging fringe. This is a very fine plant to cover a large space. The evergreen leaves have a good effect at all seasons, but especially so when the young, tender, green ones of the year contrast with the deep myrtle-green shade of those of the two previous seasons. In April, and frequently again in September, it bears large bunches of white flowers, more or less tinged with green, according to the mildness of the weather, and these

from *Choisya ternata* and *Lonicera flexuosa*, although in their case the late flowering is natural and not attributable to any special treatment. On the same border, however, are sundry things also in bloom, the result of cutting away earlier in the season all old flower-stems and encouraging late growth by watering, mulching, and the like. There are, for instance, some very fine flowers on *Doronicum Harpur Crewe*, and the foliage is healthy and vigorous. A batch of medium-height *Antirrhinums* is looking nearly as well as at the first flowering. The spikes do not compare individually with the first display in quality, but the numerical strength

gives from a distance an equally good show. The habit of growth of the *Amellus* forms of Starwort gives a successional display of flowers, which, as in the case of the *Antirrhinums*, are not so large. I think this long-sustained display is preferable to thinning the growths and having all the bloom at one time, at any rate, where one is limited as to the number of plants. Although it is a little difficult with such an endless number of varieties of these Starworts to make a selection, I think one or two of the *Amellus* type should always be included. There is nothing to compare with them for size of flower, and they are so useful for cutting. A very beautiful autumn bed is obtained by associating sorts like Perry's Favourite and Framfieldi with a white Japanese Anemone. The white and lilac forms of

GALEGA will go on flowering until late in the autumn, but as the earliest blooms go off the plants must be trimmed up carefully, for if cut in a haphazard manner it will be found that innumerable little spikes in the embryo form have been taken off, which, if allowed to remain and develop, would have furnished a very pleasing display. The value of the Goat's Rue for the border was pleasingly illustrated in a recent number of GARDENING ILLUSTRATED. Two families of dwarfing habit that are very enduring if a little attention is given are *Gaillardia* and *Coreopsis*, the long-flowering season depending on keeping the plants in a healthy growing condition, remarks that also apply to some of the perennial Cornflowers; indeed, so far as our best perennial flowers are concerned the best and most enduring results are the outcome in the first place of good cultivation. This, of course, implies bastard trenching and working into the soil a plentiful supply of good manure. The difference in the condition of the plants, so far as lasting properties are concerned, is very apparent on different soils, as growers who have had to deal respectively with a light, sandy, and a heavy, rather holding soil can testify. E. B. S.

Hardwick.

OURISIA COCCINEA.

I FEAR that the position of this plant at Wisley would be no guide to me. I have known Wisley gardens from the time that the late Mr. Wilson bought the land and watched the progress of every plant there until his death. I have seen such things as *Shortia galacifolia* and *Epigaea repens* flourishing there with native vigour. I have seen *Lilium auratum* thoroughly established and multiplying, with 10 feet stems, *Primula japonica* in the finest possible condition, and *P. cashmeriana* quite naturalised and, like our own native *Priurose*, increasing from self-sown seeds. Wisley is a place by itself, and the atmospheric conditions which prevail there cannot be enjoyed in gardens generally. Possibly the extent of Heather, Furze, and Fir-trees which bounds Wisley garden on one side helps to create an atmosphere peculiarly favourable to some kinds of hardy plants. An experienced hardy plant grower once said: "You can do what you like in the way of soil, but you cannot make an atmosphere." I still think that the *Ourisia* belongs to a class of hardy plants that are much influenced by surroundings and which in some places thrive under ordinary treatment, but in a general way need special care. This is a fact which Mr. Jenkins appears to recognise in the case of the *Ourisia*. When we wish to increase a *Saxifraga*, a *Gentian*, or anything of a similar nature, we do not submit the divided portions to a preparatory coddling process, but this is exactly

what Mr. Jenkins does with the *Ourisia*. He says "they have had the protection of a somewhat shaded frame and been given humid conditions throughout, and they are pushing out roots freely." It would be wonderful if they did not. I could grow such notoriously difficult subjects as the *Shortia* and *Epigaea* in that way. It is the sort of treatment we give tender plants in the initial stages of growth.

Mr. Jenkins says this plant is not at all fastidious with him. Such being the case, why does he not plant out at once in the open ground instead of nursing the divided portions in a frame? Your correspondent's instructions in the matter of planting may be acceptable to inexperienced amateurs, but are surely superfluous in the case of those who have been working years among hardy plants. Would any man, for instance, stick the rhizomes of the little *Iris cristata* bolt upright instead of keeping them in their natural position? Mr. Jenkins says that the fact of plants failing after having pieces taken from them is puzzling, but he does not attempt to explain why they behaved in that peculiar manner. It is the only hardy plant that has acted in that way with me. Be it understood that I find no fault with Mr. Jenkins' cultural method. I shall, on the contrary, take a leaf out of his book and pot the pieces instead of planting out at once; in fact, I have already done so, but am rather late. The successful man is the one who profits by his failures and varies the treatment according to the nature of the plant he has to deal with. J. CORNILL.

SOME BRIGHT AUTUMN FLOWERS.

I do not know whether it is the scarcity of outdoor flowers as autumn advances that makes us appreciate them the more and note any that are exceptionally bright. It is certain there are several whose specially rich colour makes them very prominent features of the garden. At present (October 14th), for instance, the eye is arrested by some very bright colours among the Starworts, the rich violet of Framfieldi (*Amellus*), and in taller things the purple Mrs. S. T. Wright and the crimson Mrs. J. F. Rayner (*Novæ Angliæ*). One of the brightest flowers we have had since the beginning of the month (decidedly later than usual) has been *Rudbeckia speciosa* or *Newmani*. I always think the rich orange florets show to special advantage against the black central disc. This plant is a little difficult to establish in naturally heavy soil, but when one gets some nice clumps it makes a brave show. One does not look to outdoor flowers at this season for a clear white that will retain its purity, although it is fairly in evidence in one or two of the Japanese Anemones, both the old white and the variety known as Whirlwind. The value of anything clear and well-defined is specially noticeable at this season with all flowers. In the pink Anemones, for instance, that known as *Rose d'Automne* seems likely to be a decided acquisition. The variety of *Sedum spectabile*, again, known as *atropurpureum*, has a much more telling shade than the type. At this time, too, one gets occasional trusses of bloom on the late *Phloxes*, small in comparison to what they were earlier in the season, but with very bright flowers, because the sun has not sufficient power to scorch the petals. There are some very nice blooms on *Coquelicot* and *William Ramsay*. When choosing the later *Chrysanthemums*, both single and decorative, for outdoor work, it is advisable to select distinct colours, these being best alike for outside and for cutting. They can, however, be hardly included among hardy

border flowers, because the first frost a little sharper than ordinary is apt to spoil them. A position should be chosen that is, in a measure, naturally protected and where a little covering can be provided when required. There are not many hardy plants apart from the members of the families above mentioned that flower in autumn and whose colour is sufficiently bright to make a good display when in fair quantity. Probably two of the best are *Senecio pulcher* and *Zauschneria californica*. E. B. S.

Hardwick.

NOTES AND REPLIES.

Colchicum Decaisnei.—*Colchicum Decaisnei* is one of the most beautiful of the genus, and I consider one of the best two species, the other being *C. speciosum*. *C. Decaisnei* appears also to be interesting from a botanical point of view, for Boissier, in his "Flora Orientalis," places it in a set of three only. The perianth of the present plant measures nearly $4\frac{1}{2}$ inches in diameter, the segments are obovate, $2\frac{1}{2}$ inches long and about $\frac{3}{8}$ inch wide. The tube is about 7 inches or $7\frac{1}{2}$ inches long. The foliage of *C. Decaisnei* is finer than that of any other species in cultivation. The taller leaves reach 2 feet in height, the free blades are 1 foot to 16 inches long, and up to 5 inches broad. Some of the inner leaves are 10 inches long and 1 inch broad. The leaves of *C. Decaisnei* remain quite green while those of *C. speciosum* have become dry, but this may possibly have something to do with the position of the plants, *C. speciosum* being the more exposed.—R. IRWIN LYNCH in *Gardeners' Chronicle*.

Viola cornuta.—Few people realise what superb sheets of colour are possible by the use of this. Planted now or in the early spring, flowers will be produced from April to October if the plant is given a light, rich soil. Those who want to plant a border cheaply should try this. The border so planted looks beautiful at a distance. Plants can now also be divided and replanted. I do not think that the white variety is nearly so pretty as the blue sort.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Geranium striatum.—A great many rock plants are blooming well in my garden this year, this pretty species being one of them. It is a neat-growing species until it has been blooming for some little time, when the flowering stems get long and untidy. The flowers are of a greyish-white colour, beautifully veined with violet. A native of this country, it is of a very accommodating habit and not at all particular as to soil. It seeds pretty freely with me.—N. L.

Erigeron mucronatus.—As "N. L.," page 533, says, this needs no special care other than a well drained soil. *E. mucronatus* is a native of Australia, and reaches a height of about 1 foot. Seeds of it are offered by many firms as a hardy annual under the name of *Vittadenia triloba*, but it is nevertheless a hardy perennial.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

Pyrethrum uliginosum.—Now (October 10th) this is flowering freely. Unfortunately, the wet and stormy weather has detracted from the value of this useful late-flowering plant. Its pure white blooms afford an effective contrast to the latest *Asters*, and help to make the closing of the season not the least interesting of the year.—W. McG., *Balmac*.

Linum flavum.—This is a good plant for the rock garden or border, making a bright spot when few other things are in bloom. Several of the growths have yet heads of flowers to open, and although we are nearing the beginning of November, I think they will open, because they get every bit of sun that shines.—C. T.

Tulipa retroflexa.—This has yellow flowers, with prettily formed petals, recurving in the most elegant way. It loses nothing because of its cheapness and its permanence in British gardens. It may be planted in November, and British-grown bulbs are obtainable.—S. A.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

CODONOPSIS.

At the present time greater interest attaches to the *Codonopsis*, by reason of several new additions from China, some of these surpassing in their quaint markings the earlier-known members of the race. A possible weak point is that of lacking complete hardiness, and in northern districts winter protection had better be afforded the roots. In other respects they are not difficult of cultivation, preferring always well-drained sandy loams and a warm and sunny exposure. So far as position is concerned it were better, because of the greater beauty of the flowers internally, that the plants be raised on moderately high shelving rocks, where the root-run is deep and good, and where complete drainage, and possibly, too, immunity from the attacks of slugs—which have a fondness for the young shoots of the plant

tudes is said to be quite hardy, and is certainly the most remarkable species of the genus.

C. OVATA (see illustration).—The flowers, two or more on a stem, are drooping, bell-shaped, pale greyish-blue in colour, with purple reticulations and orange and white base internally. The greater beauty is within the nodding bells. The plant is 18 inches or 2 feet high with small, ovate, soft, greyish and somewhat downy leaves and flowers from June onwards. Western Himalaya.

VEGETABLES.

POTATOES.

I NOTE in a daily paper that reports from several districts as to the Potato crop are satisfactory, the crop being well up to the average. It is up to the average in this neighbourhood so far as quantity is concerned, but the disease is very prevalent, quite a large percentage already bad and many slightly affected, so that it is doubt-

well. In districts where the soil is a bit holding and inclined, if damp, to hang to the tubers, it will be found advisable to dry and get them clean so as to look carefully over them before storing, otherwise a considerable percentage will later be found affected. This careful inspection is specially necessary in the case of a Potato like the Redskin flourball, the disease not being so easily perceptible. This Potato has been in cultivation many years and holds its own alike for crop and quality. Many old sorts are still well to the fore, while sorts of later introduction that came with a flourish of trumpets and sold for fabulous prices are quite forgotten. E. B. S.

Hardwick.

NOTES AND REPLIES.

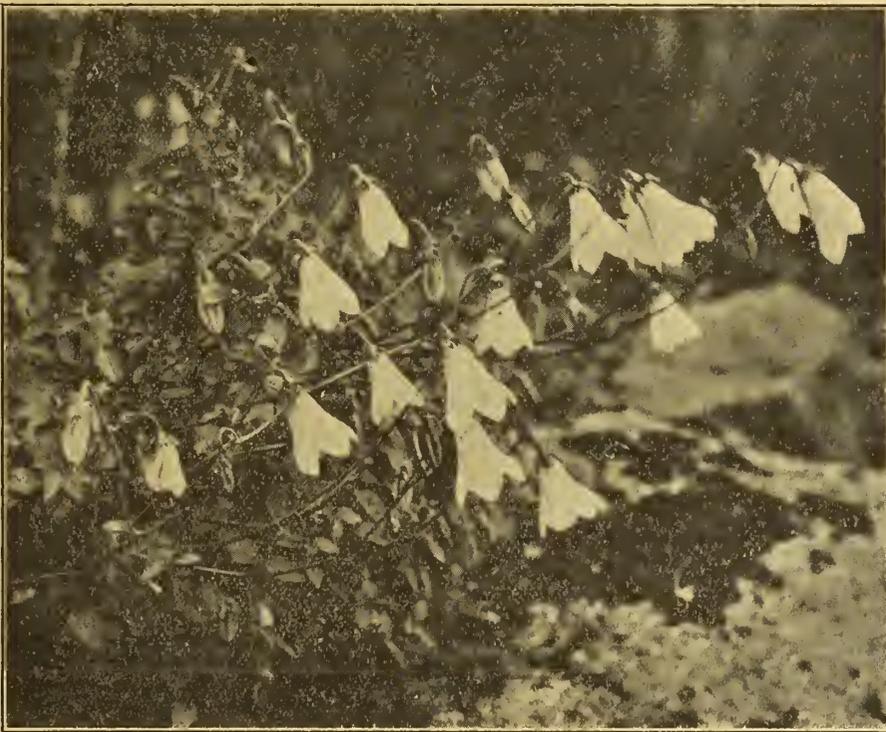
Seaweed as manure.—Seaweed may be used by itself and prove of great value, but I prefer to mix it with littery farmyard or stable manure, as it quickly reduces the strawy portion to a decayed state and renders it suitable for application to any soil. The manure and the seaweed should be turned over three times in seven weeks, at the end of which time the whole of the material will be in fine condition for digging into the soil. One load of seaweed will be sufficient to mix with three loads of littery manure. Seaweed is useful as a manure for Potatoes, Asparagus, Beans, and Peas, especially Dwarf French Beans. It is also good for hardy flowers, particularly those growing in borders of light soil. It should be dug in for vegetables during February and the early part of March.—G. G. B.

Beet.—Those who have had to do with new land during the present year and have been dissatisfied with the result of their Beet crop should remember that ground should be prepared this winter for another year. That which has been previously manured for other things, Celery for example, forms a fitting medium for this popular vegetable. Failing previously-manured ground, arrangements should now be made to well dig a piece of ground and in the second spit incorporate well-rotted manure. Many are not successful with Beet, inasmuch as they use fresh manure at the time of seed-sowing in April, which produces rank growth and forked roots quite unsuitable for the table. The round Beet seems to be more in favour every year, and for convenience of cooking there is much to be said for it. An ideal soil for it is a light loam enriched with old manure and with which salt has been incorporated just before sowing seed.—LEAHURST.

—When the time comes for storing Beet-root, it ought to be borne in mind that the leaves are rich in potash, and should not be thrown away. If dug into the quarter intended for early Potatoes, the value of these leaves is considerable. In storing Beet the roots should be carefully eased up with the fork previous to drawing, and in removing the foliage, let it be twisted off, instead of being, as is frequently the case, cut off with knife or hook, a practice which leads to bleeding.—KIRK.

Broccoli Snow's Winter White.—Few small growers of vegetables trouble about a later supply of Broccoli. They are content with cutting in September and October, but for a December crop they make no provision. One of the best of the old sorts is Snow's Winter White. If seed of this is sown in the open ground in April and the plants subsequently planted out in fairly well manured ground in an open situation one may in a mild winter look forward to good heads without the necessity of affording any protection.—WOODBASTWICK.

Potato Up-to-Date.—This maincrop Potato, which has for a few years been becoming less satisfactory, is among the worst of all in the



Part of a group of Codonopsis ovata in Friar Park Gardens.

—would, to some extent, be assured. Such a position, too, would exactly suit the trailing habit of some. The plants may be raised from seeds and from cuttings, selecting the freshly-made shoots of early spring for the latter purpose. The following are the more important:—

C. BULEYI.—A trailing species found by Mr. Forrest when plant-hunting in China. The soft, lavender-blue flowers are drooping, distinctly contracted about the middle, and openly bell-shaped at the mouth.

C. CLEMATIDEA.—A climbing or twining species of 2 feet or 3 feet high; flowers creamy-white spotted with purple and tinged with blue.

C. MELEAGRIS.—In this Chinese species the ground colour is a very pale porcelain-blue, the heavy reticulations, so striking a feature of the species, rich chocolate to purple, the base or centre of the flowers internally green. The flowers, which are solitary and of large size, are produced with some freedom in summer. This vigorous-growing alpine from high alti-

ful if they will keep any length of time. I never saw the foliage go off so quickly. It seemed to utterly collapse in a few days, and growers will fare the best who get the tubers out as quickly as possible. It is very probable that occasional spraying would have brought them through, but, in common with many districts, this practice is neglected in this neighbourhood. The cottager and allotment holder have the reputation of being very loth to try experiments, and, unfortunately, often have to suffer from lack of enterprise. Up-to-date, Redskin flourball, and King Edward are the favourite late sorts in this neighbourhood, and of the three the last-named seems the most affected. It also suffers most if left long in the ground from the attacks of underground insects, like grubs and slugs, which leads to the inference that it has a more sensitive skin than the others.

In seasons like the present, with such a pronounced failure of the late sorts, it is evident that those growers will be fortunate who rely mainly on varieties which can be lifted fairly early and also keep

south-west of Scotland this season. Not only is disease very prevalent, but the tubers are small, and in most places the proportion of ware is greater than usual.—S.W. SCOTLAND.

Tomatoes.—Fruits which are not at this date ripe may with advantage be cut and laid upon a shelf in a greenhouse, where they will ripen up well enough. If grown in pots, this practice will permit of the spent vines being thrown out in order that the house may be cleaned down in readiness for housing *Chrysanthemums* or for whatever purpose it may be desired. The crop here this year cannot be described in any other word than moderate, for while the earliest and the latest trusses set remarkably well, there was a period about the time the plants were half-grown when they could not by any means be induced to set.—W. MCG.

Potato Arran Chief.—It is claimed for this Potato that it is disease-proof. This is not quite correct, as disease is present in some which I have recently lifted. The proportion of diseased tubers is, however, extremely small. The crop is a good average one, and the tubers of excellent quality when cooked. As a main-crop Potato, Arran Chief now ranks deservedly high.—S. W. SCOTLAND.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM NOVEMBER 1ST.—*Choisya ternata*, *Escalonia montevidensis*, *Hardy Fuchsias*, *Solanum jasminoides*, *Hydrangea paniculata grandiflora*, *Laurustinus*, *Genista tinctoria*, *Hamelis virginica*, *Veronicas* (in variety), *Myrtle*, *Osmanthus ilicifolius*, *Ceanothus* (in variety), *Daphne Dauphini*, *Andromeda floribunda*, *Hypericums*, *Lavatera Olbia*, *Jasminum nudiflorum*, *Arbutus Unedo*, *Phygelius capensis*, *Polygonum vacciniifolium*, *Sedum spectabile*, *Pyrethrum uliginosum*, *Helianthus* (in variety), *Pampas Grasses* (in variety), *Lobelia cardinalis*, *Antirrhinums*, *Pentstemons* (in variety), *Gazania splendens*, *Tufted Pansies* (in variety), *East Lothian Stocks*, *Crocus speciosus*, *Sternbergia lutea*, *Hardy Cyclamens*, *Amaryllis Belladonna*, *Enocheras* (in variety), *Polygala Chamæbuxus lutea*, *P. C. purpurea*, *Gypsophila muralis*, *Parochetus communis*, *Linarias*, *Verbena venosa*, *Mertensia echioides*, *Omphalodes cappadocica*, *Valerian*, *Orobis Vicia*, *Correa magnifica*, *Aubrietias*, *Androsace lanuginosa*, *Arabis*, *Lithospermum prostratum Heavenly Blue*, *Mexican Poppy*, *Armeria Lauchcana rosca*, *Dwarf Campanulas*, *Nepeta Mussini*, *Iris stylosa*, *Salvia Gregoi*, *Anchusa Opal*, *Michaelmas Daisies* (in variety), *China*, *Polyantha*, and *Climbing Roses*, *Clematis* (in variety), *Ericas*, *Polyanthus*, *Violets* (in variety).

THE WEEK'S WORK.—The frost having destroyed the foliage of Dahlias and Begonias, these have been lifted and stored for the winter. The stems of Dahlias are cut off to less than 1 foot of the roots and the tubers stored in a frost-proof shed. The corms of Begonias were cleaned and stored in boxes of dry sand. Cannas have also been lifted, cleaned, and stored in boxes of leaf-soil. The tender plants, which have hitherto been in cold frames, have been removed to vinerias in which the Vines are at present resting and where a little fire heat is used occasionally to expel damp. *Calceolaria*, *Pentstemon*, and *Viola* cuttings in unheated frames merely require protection from frost, and plenty of ventilation is afforded during favourable weather. Lily of the Valley needs lifting every two or three years to prevent the crowns becoming unduly crowded, as when this happens the flower-spikes soon deteriorate. The present is a suitable time for the work. It is a good plan to have several beds in which the plants are of different ages, so that it only becomes necessary to lift a part of the stock at a time, as the flowers are not usually so fine the first year after replanting. The crowns should be carefully divided and graded, planting the larger ones by themselves, as they may be depended upon to flower. When replanting the crowns a fresh position is advisable, but if this cannot be afforded, the soil in the old bed should be deeply worked and plenty of thoroughly decayed manure incorporated with it. In order that the flowers may be gathered conveniently, the beds should not be more

than 6 feet in width, allowing a space of about 15 inches between the beds. If the situation is cold and damp it is advisable to raise the beds a few inches above the level of the alleys. Established beds should be cleaned and top-dressed with manure. During severe weather some of the more tender plants will require slight protection. To what extent protection has to be carried out depends to a great extent on the district in which the garden is situated. To cover a plant unnecessarily is almost as bad as insufficiently protecting it, for when the protection is removed the tender growth is very susceptible to late spring frosts. If evergreen plants have to be covered, the covering should be removed on all favourable occasions to admit air and light. Tender shrubs of moderate size may be protected by placing a few inches of Spruce branches around them, inserting them firmly in the ground.

F. W. GALLOP.

Lilford Hall Gardens.

SOUTHERN COUNTIES.

Early vinery.—The leaves having fallen the Vines should be pruned without further delay; when, if necessary, the cleaning of the rods and afterwards the structure may be held over until employment for some of the more experienced outside hands can be found in wet weather. If the wood is well ripened and the Vines in a satisfactory condition, the laterals may be cut back to one bud; but if the buds are not so plump as could be desired, then it is advisable to cut back to just above the second bud. When the Vines are being cleaned remove the loose bark only, and follow this up by scrubbing the rods, taking care that the buds are not injured. Dressing the rods afterwards with Gishurst compound or some other approved insecticide will suffice when nothing beyond a recent outbreak of red-spider has to be contended with; but if infested with mealy-bug, more stringent measures are necessary. Not only must the cleaning of the rods be more carefully carried out, but their subsequent dressing must be something of a more searching nature, such as a mixture of coal tar and clay, in applying which care must be taken that it does not come into contact with the buds. The soil of the border, after the woodwork, glass, and brickwork have been thoroughly cleaned, must be removed to a depth of 2 inches or 3 inches, and fresh loam, to which the usual additions in the shape of artificial manure, wood ashes, and lime rubbish have been made, added. Until the time arrives for starting, the house should be kept quite cool.

Late Grapes being now quite ripe, the house should be cooled down, but the temperature must at the same time not be allowed to fall too low, and the atmosphere should be kept perfectly dry, otherwise the Grapes, particularly the thin skinned varieties, will spot and decay. To obviate both evils, the keeping of the hot-water pipes just warm enough to cause a free circulation of air and ample ventilation in fine weather are necessary. Late Muscats now thoroughly ripe need similar treatment, and, if anything, a trifle more fire heat may be indulged in, especially when chilly or foggy weather has to be encountered. If the border is in a satisfactory condition as regards moisture, covering the surface with about 3 inches in depth of dry litter will prevent damp rising.

Asparagus.—The tops having turned yellow should now be cut down to about 4 inches above ground level, taking care when doing so that the berries do not drop on the surface of the beds and cause future trouble by crowding the legitimate occupants and eventually killing them. After lightly hoeing the surface and raking off a couple of inches of the loose soil, apply a good dressing of rich manure. Beyond spreading the manure, nothing further is needed until spring. Beds that are to be broken up for forcing need not be manured.

Forcing Asparagus.—Preparations for forcing Asparagus from now onwards should be pushed forward. A heated pit, where such can be spared, saves much time and labour, but excellent produce can be had with the aid of a fermenting bed of stable-litter and leaves. As the latter will soon be available in quan-

tity, a bed made up of one-third fresh stable-manure and two-thirds leaves, large enough to accommodate one or two frames, will, if the materials are thrown together and turned a few times beforehand, generate quite sufficient heat for the forcing of Asparagus. When the bed is ready the roots may be lifted and placed on the surface quite close together after spreading old potting soil over the latter about 3 inches in depth. The crowns should be covered with the same kind of material. The temperature of the frames should be kept from 55 degs. to 58 degs. In cold weather it is necessary to cover the sashes with mats. When mild, admit air when possible to prevent the produce from becoming drawn.

Chicory.—This should be lifted and stored, or the roots may instead be lifted and stood in an upright position close together in a trench taken out sufficiently deep so that from 3 inches to 4 inches of soil will rest over the crowns when covered up. Salsafy and *Scorzonera* should also be lifted and stored, placing a layer of fine cinder ashes or sand between the roots.

Pot Strawberries.—If frames can be spared, the plants are better if now placed therein than allowed to remain any longer in the open, as the sashes can then be drawn over them as a protection when heavy rain or snow appears imminent. On all other occasions—during sharp frost excepted—they may have abundant ventilation. Failing the above, the only alternative is to remove them to a Peach or orchard-house, standing the pots where the plants will receive all the light obtainable. Free the plants of dead leaves, weeds, and Moss before taking them in, and wash the pots, which will save having to do so when the time arrives for starting later on.

Alterations.—The present is a good time to carry out any necessary alterations or improvements, either in the kitchen garden or pleasure grounds. It is now the rule to devote a portion of the kitchen garden to flower culture, this generally being confined to the borders on either side of the principal walks. Two such borders, which are of considerable length, the greater part of which has already a backing of Rambler Roses, are now being cleared, and, after being dug to rid the soil of wild *Convolvulus*, old roots, etc., it will be manured, re-dug, and then planted with Hybrid Perpetuals, Hybrid Chinas, Teas, and their hybrids. The Ramblers will be overhauled, thinned, and relieved of old wood, and retied to the trellis constructed of Larch poles. The choicest varieties of the Ramblers will be planted to complete the arrangement. The Tea and other Roses will be planted in not less than twelve of each variety. A border will also be provided for the growing of the best of the Michaelmas Daisies, another for early-flowering *Chrysanthemums*, and the same for *Antirrhinums*. A long border situated outside the kitchen garden, and having a brick wall at the back partly clothed with old fruit-trees, will be cleared, and the border planted with choice herbaceous subjects, and the wall with *Clematises*, *Roses*, *Jessamines*, *Loniceras*, *Choisya ternata*, *Ceanothus* in variety, etc. Any alterations required with regard to widening or altering the course of footpaths, redraining and gravelling of the same may be undertaken as opportunities offer. The same remarks also apply to the taking up, levelling, and relaying of lawns, and the formation of croquet and tennis courts. New flower beds can also be formed if additions are desired, or a new scheme carried out. A. W.

MIDLAND COUNTIES.

Fruit-trees on walls.—The pruning and training of fruit-trees on walls should be pushed forward, so that as much as possible of the work may be completed before the winter. It is advisable to place planks on the border, as then not only will the work be done more comfortably, but trampling of the surface of the border will be prevented. In our case, Morello Cherries, Peach, and Nectarine trees were attended to soon after the fruits were gathered, and very little pruning remains to be done to these trees. In all cases it is best to do the pruning before the trees are removed from the wall, as the operator cau-

then see what shoots can be spared and what are necessary to furnish the wall space. Neglected Morello Cherry-trees can be renovated in a much shorter time than is necessary in the case of most fruit-trees. It is necessary to train in almost all the healthy young wood and remove worthless shoots, but the cutting out of much growth at one time is not to be recommended. The pruning of the Sweet Cherry is entirely different from that practised in the case of Morellos, for the Sweet Cherry fruits best on spurs. Pruning and thinning the trees in summer result in spur formation, and trees that have been properly summer-pruned require but little attention now. On no account should large branches be cut out or the knife used unnecessarily, for this is a frequent cause of gumming. After the trees are pruned they should be thoroughly cleaned before they are fastened to the wall.

Plant-houses.—The main batch of Chrysanthemums will soon be in full beauty, and every effort must be made to keep the blooms in good condition as long as possible. Ventilate the house with care, and maintain a little heat in the hot-water pipes to dispel moisture. Leave the top ventilators open a little at night and maintain a minimum atmospheric temperature of 50 degs. Remove any decaying leaves as soon as they are seen, and keep the house clean. As early varieties pass out of flower throw out all those plants not required for stock, retaining only the best for this purpose. Cut down these selected plants and place them in a frame near to the glass, that the suckers may become sturdy and robust, remembering that strong cuttings are in every way desirable. The latest varieties should be kept as cool as possible without allowing frost to reach them, but when the buds begin to show colour a warmer atmosphere will tend to the better development of the blooms. As all the light it is possible to get into plant-houses is now necessary, climbing plants should be carefully overhauled, thinning out all superfluous growths and cutting back the old flowering shoots. The earliest batch of Carnation cuttings which have been rooted in sand are now ready for potting into thumb pots, using a sandy compost. After potting, the plants are placed near to the roof glass in a house where an atmospheric temperature of 55 degs. to 60 degs. is maintained. Nine degrees of frost registered in this district on the nights of October 20th and October 21st have put an end to all the more tender vegetables, such as Marrows and Beans. Now that the outside

French Beans are past the value of those which were sown late in slightly heated pits will be appreciated. Provided the plants are not over-forced, these will continue in bearing for some time to come. A little air is admitted whenever possible, maintaining a temperature of 50 degs. to 55 degs.; and when water is needed at the roots, it is given in a tepid state.

Cauliflowers have suffered very little so far from the frost, but the plants need to be examined at least twice a week, and all those of sufficient size lifted and placed under cover. Any heads which are now formed are well screened from frost by placing spare leaves upon them and tying up the tall ones in such a manner that they will shield the centre. Spring Cabbages have been moulded up right up to the leaves. This treatment does much to ensure the plants passing through a severe winter. The growth of

Globe Artichokes has been cut down nearly to the ground and a quantity of cinder ashes heaped about the base as a protection to the stocks. Before the ashes are applied the soil is loosened with a fork in order that water from heavy rains may pass easily away. In the event of severe weather, straw or litter will be applied as a further protection. The blanching of

Leeks should be completed as soon as possible. If planted in trenches, the soil should be banked up to the point at which the foliage commences. Those that were blanched early will now be lifted and stored in sand in a sheltered position, leaving the foliage exposed to the weather. A few of the earliest crowns of Seakale have been lifted and laid on top of the ground to prepare them for forcing.

Rhubarb roots that were lifted and exposed as advised in previous notes are now ready

to be placed in the Mushroom-house. Another batch of roots has been lifted and exposed to the air to form a succession.

Asparagus is one of the easiest vegetables to force. If strong, well-matured crowns are available a start may be made at once in a brick pit where a little heat can be applied in frosty weather. A moderate bottom-heat is necessary. The bed of the pit should be removed to the depth of 4 feet and replaced by a quantity of fresh leaves, which should be collected and placed together for fermentation previous to use. When the leaves are placed in the pit they should be trodden firmly until the surface of the bed is within 18 inches of the roof-glass. A covering of thoroughly decayed manure should then be placed over the surface of the bed, covering this lightly with sifted leaf-soil, so that the Asparagus roots may not come into contact with the manure until growth commences. Exercise care in lifting the roots and place them in the pit as quickly as possible. They may be arranged quite closely together and covered lightly with fine sifted soil, which should be watered in amongst the roots with tepid water. After a few days the young shoots will begin to appear, and at this stage a covering of fine sifted leaf-soil should be placed over the surface to a depth of 4 inches, after which the shoots will grow more quickly. The temperature of the bed must not exceed 80 degs. or the roots will be scalded.

F. W. GALLOP.

SCOTLAND.

Asparagus beds.—When the stems are thoroughly ripened no good purpose is served by allowing them to remain. In cutting them over, it is sometimes customary to use a hook or the scythe. This is deprecated, because the force used is, as observation will prove, very apt to injure the embryo crowns. It is better, even at the expenditure of more time, to use the knife—and a sharp one at that—to cut over the stems. These can be buried if trenching is going on—a way of disposing of these and similar things in a very convenient manner. After the stems are removed the surface of the beds ought to be thoroughly freed of weeds, either by hoeing and raking or by hand-picking. Some consider it necessary to cover the stools with manure, which is allowed to lie on them over the winter. I think this a mistake; but, naturally, something depends on soil and climate. In very light, porous soils, a covering of manure may be necessary; but I think that in ordinary conditions the winter manuring of Asparagus is a fallacy. Favoured by a period of highly suitable weather, this annual cleaning up in connection with the Asparagus beds was carried out in the course of the week.

Artichokes.—The treatment of Artichokes during winter is different from that accorded to Asparagus. Naturally more susceptible to hard frosts, it is necessary to afford the former a fairly good mulch of half-decayed manure or of Bracken or litter of a similar character. I have seen the foliage tied up in bundles round the crowns of the plants at this time of the year, but, as these leaves are affected by frost, I could never see wherein the benefit lay, and I prefer to mulch somewhat freely before the time when severe frost may be expected. The plants yield, even at this date, an occasional head, and have done well during the season.

Cabbages.—During the week a finish has been made with the planting of Cabbages for the present year. The variety used was Flower of Spring, which will turn in conveniently after the previous plantings. These have made very fair progress despite the erratic weather, and, taking advantage of the dry time, the soil between the lines, having previously been dressed with soot, was hoed up rather deeply. This will complete the work among these Cabbages until growth again begins in the spring.

Beet.—The crop has been very satisfactory, and in the course of the week the roots have been lifted and stored. In lifting Beet care is necessary, for if the skin be broken bleeding will ensue, and both the colour and the flavour be spoiled. In lifting, let the roots in each line be eased out by means of a digging

fork, and instead of cutting off the leaves with the knife, they ought to be twisted off. It is worth mentioning that, chemically, the leaves of Beet are rich in potash, and should, therefore, be dug in at once instead of being taken to the rot-heap. Beet may be successfully wintered under the same conditions as Potatoes; it is as well, however, to place the roots in layers, with a good allowance of sand between each layer. In the absence of sand, finely-screened, perfectly dry soil makes a good substitute.

Parsnips.—Strictly speaking, it is not needful to lift and store Parsnips; but in my own case it is more convenient to do so, and they keep quite as well when stored as they do when left in the ground. They are treated exactly in the manner described above with reference to Beet. Owing in a great measure, no doubt, to the rather wet season, the roots of Parsnips are larger than usual—larger, indeed, than is necessary. A medium-sized root will always be of better flavour than a larger and coarser one; and it is worthy of note that medium-sized—even smallish—Parsnips are preferred in the kitchen.

Winter vegetables generally received a look round in the course of the week. Brussels Sprouts are firming up well, and Savoys and Curly Greens still continue to grow. In the case of Sprouts, it is advisable that a few of the bottom leaves be removed in order that a free circulation of air may be maintained and as much light as possible admitted. Leeks and Celery are yet growing, but the increasing cold at night will soon give these things a check.

Parsley in frames.—On all suitable occasions let the ventilation be free by night and day, and care must be taken that sufficient moisture is given. Emphasis is laid on "sufficient," for if too much water is applied the plants will rot, while, on the other hand, if moisture be given too sparingly the leaves will, most certainly, turn yellow.

Digging and trenching.—During the week a good start was made with the turning up of vacant quarters. It always pays to get along with this important work as quickly as is consistent with good workmanship. Good spademen are scarce owing to circumstances, so that it will not be possible to undertake quite so much trenching as usual, but if honest digging is done no great difference will be noticed in respect of the crops carried by breaks which have been trenched a season or two ago. Let manure be given with a free hand where it can be obtained. We hear much about economy in these days, but it is false economy to starve vegetable ground. Two quarters—those intended for Peas and for Onions—at whatever expenditure of time, will be trenched. Quarters trenched last season may, with digging deeply, be relied upon to grow Potatoes, Broad Beans, and Cauliflowers quite satisfactorily.

Cleaning up.—Some spare time was devoted to clearing off the spent haulm of Sweet Peas, exhausted Vegetable Marrow plants, the straw of Peas and of Broad Beans. All that will burn goes to the fire heap, the residue to the rot heap.

Under glass.—The fine weather having been used for pushing on the work out-of-doors, the work under glass was limited to routine. Watering, as is needed, is attended to every morning—the best time always to do such work. In order to dry up superfluous moisture after watering, the heat is run briskly through the pipes, after which the fire is banked up. Free ventilation is, of course, given on all suitable days. Among plants in pots, Nerines, now passed out of bloom, must yet be regularly watered. It is fatal to success in the case of these fine bulbous plants if their season of growth—a long one—is unduly curtailed by affording them too limited supplies of water. Keep them yet in the same temperature in which they bloomed, and a little soot-water—rather weak—will keep the foliage in good health. There is not yet need of more than very moderate fires. Stove round about 65 degs., greenhouses 54 degs., cool-houses 48 degs. to 50 degs., all at night.

W. McGRUGG.

Balmie Gardens, Kirkcudbright.

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NOTES OF THE WEEK.

Crocus speciosus.—This certainly deserves the favourable notice you give it at page 555, but I find *Crocus medius* at this season even more effective, with its rich purple colouring and scarlet anthers. With me it is also more free-flowering than *C. speciosus*.—D., Orchardton Castle, Douglas, N.B.

Rose Comtesse de Cayla in the house.—This China Rose as a cut flower is of great value, the colour superb day or night. It grows well from cuttings, and, indeed, in the usual nursery way. I like it best in a bronze pot if there be one at hand. Glasses are not nearly so good as opaque vessels. In the open air it is never out of flower in summer or autumn.—W.

Crocus speciosus Artabir.—Of the forms of *Crocus speciosus* this is one of the best. It has large, light blue blooms, and makes a nice variety to the typical *C. speciosus*, which has deeper-coloured flowers, and to *C. s. Aitchisonii*, which it surpasses in size. It was sent out a few years ago by M. Van Tubergen, and has as yet only found its way into a limited number of British gardens.—S. ARNOTT.

Verbena venosa poisonous.—Seeing in GARDENING ILLUSTRATED this week an answer to an enquiry about *Verbena venosa*, I think your correspondent should be warned that it is a highly poisonous plant. Some years ago a plant was given to me, and I planted and trained it myself, instead of leaving it to the gardener. The result was, I had blood-poisoning in both hands and wrists, which was very difficult to cure. Our doctor, who is a very good botanist, considered it a very dangerous plant to handle.—K. M.

Berberis Thunbergi.—Among the many varieties of *Berberis* now in cultivation none can compare with the above in the exceeding brilliancy of its foliage in autumn, and for which good attribute the species merits attention. To a brilliant colour effect must be added a neatness of habit removing it from the common-place and rendering it welcome for grouping. The rich colour is assumed early in autumn, and, while most pronounced where given full exposure, is, perhaps, brightest where the plant is grown in warm, well-drained soils.

Cutting off the stems of hardy plants.—Are we not, most of us, in too great a hurry to cut over the ripe and ripening stems of hardy plants? During the week I have been noticing the many varied autumn tints which they provide. *Dielytra*

spectabilis has turned to a beautiful pale golden-yellow, the *Loosestrife* (*Lythrum roseum superbum*) equals in colour the bronzing *Azalea* leaves, the ripening stems of *Asters* are not unattractive, nor are their downy seeds, although these ought to be removed. *Epimediums*, *Helianthus*, *Thalictrums*, *Lysimachias*—only to name a few—also take on very fine colouring, and in an open season, such as this, so far, has been, certainly add much to the interest of the hardy flower borders.—KIRK.

Crocus aërius.—This species is closely related to *C. chrysanthus*, but running into wonderfully rich shades of blue and purple, with almost crimson markings on the outer segments. It is not quite so robust here as *C. chrysanthus*, though, I believe, both grow together on the Bithynian Olympus. Mr. Smith, of Newry, used to have the finest stock of *C. aërius*, but nowhere can you get it cheaply, as it is rare as well as beautiful, and with me it increases so slowly that even by raising seedlings I have very little of the good forms.—E. A. B.

Carpenteria californica.—Although our soil and aspect are very suitable for most of the Californian half-hardy plants I cannot induce *Carpenteria* to bloom. The shrub is growing at the foot of a west wall, in well-drained soil, and is perfectly healthy. It is now about 3 feet high, and this year it has sent up a strong shoot some 2 feet in length from the base. But it has shown no sign of blooming, and this is its third year. Judging from an acquaintance with this subject in its own country, our conditions ought to meet its requirements. Does it demand any special treatment here to encourage it to bloom?—A. T. J., N. Wales.

A fine hardy Crinum (*C. Yemense*).—This has proved the finest of all hardy *Crinums*, a splendid plant in every respect. The Kew hand list relegates it to the minor position of a varietal form of *C. latifolium*, to which I may say it has no resemblance, and is, in fact, in every respect superior. It has been for about ten years in its present position, and continues to increase and flourish. The leaves are strong and upright, dark shining green, not easily damaged. The scapes are numerous, very sturdy and erect, and able to withstand severe storms, each carrying from thirty to fifty flowers, which are of good substance, pure white when fully open, and there are frequently, when the weather is fine, about a dozen flowers open at the same time.—F. W. Moore in *Irish Gardening*.

Our wild Clematis as a stock.—Mr. Cornhill vexed me by his learned consideration as to how this behaved on chalky soils or others, and this with regard to its influence as a stock. It is of no value whatever as a stock, its use having done infinite harm to British gardens, killing thousands of the loveliest plants known. I passed it lately on the hills 30 feet or more high, a northern *Liana* on which a desperate man might hang himself. In Wiltshire it is called *Devil's Guts*, no doubt from the difficulty of getting rid of it. It may well be left to find its own way.—W.

Rose Trier.—I am writing this note at the end of October, and have just cut some lovely sprays of from fifteen to twenty blooms of this Rose. The flowers are creamy-white, semi-double, with golden anthers, and have the fragrance of a wild Rose. It is the most dainty cluster Rose I know, and, unlike the other *Ramblers*, it not only flowers freely in July and August, but gives a few clusters until cut off by frost. It has not the rampant growth of *Dorothy Perkins*, being, if I may use the expression, more "staid" in growth and charming when seen at its best towards the end of July.—LEAHURST.

Cheiranthus linifolius was sown in February and planted out early in June in good sandy loam and a sunny position. A few flowers opened on most of the plants about the middle of August and are still as they were. I am told my plants are much too close together—18 inches apart is the right thing. This, however, does not seem to be the reason why they do not flower freely. Two plants in the same border have not flowered at all, though they are a long way from the others. Can any of your correspondents tell me how to make this very pretty *Cheiranthus* flower freely?—E. C. Buxton, *Coed Derw, Bettws-y-Coed*.

Yucca Whipplei.—In a recent number mention was made of *Yucca Whipplei*, a species growing wild throughout S. California. There are at least three forms of *Y. Whipplei* characterised chiefly by size, vigour, and habitat. One, the smallest, has a flower-spike from 5 feet to 8 feet high. It frequents the low foothills on the hot, dry, rocky sides of which it flourishes. Another grows in the valleys in sand or sandy loam, and throws an immense spike 10 feet to 12 feet or more in height, with, I should say, 5,000 to 8,000 large creamy-white, fragrant bells, each 2 inches or more in diameter. The third form is similar in appearance and vigour, but grows at between 5,000 feet and 6,000 feet altitude,

where much snow falls and frosts are frequent. This form should prove perfectly hardy in England. Of course, the dampness may be detrimental to it.—J. HARRY JOHNSON, 5,475, Franklin Avenue, Los Angeles, California, U.S.A.

Loss of colour this year.—It is the worst year for colour of the leaf that many remember. The cool days and warm October nights seem to have kept the plants growing instead of putting on their usual autumnal dress. The only tree—an exception to the rule this year is the Red Oak (*Quercus rubra*). Not so showy as the scarlet Oak, it is a noble tree, its soft red and brown colours very welcome to me. The leaves of our native Oaks beside it are quite green. The Liquidambar is not in its fine colour yet, and the snowy Mespilus (*Amelanchier*) hesitating. The Norway Maple is doing its duty, but not so bright as usual. The noble Japanese Vines that have made the garden glorious with colour are not nearly so good, though certainly giving the finest shades of any plants. The French Teinturier, of which I grow several forms, is not nearly so fine in colour as in other years.—W.

Begonia Mrs. J. A. Petersen.—Since the now universally-grown Begonia Gloire de Lorraine was raised, about twenty-four years ago, several allied forms have been put into cultivation. One of the newest arrivals, and a desirable kind, too, is Mrs. J. A. Petersen, raised in the United States. In this the flowers are much richer in colour than those of the type, while the foliage is of a pleasing reddish-bronze shade. From its richness of colouring it is a welcome addition to Begonias of the Lorraine type. Though these Begonias were at first considered to be somewhat particular in their cultural requirements they do not now present any difficulty in this respect. The main point is to give them a period of rest after flowering, then partially cut them back and introduce into heat. This will lead to the production, near the base of the plant, of sturdy shoots which, if taken off when about a couple of inches long, will soon root. Cuttings taken from the points of the shoots will never form bushy specimens.

The Macartney Rose.—Mr. Edward H. Woodall, writing in the *Garden*, says:—

"I am glad to know that Rosa bracteata grows with such vigour on a wall in the warmer parts of England, for it is charming in autumn when its bright, glossy foliage is set off by the pure white petals and golden stamens of its sweet-scented flowers that succeed one another for many weeks on a warm wall. My principal motive, however, in writing this note is to remind Rose-lovers of its peculiar merit as a stock on which to bud Roses that seem refractory. There certainly are some Roses that grow better and colour far more brilliantly on this stock than on any other, and it is well worth a trial when you have a good Rose that refuses to do well with you on any ordinary stock. Quite ten years ago I budded that beautiful but most capricious Rose Georges Schwartz on R. bracteata, and now the bush is stronger and more vigorous than ever, while on any other stock it dwindles and dies out after two or three years. Another Rose that is quite marvellous in growth and colouring on this stock is General Gallieni; its size and brilliance are quite abnormal, especially in spring, when the first blooms on any other stock are defective in colour and shape. So, though it may not be a stock for the nurseryman, it is well worth a trial by the amateur."

VEGETABLES.

POTATOES IN 1916.

THAT Potatoes are very dear is too well known in households generally. That they will become dearer still is the opinion of those best qualified to form an accurate opinion. What the maximum price per ton will be before early crops come no one can say, but anything between £12 and £20 per ton is predicted. At the present time £10 per ton is the price in the London markets. Everything has been against the Potato this year. In the first place, many of the larger growers were either unable or unwilling to plant the usual area, unable by reason of shortage of labour, unwilling because Wheat, making the price it does, they thought it would pay as well, or better, than Potatoes, with much less expense, for half-a-dozen acres of Wheat can be drilled in in less time than it takes to plant one acre of Potatoes. Therefore, to begin with, there was a diminished acreage; then came the shortage and corresponding high prices in May and June, which caused growers to dig large breadths which would otherwise have been allowed to run the usual course. One grower said that these early crops, at four tons to the acre, would pay him better than nine tons in the ordinary way, and, of course, the land was clear for another crop. It will, therefore, be seen that the acreage of keeping Potatoes has been considerably diminished, and this fact alone would tend to stiffen prices. Just when rain was badly needed there was, in most districts, a spell of heat and drought, which, in a measure, paralysed development, and when the rain did come it fell on enfeebled plants, and the temperature was abnormally low for the time of year. The average yield appears to vary considerably, some districts being very badly hit by disease, the favoured spots where the yield is up to the average being few and far between. The accounts from Scotland are dismal in the extreme. Not only was disease rampant, but in some places frost cut off the haulm, so that the yield in some cases is not more than three tons to the acre. It is the same in Ireland, the yield being estimated at from 30 to 50 per cent. below average, and it is reported that in view of this shortage the Government will, in all probability, forbid the export of Potatoes from there.

Out of these facts arises the problem of where seed is to come from for the southern parts of England. A grower here says that he can get no quotations for Scotch seed, there is none to be offered, and I should hesitate to use seed from plants that were subjected to such enfeebling conditions. Fortunately, Yorkshire is a bright spot in a dismal record, and it is to the county of broad acres that we in the southern counties must turn for salvation. Shropshire and Cheshire have a fairly clean record. We value Scotch seed on account of the superior energy which a bracing climate imparts, but this vigour, having been eliminated by abnormal climatal conditions, we must rely on those localities which have been sufficiently favoured to admit of a higher degree of maturation. This is really a very important matter, and should receive consideration from Potato growers generally, for no one can hope for a full crop from imperfect seed.

Those who cater for the public in this matter will have to use judgment in the selection of seed, and should take every possible means to ensure a supply from localities where growth has been normal. I am in the fortunate position of being able to use my own seed this year, having

procured Scotch seed last season. My crop was uneven—good, bad, and medium—so I selected seed tubers from the best plants, and this I would advise your readers who may be similarly circumstanced to do. There is no appreciable difference the second year in the cropping powers of Potatoes from the North, but it must not be repeated or there will be failure more or less pronounced. Wherever possible, Potatoes should be stored under cover. There will, I feel sure, be heavy losses in the clamps. The weather could not be worse for lifting; much of the crop will be stored wet, and a diseased tuber here and there will cause a lot of decay later on.

BYFLEET.

FORCING RHUBARB AND SEAKALE.

WHERE the Apple crop has been a short one forced Rhubarb can be used to make up the deficiency. The forcing may be conducted either where the crowns are grown, or the roots may be lifted and placed at the warmest end of a Mushroom-house. In the latter instance it is a good plan to expose the crowns to the weather for a week or two after lifting before placing them in warmth. This causes them to start into growth much more quickly than if taken in as soon as lifted. Regarding the other method of forcing, more time is required, but there is no necessity to lift the roots. Failing a supply of pots sold for the purpose, old cement and flour barrels answer equally as well. Warmth is supplied by placing a mixture of tree-leaves and stable-manure, in which the former largely predominate, round whatever is employed for placing over the crowns. Covers must be provided, for the two-fold purpose of releasing steam when the fermenting material first beats up, and afterwards for enclosing warmth. When growth begins to push up, the covers are then best tilted, and whatever protection is needed can be afforded by placing some loose litter lightly over them. It saves much time and trouble if the heating material is mixed, thrown together in a heap, and turned three or four times beforehand. A heap should always be in reserve for renovating. Much that has been said about Rhubarb is applicable to the forcing of Seakale. If the forcing is to be conducted in a Mushroom-house the crowns, after being planted and watered, should be covered with clean tree-leaves to a depth of 9 inches, which causes the Kale, as it develops, to grow close and compact. Very good Seakale can also be grown in a deep frame placed over a well-made hotbed, provided daylight is effectually excluded.

K. P. S.

Onions decaying.—Can you tell me why my Onions are like this one? They are autumn-sown, were transplanted in February, and taken up in July, dried in the sun, and left spread out.—RUSHFORD.

[Judging by the appearance of the Onion you send, we should say that the bulbs have either been kept in too warm a place, or they were not properly matured when stored.]

Brussels Sprouts failing.—Nearly all my Brussels Sprouts have no Sprouts formed or forming, though they are big, strong plants.—RUSHFORD.

[With regard to the Brussels Sprouts, it may be that a sufficient length of time has not elapsed between the time of planting and now for Sprouts to have formed. If they do not eventually develop you may then know that the plants are at fault. We should, however, think they will yet form Sprouts.]

Tomatoes ripening unevenly.—I am sending you two Tomato fruits grown by a friend of mine, who is much vexed by the trouble they show—uneven ripening, hard green

patches on, more especially, the undersides of the fruits. This is a fairly common trouble, and most of us have our own theories as to the cause. My friend is a most careful and capable grower. Of late years his Tomatoes have been much attacked by Cladosporium. Would this be a possible cause of the defects in the fruit, do you think?—A. CAMPBELL.

[The general opinion regarding the uneven ripening of Tomatoes and the presence of hard green patches on the fruits is that it is due to a deficiency of potash in the soil. We also share in this opinion, and during a long experience have found that when potash is freely supplied to the soil in some form or other the fruits are never so affected and always

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

THE NOBLER FUCHSIAS IN THE FLOWER GARDEN.

LONG struck by the beauty of some of the wild Fuchsias, I began to use them in the flower garden, and in this cold year they have done and looked well, both in flower and leaf. The kinds used are corymbiflora and its white form and fulgens. They are growing in good loam in a half-shaded bed. We only wanted an Italian autumn

be no apprehension as to the sets not growing. I have on occasion planted, with excellent results, edgings with sets on which there has not been a vestige of a root. The great thing is to provide a good quantity of soil for them to root into, and to make it as firm as possible by ramming both before and after planting.—K. P.

TULIPS.

TULIPS, as we know them to-day, are more than flowers of April, for they linger with us through May, and even to the threshold of June. Tulips, indeed, may be regarded as connecting-links between the first and second seasons, messengers of an advance



Fuchsias at Gravetye. 1916.

ripen to perfection. Growers on a large scale use potash in combination with other chemicals, while amateurs and private gardeners, when they can obtain them, resort to the use of wood ashes, which supply the necessary amount of potash when mixed with the compost. Possibly, the soil in your friend's case has become exhausted through being used for the same purpose two or three seasons in succession. If so, the remedy is either to replace it with new soil, adding wood ashes if you can obtain them, or an artificial manure of which potash forms a constituent. The latter should also be employed in the event of your being unable to change the soil.]

to let the many flowers open; instead, the frost soon came and blackened the shoots. W.

Replanting Box edgings.—This is a good time to undertake work of this description, as the new sets have an opportunity to become well rooted and established ere spring arrives. Box forms a very suitable edging to kitchen garden paths, and nothing has a nicer appearance when it is kept dwarf and regularly clipped. Overgrown edgings furnish an abundance of material for replanting with. This need not be planted in its entirety, as the older portions of the stems and roots can be cut away. So long as there are a few roots present there need

guard, antedating the greater glory of early summer flowers, like Pæonies, Irises, Roses, and Larkspurs, which broaden into beauty as the days pass. No bulbous plants are easier of cultivation than Tulips, and it is possible, without much difficulty, to have the various sections in bloom from February to May. To those who desire to have pots and bowls of bulbs in their homes in the early months of the year Tulips should appeal, inasmuch as they last longer in flower than most subjects, and may be grown either in soil or shell-fibre with much success when once their culture is understood. The colours, too, of the blossoms are so charming, ranging from faintest pink to deepest rose,

carmine, and crimson; from vivid scarlet to mauve, purple, and violet; from primrose to yellow and orange; with white in purest form, that anyone interested in window and table decoration may, by a careful selection, bring about combinations that will harmonise with the interior of any room. The Darwin Tulips are distinguished by their wealth of lovely self-colouring, their shapely blooms being borne on strong, tall stems. Cottage Tulips belong to a much earlier race, and in some instances have been lifted from the obscurity of old English and Scottish and Irish gardens. Both these sections lend themselves to colour schemes in gardens where herbaceous plants are grown and where their handsome blossoms show up amongst the wealth of the fast-developing foliage of May.

CULTURE IN POTS AND BOWLS.—To have Tulips in bloom in March and April in pots or bowls a long season of growth is recommended. It is, therefore, best to procure the bulbs early in autumn. Five-inch or 6-inch pots will be found a convenient size, and drainage should be provided by well crocking them. A good compost is turfy loam, with leaf-mould and coarse silver or river sand added, the whole being well mixed. Four bulbs will suffice for a pot. For growing in bowls shell-fibre is a suitable medium. This, if dry, must be thoroughly moistened, the material being pressed firmly into the bowls, but not made hard. The bulbs should be inserted until the crowns are level with the top of the fibre or soil, the receptacles will then be ready for removal to a cool, dark, airy place, where they may be left until about 2 inches of growth are visible. Whilst in this stage it will only be necessary to afford the bulbs water occasionally. After this they can be brought into the light and slightly warmer conditions. If they are removed to a greenhouse great care must be exercised not to expose them to more than gentle heat. Tulips, perhaps more than any bulbs, resent forcing. Probably that is the reason why many who do not own a greenhouse are successful with them, because the heat of a sitting-room is generally quite sufficient to lure them into bloom. It is futile to attempt the early forcing of any bulbs before they have made liberal root-growth, and this can only be achieved by early planting. Undue forcing is frequently the prelude to failure. Another source of disappointment attending the culture of Tulips in bowls and pots is keeping them too dry. When water is really necessary the soil should be soaked, and in the case of bowls any superfluous moisture drained away. The danger of over-dryness must be guarded against, especially after the bulbs show an inch or two of growth.

Tulips will do well in most soils, provided the situation is a sunny one, but do best in a light, rich, sandy loam. After the ground has been well dug in the autumn the bulbs should be planted 5 inches deep and about the same distance apart. In a heavy soil 3 inches deep will be sufficient. From the middle of October to the end of November is the best time to get the bulbs in. LEAHURST.

Kalosanthes coccinea and Rochea falcata.—These two pretty-flowering succulents, mentioned on page 542 by J. Cornhill, have undergone some changes of names since they were first introduced to British gardens. Take the *Kalosanthes*. It was, after a time, placed in the genus *Crassula*, and now, according to the "Kew Hand List of Tender Dicotyledons," it is transferred to the genus *Rochea*, the specific name of *coccinea* being still re-

tained. On the other hand, the name of *Rochea falcata* is now changed to *Crassula falcata*. I quite agree with J. Cornhill as to the desirable qualities of these two South African succulents, but the shifting about of names is a nuisance. It is not as if all authorities were agreed, but the game of battledore and shuttlecock is so persistently played with the names of plants that in referring to any plant by its botanical name one is never sure whether the one you know it by is in accordance with the latest naming. The names of Ferns in the "List of Plants Certificated by the Royal Horticultural Society" furnishes a case in point.—W. T.

WASTED EFFORT IN GARDENS.

In trying to carry out improvement of the flower garden, owners should remember that, as a rule, there is no merit in mere extent or area. In a garden mere size is nothing to boast of. Beauty in modest ways, as we see it in a cottage garden, is a better aim. Great size is against good gardening. There are so many needless walks and other *impedimenta* in our gardens that men cannot get to work in any simple way. Half the time is lost in cleaning the feet, seeing that edges are not injured, or in repairing them when they are; a lot of useless labour is caused, the time expended in which ought to be given to the growth of plants.

Then we have the endless shaving of lawns. The soft turf is the glory of our gardens, and forms the most delightful playground; but who can say that it is wise to mow, as people have boasted of, 40 acres of kept lawn? Soft lawns we want near our houses, and cannot take too much care of them, but the wide acres that are mown in many large country seats would be better cut at hay time. Flowering Grass is one of the most beautiful things in Nature, and our garden lawns would be at least as lovely. The Grass itself should be a beautiful garden. We should see in it, as we often see on an alpine meadow, fair bulbous flowers and other plants which will grow in English as well as in alpine turf.

After the Grass come the needless walks. Our own landscape gardeners are a little more economical in hideous walks than are the French, but we very often have four times too many walks, which torment the poor gardener by needless and stupid labour. The planning of these walks in various elaborate ways has been supposed hitherto to have some relation to landscape gardening, but the presence of one needless walk often spoils all possibility of good landscape effect near. Walks should be designed to go with one sweep wherever it is necessary they should go and be reduced to modest dimensions. Generally, all flower-beds are best set in Grass, and those who care to see them will approach them in that way quite as soon as if hard walks are brought near them. For the three or four months of our dullest season there is little need of frequent resort to flower-beds, but for the rest of the year the turf is better than any walk. I do not mean that a walk should not lead to the flower-garden, but that every walk not necessary for frequent use should be suppressed. Few have any idea how much they would gain, not merely in saving labour, but in the beauty of their gardens, by abolishing useless walks.

This waste of effort should be turned to good account in the growth of flowers. In many places miles of walks may be seen, bordered in many cases by long, naked stretches of earth. The gardener, with his few men, is impotent to turn such a waste into a paradise; his time and his

thoughts are eaten up by trivialities—barber's work, shaving Grass, and weeding walks eternally. To form a garden of Roses, or groups of choice shrubs, or beds of Lilies, or other noble hardy plants properly, as regards the soil and its depth, that the bed might fairly nourish its tenants for a dozen years is flower gardening. To such ends all good gardeners' labour should be directed. Instead of the never-ending scratching of beds in autumn and spring we ought to have a thorough preparation of one portion of the garden each year, so that it would yield us quiet beauty for many years to come.

Glasshouses are useful and charming helps for many purposes, but we may have noble flower gardens without a pane of glass. To grow Roses or Carnations in winter, to ripen the fruits that will not mature in our natural climate, to enable us to see many fair flowers of the tropics and sunny climes—for these purposes glasshouses are a precious gain, but for a beautiful English flower garden in the British Isles they are wholly needless. Therefore, one great source of expense may be saved, and the numerous glasshouses in our public and private gardens can then be turned to better use. It would not be true to say that good hardy flower gardening is cheaper than growing the masses of graceless plants that often disgrace our gardens. The splendid variety of beautiful hardy things and the ceaseless birth of novelties tempt one to buy. All the more necessary is it, therefore, not to waste money in stupid ways.

From an economical point of view nothing is more important than the due preparation of a flower garden soil by deeply trenching it. This well done in the first instance, and due after-attention given to mulching, but little, if any, artificial watering will be required, excepting in the driest season. There is much unnecessary labour expended in watering. Often-times, if the surface soil only looks dry, it is concluded that watering is needed, and accordingly it is given. 'W.

NOTES AND REPLIES.

Poor soil—manures for.—I shall be much obliged if you can tell me whether superphosphates would be useful to my soil, which is very poor. There is no sand or lime in it; but it is poor and light. The subsoil is yellow clay. I have trenched it deeply and heavily manured it, but this does not seem enough. Do you advise the above or basic slag or lime for flower borders?—T. S. BARKER.

[Yes, superphosphate would be of great service to your soil, and basic slag also, but the latter would have to be applied now, while the former would be best used in February or early in March. Basic slag is an excellent dressing for the lower spit when land is being double-dug or bastard-trenched in autumn. Quite half a pound per square yard may then be applied. Of the two we should prefer basic slag for flower borders, but, as before remarked, it should be applied now, for the reason that it is a slow-acting manure.]

Dwarf Fuchsias for the rock garden.—The best of the dwarf Fuchsias I have tried for the rock garden has been Bouquet, a dainty little plant, one of a series of hybrids raised by M. Lemoine, of Nancy. It is of erect growth, not more than 9 inches or 12 inches high. I had on a rock work one plant for upwards of fourteen years without any protection. S. ARNOTT.

Potentilla dubia.—This Cinquefoil deserves what "N. L." says of it. It is an excellent little plant for the crevices of stone pathways, rough steps, or old walls. In flat places on rockwork or in the front of the border it should be favoured with the top-dressing advocated by your contributor, and, if this is neglected, I have seen it lost after a lapse of years.—S. ARNOTT.

INDOOR PLANTS.

WINTER-FLOWERING BEGONIAS.

HYBRID winter-flowering Begonias are today the most valuable of all plants for blooming during the winter. They are the result of intercrossing *Begonia socotrana* with varieties of the tuberous-rooted section. They equal those of the Lorraine type for freedom of bloom, and greatly surpass them in size, form of flower, and wide range of colour. Messrs. Veitch, of Chelsea, were the first to take in hand these Begonias, and they raised many fine varieties. Messrs. Clibran, of Altrincham, have also raised many beautiful varieties, including Pink Perfection (clear blush-pink), Altrincham Pink (bright pink), Mr. T. H. Cook (rose-pink),

drained. All the varieties are easily increased from cuttings, which may be taken at any time from April to August. They are made from the young shoots which form in the axils of the leaves after the plants have completed their season of rest. Insert the cuttings singly in 2½-inch pots, using a sandy compost, and place them in a handlight or small propagating-frame where the temperature does not fall below 70 degs. Directly they have filled their pots with roots pot them into others two sizes larger, and so on, till they reach the flowering size. Cuttings rooted early will require 6-inch pots, and a later batch will need 5-inch, using the compost named above. A somewhat moist atmosphere is essential through the growing period and a temperature of 60 degs. to 65 degs. No

potting; indeed, they never flower so well as when the bulbs are closely packed together. Sometimes, however, the roots get into a bad state, and repotting then is absolutely necessary. The best time to carry this out is as soon as it can be seen that the bulbs do not intend to flower, when they should be shaken clear of the old soil and repotted. Whether they are placed singly in the pots or grouped together the drainage must be ample, and the compost selected good yellow loam, with a liberal amount of sand, and if of too adhesive a nature a little well-decayed leaf-mould to keep it open. This compost will keep sweet for a lengthened period, hence its value for such plants as this. During the winter and early spring the plants should be kept in a light position in the greenhouse and moderately watered in order to encourage good and free yet sturdy growth. Then, as the plants show signs of going to rest the water supply should be diminished, and when dormant the bulbs must be kept totally dry and well baked in the sun; indeed, they will require no water till the flower-spikes show, when water must be carefully given. If the clumps or masses get too large, and it is decided to divide them, this may be done directly the flower-spikes can be seen, for *Nerines*, unlike many bulbous plants, will develop their blossoms if disturbed at the roots. The spikes, however, must be a couple of inches long before this is done or failure will be the result. You must not, however, be surprised if many of these divided plants fail to flower the next season. Weak liquid-manure applied occasionally during the growing period is very beneficial to the *Nerines*, but care must be taken that it is well diluted, as anything tending to choke up the potting compost should be avoided.]

Kalosanthes coccinea.—I was glad to observe (page 542) Mr. Cornhill's note on this beautiful but neglected greenhouse plant. There are several reasons why the *Kalosanthes* has never become popular with amateurs, the chief being that the flowers are unsuitable for cutting, a consideration which in these days appears to outweigh whatever other good qualities a plant may possess. Notwithstanding this disadvantage, one cannot shut one's eyes to their value as pot plants. The *Kalosanthes* is beautiful when in bloom, lasts a long time in flower, and is not difficult to cultivate. Mr. Cornhill rightly emphasises the worth of cultivating moderate-sized plants. Peat and loam, with a little bone-meal added, make an excellent compost. The plants should always be given the sunniest position in the greenhouse, so that the growths may become well ripened.—LEAHURST.

Winter-flowering Begonias.—The bulk of the plants of the Lorraine type of *Begonia* should be placed in a house by themselves, preferably one that is not too lofty. Before arranging the plants therein the house should receive a good cleaning, recovering the stages with clean fine gravel or ashes. Allow the plants ample space for development and attend to their needs in the way of tying as the flowering shoots extend. In a temperature of 55 degs. to 60 degs. the plants will come gradually into flower and last over a long period.—A. W.

Shrubs for forcing.—A few shrubs, such as *Azalea sinensis*, Lilacs, Prunus, Wistarias, *Staphylea*, and Laburnums, are being potted up or top-dressed for forcing during the early spring. The flowers provide a valuable supply of cut bloom, and the plants furnish excellent specimens for decorating the greenhouse and conservatory. Many of these plants may be forced from year to year, provided they are given suitable treatment after they have flowered.—F. W. G.



Winter-flowering *Begonia Emily Clibran*.

Emily Clibran (light salmon, flushed orange, here illustrated), Optima (salmon), Lucy Clibran (orange, suffused rose), Scarlet Beauty, Vivid (bright scarlet), Britannia (bright crimson), and Elatior (rosy-carmine).

CULTURE.—When the flowers are over, a partial rest should be given until the end of March in a temperature of 55 degs. to 60 degs. At this time they need very careful watering; in fact, this is the most critical time of their existence. If they are kept moderately dry, giving just sufficient water to maintain the stems and foliage in a healthy condition, they will not suffer. After growth commences the plants need repotting in a compost, consisting of two-thirds good fibrous loam, one-third good leaf-mould, a little well-decayed cow-manure, and silver sand. The pots must be perfectly clean and well

overhead spraying is advised, as any condensation of moisture on the leaves is detrimental to their welfare. Pests that have to be guarded against are mite and thrip. An occasional fumigation with nicotine will act as a preventive of these pests.

F. W. GALLOP.

NOTES AND REPLIES.

Growing Nerines.—I possess several very fine old clumps of *Nerine Fothergilli*, *N. Fothergilli major*, and *N. cornusca*, but though each pot now contains more than a dozen bulbs, I seldom have more than four blooms from a pot, and sometimes none at all. I was told that *Nerines* should never be repotted, and should be well baked in the sun each summer. I should be glad of any hints as to cultivation.—M.

[Provided the roots are in good condition, *Nerines* will stand for years without re-

FRUIT.

CORDON PEARS.

Will you oblige by giving me the names of the best twelve cordon Pear-trees for a wire fence for early and late use? I should like them with the combined qualities of dessert and stewing. Also, are they best on the Quince or on the Pear?—N. J. S.

[Good varieties for cordons are Souvenir du Congrès, Louise Bonne of Jersey, Beurré Superfin, Beurré Hardy, Beurré Diel, Doyenné du Comice, Marie Louise, Thompson's, Winter Nelis, Glou Morceau, Bergamotte d'Esperen, and Easter Beurré. There are no doubt others equally good, but much depends upon soil and situation, so that in selecting varieties these should be taken into account. Deep planting is a serious evil, and should be avoided. Thoroughly trenching and draining are also of great importance. Heavy, wet clay will require draining and suitable ingredients, such as lime-rubble, charcoal, burnt soil, and other material mixed with the soil.

When on the Quince, which is the better stock, heavy mulchings of good manure should be applied twice a year—viz., in the autumn and spring, as it is useless to starve the trees. The roots being near the surface must be encouraged to remain there, so that a good dressing of thoroughly decayed manure from 4 inches to 6 inches deep is what is wanted to produce fine fruit. The watering of trees grown as cordons must also be attended to, as the roots, being near the surface, soon suffer in dry weather. A heavy mulch in the spring will do much good by retaining the moisture, and should, at the least, be 3 feet from the wall. Liquid manure is of great assistance to the fruit when swelling, well washing it down to the roots. Protection from frosts and thinning of the fruit are also necessary. Pinching and stopping during the growing season are also very important, and if these are attended to not much winter pruning will be required. What are known as dessert Pears are of no use for stewing, good sorts for this purpose being Catillac, Gilogil, and Verulam.]

NOTES AND REPLIES.

Black Currant Lee's Prolific.—Of late years Boskoop Giant has been so largely planted that other of our good old standard sorts have been somewhat neglected. The "big bud" disease has been a serious trouble, and has led up to the clearing of large areas of Black Currants, hence there has been a distinct shortage of this highly-favoured fruit for some time past. I have given up growing Boskoop Giant, which was said to be immune from the attack of "big bud," and now grow the Baldwin, Lee's Prolific, and Victoria, which give me heavy crops of fine berries and are free from "big bud." Boskoop Giant was remarkable only for the giant size of the individual berries. Lee's Prolific is well named, and those who plant this in place of Boskoop Giant, as I have, will find both profit and satisfaction. As the season of planting is with us the occasion may be opportune to some of your readers to reinstate the proved and time-honoured favourites of bygone days.—W. S.

Apple Langley Pippin.—This should, in time, become a popular Apple, its season, August and September, being one that does not provide much variety for dessert. True, there is the Worcester Pearmain grown in great quantities for market, but, apart from its brilliant colour, there does not seem any other outstanding merit. Langley Pippin is said to be a cross be-

tween Cox's Orange Pippin and Mr. Gladstone, parents that should produce quality. Mr. Gladstone is a handsome August fruit, but in many gardens shy-bearing, while in others it crops freely. Langley Pippin, of Pearmain shape and attractively coloured, has a soft flesh and pleasant, crisp flavour. When the merits of this early Apple become better known it will be freely planted, though not to the extent of the Worcester Pearmain. Langley Pippin, with me, makes quite an attractive bush, does not assume undue vigour, and is, therefore, likely to become a regular-bearing variety. Another of Messrs. Veitch's newer varieties, September Beauty, is said to be of the same parentage, but is not, in my judgment, comparable with the Langley Pippin. My trees of both these kinds were grafted, headed-back, established trees, and it may be that this double grafting may cause a variation in the character of any particular kind. At the same time, it is an easy way of substituting a new or a better Apple for one that is unsatisfactory.—W. S.

Apple Hambling's Seedling.—I have been much impressed with the fine keeping qualities of this Apple. It remains perfectly sound until March, which for a large-sized cooking Apple is considered a good record. With me, in standard form, it has not yet given a bountiful crop, but, like the Blenheim, it may fruit more freely when older. It is distinct in appearance, quite round, and smooth in outline, and very solid. It may possibly not give the best results grown in bush or pyramid form, as its growth is spreading. The Paradise stock restrains the exuberant growth of many Apples, and may do so in this case. At any rate, Hambling's Seedling, having such fine keeping qualities, is deserving of trial.—W. S.

GARDEN FOOD.

NOTES AND REPLIES.

Indian Corn.—Some time ago you had a paragraph about growing Indian Corn as a vegetable. I had some planted at once, and it came up and grew well, but now at this date (November 5th) the cobs are only some 6 inches long when stripped of their leaves, and it is not easy to get the Corn off when cooked, the husk part being very tough. Are my cobs too young? Was I too late in planting, or would the plants be better started in pots and planted out?—C. A. HOPE.

[You may have planted too late. The recipe you give we omit as of slight value. There is no need to prefer the short cobs. Long ones are good, the mistake is letting the cobs grow too old and hard. We find the Corn best eaten straight off the cob, dog-fashion, though there are various good ways. Plant on warm southern slope. Get best American varieties.—Ed.]

Celeriac.—This vegetable should soon be in use, and in these times of scarcity of workmen it is well to have plenty of it, as being less troublesome than the blanched Celery. In the garden it is easily grown, even in the wettest parts. The thing to desire is that the cook should make good and frequent use of it, varying the dishes made by its aid in stews or "hotpots," and also as a separate dish. It should be home-grown, as the market produce is often far from fresh or good. In growing it, the kinds with the largest roots are not the best, and some trial is necessary to find out the best kinds for the cook.—W.

Pumpkins and Gourds.—Were the value of Pumpkins and Gourds as vegetables fully recognised they would be grown much more extensively in this country. I fear that a certain amount of prejudice has much to do with their neglect, and my object in calling attention to them at this time is to induce all who may be in

possession of any at this season to take the greatest care of them for use during the coming winter, when many vegetables, and especially Potatoes, promise to be extremely scarce. Cooked and served properly I know of few vegetables which are more appetising than Gourds or Pumpkins. A large Pumpkin may be cut much in the same way as a cheese, and used as required; if stored in a dry place it will keep good for a considerable time.—EDWIN BECKETT in *Gardeners' Chronicle*.

Rice and Cabbage.—Take a good, fresh Cabbage, trim and take out the stalk, well wash, and cook (but not over-cook it). When it is done, press it with a clean cloth in the colander to get it as dry as possible; then chop it coarsely and return to the saucepan with 2 oz. of grated cheese, 1½ cupful of cooked Rice, and a small piece of butter. Season lightly, mix all well together, and serve very hot.—S.

Growing Celeriac (p. 556).—By mistake I was made to say "it grows best in the coolest and best parts of the garden." I meant the *worst* part of the garden. It is convenient to have a crop that one may put into the heaviest and wettest parts of the kitchen garden. No doubt it would grow in other parts, but I always put it in the heaviest and wettest spot.—W.

Couve Tronchuda.—From time to time short notes appear in GARDENING ILLUSTRATED about Couve Tronchuda, or Portugal Cabbage, but, judging by the little prominence it is given in most seed catalogues, it cannot be very well known. It comes in at the end of October and early in November. It will not stand too much frost, but a slight nip of cold weather improves the flavour. I am now cutting mine, and find it most useful. It takes up rather more room than ordinary Cabbage, but nearly every leaf is eatable, while the ribs may be cooked much like Seakale.—WOODBASTWICK.

QUINCE RECIPES.

QUINCE MARMALADE.—Pare and core and cut into pieces the fruit, put the skin and cores into a kettle, cover them with water and boil thirty minutes, or until tender. Strain off the water through a colander and as much pulp as will pass without the skins; to this add the rest of the fruit and three-quarters of a pound of sugar to each pound of fruit; boil it until it becomes a jelly-like mass; mash the fruit as much as possible. Turn into glasses and seal.

QUINCE BUTTER.—One-half gallon of Quinces quartered and cored, one-half gallon of tart Apples quartered and cored, two quarts of sweet cider, one pint of cold water. Cover the crock and stew gently until the fruit is very soft, then pass through a sieve. Add five cupfuls of sugar and cook until thick. The quantity of sugar must be governed by the cook's taste.

QUINCE JAM.—Take one pint of quince juice left from preserves, add one pound of sliced Apples, three-quarters of a pound of sugar; boil two hours, stirring well; pour into glasses while hot, and seal.

QUINCE AND PEAR SAUCE.—Three pounds light brown sugar, six pounds Pears, quartered if large, small ones cut in halves; nine pounds Quinces, quartered. Boil sugar, Pears, and Quinces nearly all day, taking care not to let them cook too rapidly, until both Pears and Quinces are of a rich red, and the juice an amber syrup. Can and seal tight. The fruit keeps its shape, the Pears having gained a fine flavour from the Quinces, and the Quinces having an added goodness from the Pears.

QUINCE HONEY.—One medium Quince and one cupful of granulated sugar will make one jelly glass of honey. Pare and grate the Quinces, then stir this grated pulp into a boiling syrup made of the sugar and enough water to dissolve it. Stir slowly and quite often until the pulp will remain suspended through the syrup. One should not get it too stiff. Put into jelly glasses, and when cool cover in the same way as preserves and jellies, and keep in the preserve closet.—*Rural New-Yorker*.

TREES AND SHRUBS.

PARROTIA PERSICA.

AMONG the trees that have kept their character this poor season this is one of the best. It is planted near a group of Pines, not the best place and not sunny, in ordinary cold soil. There is no need to describe the plant again. It is quite hardy and thrives in ordinary soil, but we are as yet ignorant of its character and needs. It is best, therefore, to group it with medium-sized trees.

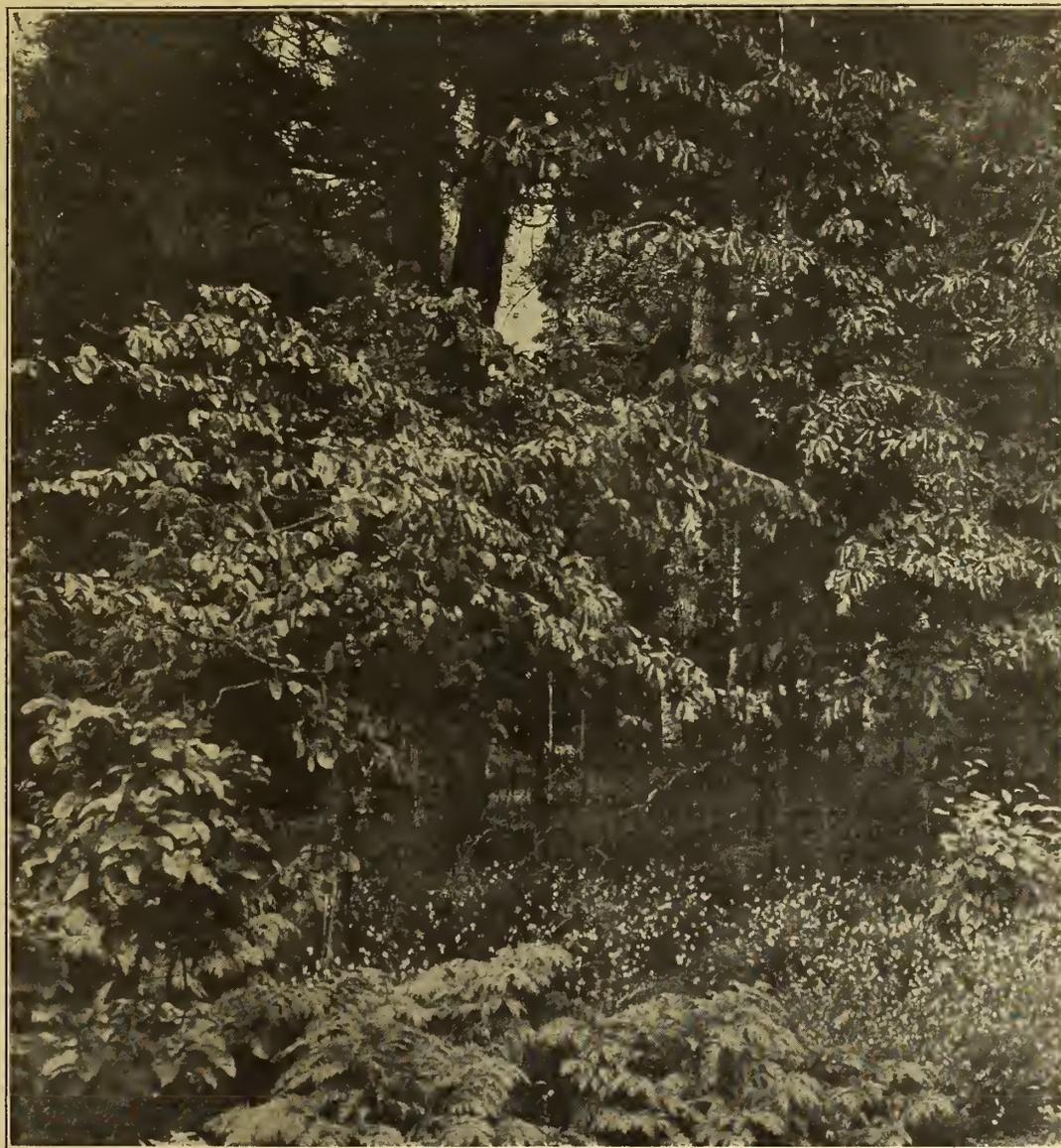
1848, but though a considerable time has elapsed since then, it is still an uncommon plant. A well-drained sandy loam that is, however, not parched up during the summer will suit this Parrotia best.—P. T.

NOTES AND REPLIES.

Diplacus glutinosus in the wild garden.—This is considerably hardier than many suppose. I have a colony established on a sunny slope in company with Ericas, and the masses of golden-buff flowers, which are produced from midsummer to the end of October, are very attractive. These plants were all raised from cuttings. D.

just read Mr. J. Harry Johnson's note on this plant, on page 539, and can corroborate all he says in regard to the Diplacus in its native land. There I have often seen the lovely red and yellow forms alluded to covering the hillsides, and I cannot forget the aromatic essences which arise from the bushes as one brushes through the chaparral.—A. T. JOHNSON, N. Wales.

Cotoneaster adpressa.—Minus fruit or flower beauty, this modern introduction from China would still rank high among its fellows by reason of its exceptional value for the rock garden. Virtually a



Parrotia persica on margin of Pine grove, Gravetye.

— The present autumn has not been at all favourable to those subjects whose decaying leaves assume a vivid colouring before they drop, but despite the dull weather this Parrotia has in some cases at least been very bright. In any selection of trees or shrubs remarkable for their autumnal foliage this must have a place, but in addition to this the flowers are also very pretty and interesting. Their most conspicuous feature is the red-tipped stamens. In general appearance and in the arrangement of the inflorescence this Parrotia bears a good deal of resemblance to the Witch Hazels (*Hamamelis*), to which, indeed, it is nearly allied. It was introduced to this country from Persia in

glutinosus is best planted when quite young, and likes a warm, light soil with good drainage and plenty of sun. Indeed, this shrub has many attributes in common with the Gum Cistus, and where one will thrive the other will usually do so. Winter treatment merely consists in covering the roots of the plants with a cone-shaped heap of ashes. It is also desirable to secure the trailing branches of the larger shrubs so that they will not be blown about by winter winds. In the spring these branches may, with advantage, be shortened right back to within a few inches of the base. This treatment conduces to finer blooms and more of them, as well as a more compact habit. I have

rock-clinging subject—so tightly does it press its prostrate branches against the rock—it is the best of them all for this purpose, covering a few feet square in the course of three or four years. To this good attribute must be added free growth, hardiness, and a neat habit equalled by none. In common with others of its class, it provides a leaf-colour effect late in autumn prior to casting its foliage. The flowers are pink, succeeded by scarlet berries. Covering its allotted space on the rock and encroaching on to the path, it will root into the mingled gravel and soil in its onward course. In dryish places the slower growth is more minute—perhaps more pleasing.—E. H. JENKINS.

CHRYSANTHEMUMS.

CHRYSANTHEMUM NOTES.

WITHIN recent years there has been introduced a type of Chrysanthemum of far better quality than what we know as outdoor kinds, but it is not so early in bloom, and, therefore, requires some sort of protection. These semi-early sorts are in bloom now. The protection necessary applies only to the flowers, for they are growing in the open ground. It is best to grow them in beds of, say, three rows, 2 feet apart, and then temporary protection can be readily fixed above to ward off rain and frost, with mats, or the like, for side shelter. The varieties are about a yard in height, are generally sturdy, and stronger in stem and leaf than the true earlies. They are amenable to disbudding; in fact, grown without thinning, they are not nearly so useful, from my point of view, for producing blossoms of high quality which fetch good prices in the market, and are valuable for filling vases, etc., in the house. From one dozen to two dozen flowers are allowed to each plant, one bloom to a branch. These modern semi-early sorts were probably obtained by crossing the outdoor ones with the November Japanese kinds. At any rate, we get in them a type that is most useful during early October. The following are excellent:—*Amirante* (chestnut-crimson), *Countess* (white), *Cranford Pink*, *Cranford Yellow*, *Cranfordia* (yellow, fine), *Dolores* (deep bronze), *Miss F. Collier* (white), *Mrs. Roots* (white), and *Le Pactole* (light bronze, of French origin). There are a few others, but it is not worth while to give their names, because, as yet, they cannot be obtained from the raisers.

Noticeable among the newer Japanese kinds of the big-flowering type is the splendid habit of growth. We seldom see nowadays new varieties of indifferent constitution. These newer varieties are mostly short or, at least, of medium height, and with exceptionally large foliage. I am especially pleased with *Mrs. M. Sargent*, a strong grower that has flowers of an incurving form, which are white, with a distinct green tinge. This should be favoured by amateur growers, and, if I mistake not, it will be capital from a market standpoint. It was raised by Mr. Bryant, who gave us *Queen Mary* and *Mrs. G. Drabble*, two first-rate whites. *Edith Cavell* (deep bronze) is thought by some growers the best of last year's novelties. *Frank W. Ladds* is distinctly promising, with flowers of a clear yellow shade. This, while useful for show, will be valued for what I will term ordinary culture. The sport from *Wm. Turner* named *Mrs. H. Tysoe* looks most promising this year. It is a yellow variety that will be esteemed for exhibition. Of the first-named I saw some exceptional bush specimens the other day. The plants are thinned to a dozen branches, each bearing a sturdy-looking flower-bud. When in full bloom the head of white should be a mass a couple of feet across. Unusual varieties in these days are the old-time *Mrs. G. Rundle* and its yellow sports. I had thought them quite out of date, and yet I am looking forward to flowers from these plants creating considerable interest when seen in public. The stock whence the cuttings came in this case has been in the care of a grower for forty years.

In growing Chrysanthemums under glass we should endeavour to keep the surroundings dry, and if there be fire-heat there should also be air, more especially through the top ventilators. Cold draughts are harmful. It is well to do what watering is necessary in the early part of the day, then at night there is less chance of

damage by condensed moisture, a frequent forerunner of decay or damping. Continue to give stimulants to the plants when the flowers are opening; indeed, this assistance is then needed as much as ever to finish the flowers. Soft side shoots should be rubbed out, and the growths at the bottom removed; such are useless for cuttings. Better material for propagating will follow later, when flowering is past. The rage for

SINGLE-FLOWERED varieties of late years has resulted in numerous pretty varieties if we judge the flowers only, but one could wish for better growth in these in too many instances. We cannot complain of any like the "Mensa" type, which is the ideal of to-day, although some might desire a slightly dwarfer growth. *Aristocrat*, amongst the new sorts, is very promising. Presumably singles are preferred where disbudding has been done—say, from ten to eighteen branches to a plant, each branch carrying but one flower. The gain in size matters little, but what we get in substance does, and the flower-stems then come strong enough to hold the blossoms well up. A rather new class, *Anemone-centred singles*, is being tried this season. I liked *Ceres* and *Aphrodite* when exhibited last year. *Kathleen May* and *Snow Queen* have been noted before.

H. S.

ROSES.

NOTES AND REPLIES.

A large Dog Rose.—A fine old bush, almost a tree, of *Rosa scabrata* is just at its best, and is bearing hundreds of its large, deep pink, single Dog Roses. It is a seedling form of *R. canina*, but its flowers are twice as large as those of the wilding, a fully expanded flower being over 4 inches across and of a warmer and more uniform shade of pink. It is the best single pink Briar Rose I know of to form a large self-supporting specimen in the Grass, either on a lawn or in the wild garden. All the attention it requires is the removal of some of the oldest wood now and then to allow the long arching shoots room to develop. Then throughout June they should be covered with the shell-pink flowers, and in autumn and winter, until the birds feast on them, the large hips are very ornamental.—E. A. BOWLES in *Garden*.

Rose Hugh Dickson.—This does not flower so freely as General M'Arthur or Richmond, but its blooms are finer than those of these popular Roses. It is such an excellent autumnal variety that it is worth special consideration for this virtue alone. Perhaps at times its colour might be more glowing, but it deserves all the praise it has received since it was introduced about thirteen years ago.—SUB ROSA.

Rose American Pillar.—This has again been very fine this season, and in a number of Scottish gardens it is a great favourite. As a pillar Rose it is superb, but it is a charming variety as a tall weeping standard. The large pink flowers, of a deep shade, are in clusters, and borne very freely. It makes vigorous shoots. The foliage is very beautiful, and no garden where climbing Roses are grown should be without *American Pillar*.—A.

Rose Debutante.—This is a charming Rose for a high arch or pergola. It is excellent in the gardens of Captain Sir C. Hope Dunbar, Bart., at St. Mary's Isle, Kirkcubright, where it has been for some years on an arch. The long, drooping branches, with their abundance of semi-double, soft-pink flowers in clusters, are very effective. *Debutante* blooms for several months, and this is in itself a strong recommendation.—S. A.

Rose Flame of Fire.—In a Scottish garden the other day I saw this in fine condition. The flowers are comparatively small, but they are bright and showy, and are also freely

produced. The colour, as described in "The Rose Annual," is a "deep orange flame," and it is not easy to think of anything to convey better the brightness of the colouring of this Rose.—SUB ROSA.

Rose (H.T.) H. E. Richardson.—This Rose, introduced by Messrs. Hugh Dickson in 1913, is blooming well this season, and promises to be a good garden Rose. The growth, which is upright, is free, and the flowers, of beautiful form, are of a lovely velvety crimson. In slight shade during mid-day, its exquisite colour is enhanced by the perfect form of the blooms.—Scot.

Rose Tea Rambler.—After growing this for several years, I have decided to replace it by a hardier Rose. *Tea Rambler*, pretty though it is, is not suitable for gardens where the wood does not get thoroughly ripened in autumn, and where the winters are inclined to be severe. Various friends have had the same experience with this Rose.—S. W. Scot.

GARDEN PESTS AND FRIENDS.

THE ONION-FLY.

THIS year I have sown Onions several times for early and late crops, but in every case they have been attacked by the Onion-fly. I have used paraffin and sand without effect. The same treatment has warded off the Carrot-fly, and this year I have got the best crop of Carrots I have ever grown. I get one pint of paraffin and a bucket of dry sand. I mix the oil and the sand together and sprinkle it round the roots of the Carrots as soon as I have thinned them the first time, then in about fourteen days I go over them again and thin and sprinkle as before. I do the same with my Turnips and other young stuff. It is just possible in the case of Onions mentioned above that the mixture of sand and paraffin was applied too late. Kindly tell me what I had better do to get rid of the Onion-fly.—ONION-FLY.

[The Onion-fly lays its eggs at the base of the young plants during April and May, and the grubs, when they hatch out, begin feeding on the bulbs and burrow into the hearts of the plants, which soon begin to fail and finally collapse. In the case of a bad attack the plants can then be pulled with little or no effort from out of the drills, as the roots by this time are partially or wholly destroyed. When in this condition every affected plant should be pulled up and burnt. Remedial measures to take when there have been previous infestations are to sow rather deeper than usual, as shallow sowing renders the plants susceptible to attack by reason of the base of the plants being then either on the surface of the soil or but little below it. By sowing more deeply the vulnerable portion of the plant is then buried, and for this reason it is recommended, when an attack is apprehended, that soil be drawn up to the plants on either side of the drills so that the "fly" is baffled and unable to get at the base.]

Some growers water the soil with paraffin and water, others strew sand or sawdust saturated with paraffin between the rows, but the results are not altogether satisfactory. The best way when this pest has been troublesome is to grow the crop in another part of the garden, as far removed from the infested area as possible, to sow the seed as early as circumstances permit, and at a rather greater depth, so that not only shall the base of the plants be lower in the soil, but that the outer cuticle shall become hardened and less liable to be pierced by the insects when the egg-laying period arrives. It is also a good plan to dig in a soil disinfectant or strew sufficient lime and salt on the ground to whiten it previous to preparing the site. The same treatment should be meted out to the old bed, and then double dig it, by which means all insects, pupæ, etc., will be placed beyond

all chance of making their escape and doing further mischief.

It is a well-known fact that plants raised in autumn, as well as those raised in the early part of the year under glass, are seldom attacked, as the bases of the plants are too hard and buried too deeply for the insects to get at them, and this furnishes the clue as to how best to combat the pest. In some instances where losses have been serious, growers have abandoned outdoor sowing and raised the plants during January under glass instead. These, when large enough, are either pricked off into frames or boxes and finally planted out as soon as circumstances permit in April. By these means losses from this cause are reduced to a minimum.]

Lavender disease.—A destructive fungus disease has broken out among Lavender plantations. An account of it is given in the last number (5) of the *Kew Bulletin*, from which we take the following particulars:—Attention was first called to it

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

GENISTA SAGITTALIS.

This is an interesting and useful rock shrub associating well with rockwork and growing and flowering freely with ordinary treatment. It appears to prefer poor, rather dryish soils, and certainly a sunny position. Soils of medium texture might well be freely incorporated with gravel, old mortar, pulverised rock—anything, indeed, which will assist root warmth and drainage. Grouped near a sunny rock-ledge, with a slightly inclining bank behind and smaller rocks distributed over the surface, it is seen better thus than on a quite level spot, and better still if midway between the line of vision and the soil. This prostrate broom merits some such consideration. Six inches or so high, it has curiously-winged or two-edged branches, above which, in a leafless terminal spike, the yellow flowers rise. This South European species flowers in

the winter months, which was recommended by Mr. Reginald Malby in some notes on this plant in one of the gardening papers a year or two ago. Mr. Malby considered that the clumps with glass on flowered better. There is no question mine flowered better than some others I had (uncovered), but I am not sure that this was not due to the position and treatment rather than the glass covering, as it is my opinion that the flowering tufts are formed before the glass is put on. In my case, where the garden is situate within half-a-mile of some large works, the covering of glass helps to keep the plant cleaner and probably healthier during the winter months. Other plants I have in a shallower and more limey part of the moraine, while flowering fairly well, are not so fine as the above, and part of them was affected by the dry weather we had immediately after flowering, possibly owing to not having so deep or free a root-run.

All the plants mentioned above are well away from other plants, so that, in my case, there is no question of plant association being required for successful culture. I have lost plants that have been planted in ordinary soil, and it is very important that they should not be covered up by strong-growing neighbours. I was in a part of England where this *Gentian* grows wild, at the latter part of June last, but it was much too late to see it in flower. Of the few plants I noticed, some were pretty clear of other vegetation, being in one case in quite a natural moraine, where the plant was flourishing quite clear of other plants. In another case I noticed it among the stones deposited by a small stream-side; they were also in among the short Grass such as is usually found in high, hilly pastures.

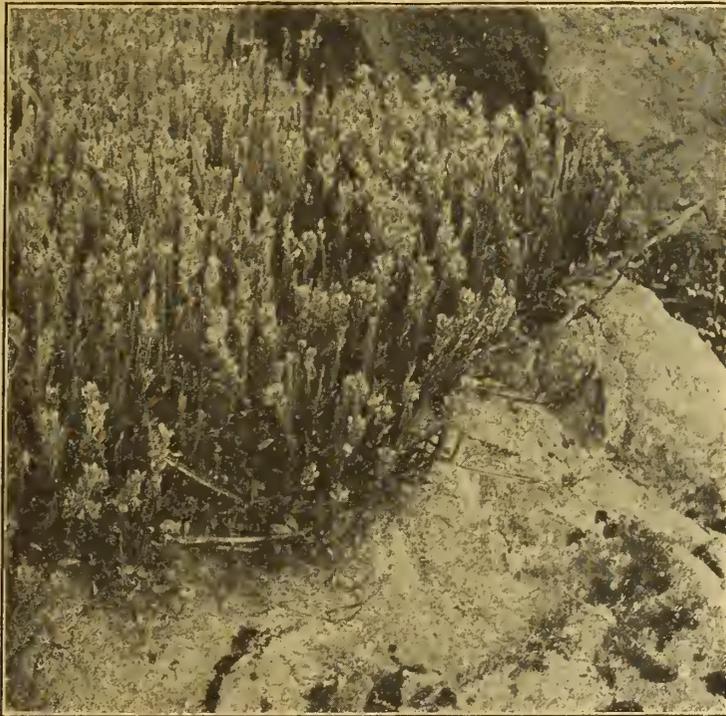
T. A. LOFTHOUSE.

Middlesborough.

NOTES AND REPLIES.

Saxifraga oppositifolia.—I have found very little difficulty with this interesting and welcome early-flowering Saxifrage, either on the moraine or in specially-prepared places in the rock garden. The important thing is to have the soil gritty (lime for preference), open, and well drained, and to see that the plants are not overgrown or shaded by other plants or shrubs, this preventing the plants ripening properly, and thus setting flowers for the following season. Of course, it is quite possible that they will not flower so freely after a sunless season such as it has been up in this part of the country this year. I do not think there is any question that the want of sufficient sun during the growing season has an effect on the flowering of many species during the following season. My plants, both on the rock garden and on the moraine, usually flower quite well where the open conditions are provided. After flowering, the plants are well mulched with a limy compost, and in dry weather occasionally watered. The only trouble in this part of the country is that at the time of flowering we usually have cold, frosty nights and the early morning sun bleaches the blooms. Rain, also, often following, tends somewhat to shorten the flowering season. Of course, one could protect them to some extent with glass, but this is somewhat difficult where there is any quantity, and, of course, takes away from the effect.—T. A. LOFTHOUSE, *Linthorpe, Middlesborough.*

Conandron ramordicoides.—This has proved a puzzle to many British growers. To see it in an alpine-house is to make one long to have it happy in the rock garden. Its big, glossy, light green, Begonia-like



Genista sagittalis in the rock garden at Friar Park.

at Kew last year when two large beds of Lavender purchased from a nurseryman were seen to be dying from some cause. Affected shoots presented a dirty brownish-grey colour, and the bark tended to split away in flakes. At first only individual shoots were affected, but finally the whole plant collapsed. It was found that the cause was a fungus known as *Phoma Lavendulae*, which appears to attack Lavender only. It spreads by means of spores, which are produced in immense numbers on infected plants, and, wintering in the bark, vegetate freely in spring. By the removal of all affected shoots in autumn the disease may be kept in check. *Phoma*, according to Masseur, is a large genus the species of which form crowds of black microscopic dots on stems and leaves. They are known to attack the Goosberry (Shoot spot), Cabbage (Stem rot), Carrot, Swede, Mangold, Wheat, and in Australia the Grape Vine. One of them (*P. solanicola*) attacks the haulm of the Potato, causing the leaves to wither and checking the development of the tubers.

May and June. Cuttings root quite well in July and August, or in early spring, selecting always non-flowering shoots of 2 inches long or thereabouts.

E. H. JENKINS.

GENTIANA VERNA.

[To the Editor of GARDENING ILLUSTRATED.]

SIR.—In reference to the notes in a recent issue relating to this plant, from my experience I do not think it depends on a close association with other plants for its establishing itself and flowering satisfactorily, plants I have in a moraine flowering freely. I have a small patch of the plant in a deep moraine which had the upper part to a good depth filled in mostly with whinstone chippings, in the first instance. The plants, which at present cover an area of about 9 inches by 4 inches, had over seventy blooms on last spring, and formed a beautiful clump. After flowering, I cut most of the dead blooms off, mulch with lime and a little sand, and water in dry weather. I have covered the above clump with a sheet of glass during

leaves are handsome, the purple and white yellow-eyed blossoms on short, stout, fleshy stems making the picture complete. Those who have seen the Conadron at home in Japan agree in thinking that it should be hardy with us, but it always seems to me that our winters are too wet, even for a plant which, in its native land, frequents deeply-shaded places.—S. ARNOTT.

Primula capitata.—This is valuable because it blooms in the autumn, and it is often in flower through September and into October. It is quite easy to grow in a cool, well-drained, but moist site, and I find it appreciates a little lime in the soil. My plants were blooming well in the early part of October, and they remain in bloom for some weeks. It seeds freely and is easily raised.—N. L.

Phlox amœna.—This delightful little Phlox is blooming freely now (the end of October); indeed, I find it quite as free flowering now as it is in the spring. It is of quite as easy cultivation as the subulata section, but does not grow nearly so rapidly nor make such a big spreading patch with me. It is a very dainty little species, and to my mind one of the loveliest of the dwarf Phloxes. I grow it in gritty, fairly rich soil in a sunny situation. It is easily increased from cuttings.—W. O.

Saxifraga geranioides.—This Mossy Saxifrage is not so often seen as most of this section, but is quite worth growing, and very distinct. The rosettes are much larger than those of most of its near relatives, and a good plant makes a fine contrast to the more ordinary forms. The white flowers are of good size and carried on branching spikes.—N. L.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM NOVEMBER 8TH.—*Convolvulus mauritanicus*, *Dwarf Campanulus*, *Parochetus communis*, *Mertensia echioides*, *Potentillas*, *Linarias*, *Armeria Lauchiana rosea*, *Eriogonon mucronatum*, *Hardy Cyclamens*, *Sternbergia lutea*, *Crocus speciosus*, *Tufted Pansies (in variety)*, *Sedum Sieboldi*, *Meconopsis cambrica*, *Valerian*, *Chrysogonum virginianum*, *Verbena venosa*, *Gazania splendens*, *Pentstemons*, *Antirrhinums*, *Nepeta Mussini*, *Anemone japonica*, *Lobelia cardinalis*, *Salvia Greggii*, *Corydalis thalictrifolia*, *C. lutea*, *Helianthus*, *Michaelmas Daisies (in variety)*, *Phyllis capensis*, *Hydrangea paniculata grandiflora*, *Hypericums*, *Climbing Roses*, *Clematis (in variety)*, *Escallonia montevidensis*, *Ceanothus (in variety)*, *Solanum jasminoides*, *Hardy Fuchsias (in variety)*, *Andromeda polifolia*, *Jasminum nudiflorum*, *Laurustinus*, *Lacatera Olbia*, *Veronicas (in variety)*, *Genista hirsuta*, *G. tinctoria*, *Myrtle*, *Ericas*, *Menziesias*, *Pampas Grasses*.

THE WEEK'S WORK.—*Chrysanthemums* have been valuable in the garden this autumn. As the flowers are now over the plants have been cut down and those required for stock lifted and placed in a cold-frame, covering them with leaf-soil to a depth of 3 inches. All Gladioli have been lifted, labelled, tied in bundles, and hung up to dry preparatory to storing them for the winter. *Lobelia cardinalis* is still flowering. The plants will not be lifted until cut down by frost. This *Lobelia* is valuable for colour-effect, while for cutting it is excellent, the spikes lasting well in water. It thrives in good, strong loamy soil enriched with plenty of stable-manure and an abundance of moisture at the roots. The plants often give considerable trouble when lifted and stored for the winter by what is known as damping, the whole plant literally rotting away. This happens when the plants are lifted from the border, stored in houses, and kept without water. It is really dry rot. This difficulty will not occur if the plants, as lifted from the border, are planted in boxes, using good soil with plenty of sand added. Give a good watering to settle the soil among the roots. Place the boxes in a cold-frame, removing the lights whenever the weather is open. Water as often as required. The roots will be active all through the winter without making any top growth. Early in March they may be divided into single crowns,

each having good roots. Plant them again in boxes, allowing them plenty of room, or, better still, pot them singly into 3-inch pots, subsequently shifting into 5-inch. Harden off and plant out in May. *Amaryllis Belladonna*, planted under a warm wall, has flowered well this season. All flower-spikes have now been removed and the bulbs top-dressed with good loam, a little lime-rubble, and well-decayed manure. The present is the most suitable time for planting *Roses*, provided the ground has been well prepared as advised in former notes. For general cultivation in beds the Hybrid Teas will be found the best. Though there are numerous methods of forming *Rose gardens*, the system of planting a bed with one variety has much to recommend it. The plumes of the *Pampas Grass* have been very effective for several weeks past. If for any reason it is considered necessary to lift and divide any large clumps, the present is the most suitable time to undertake the work. Division of old clumps is sometimes advisable, as when the crowns become overcrowded the plumes cannot develop properly, and many are smothered. If division be carefully done, no harm will accrue, and the planted pieces will flower the following season.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Chervil and Tarragon.—Handlights should be placed over both to preserve the leaves and tops for present use and prevent their being destroyed by frost. Some roots of the latter should be lifted, potted, and placed in gentle warmth to maintain the supply in the depth of winter.

Mint.—A good supply of roots should be hoaxed and treated similarly to the foregoing. A portion of a bed cut over a short time since is now pushing up a great quantity of young growths. Handlights or a frame would afford ample protection against ordinary frost.

General work.—Recent frosts having destroyed *Scarlet Runners* and late *Peas*, both will now be cleared away and the sticks preserved for future use, if not for the same purpose. Old hotbeds should be turned and thrown into a heap for a week or so, prior to wheeling the material to where it is required some frosty morning. Turning is generally the means of the mass becoming heated again to a certain extent, which hastens the decomposition of the outer portions of the beds, which are apt to get dry and decay but little. Heaps of farmyard, and particularly stable, manure always pay for being turned in advance of the time they are required for dressing the land.

Forcing shrubs.—Where a home supply of these is grown they should be lifted and potted forthwith, standing them afterwards outdoors on a bed of ashes and wide enough apart for some loose litter to be worked in between and over the tops of the pots to prevent their being split by frost. Potted and protected thus in good time, and with their heads exposed to the elements, they respond the more readily when introduced to heat. Even when a supply has to be bought in, the plants should be treated in the same way.

Bush fruits.—This is a good time to prepare ground for the planting of new breaks of *Red*, *White*, and *Black Currants*, as well as *Gooseberries*, with a view to replacing existing plantations which have become worn out. The latter should be allowed to remain for the present or until the newly planted bushes come into bearing. For the sake of conveniently netting the breaks in winter and again when the fruit ripens, or, what is still better, enclosing them with wire netting stretched on a properly constructed framework, the breaks should be arranged and planted accordingly. A portion of the netting in the latter case should be capable of being removed at the sides after the crops are cleared, as it is not necessary nor expedient to exclude birds the whole year round. If new breaks of *Raspberries* are required, the top portion should be permanently covered with wire netting. The sides can be enclosed when requisite either with the same or with tanned

string netting. These should be planted in consecutive rows 5 feet to 6 feet apart, allowing a distance of 18 inches between the stools, and be trained to wire trellis 5 feet in height. The autumn-fruiting varieties are best grown in a separate break, or a good way is to plant them on either side of one of the less frequented footpaths and train to a wire trellis. The soil should be liberally manured and deeply dug for *Raspberries*.

Fruit-tree planting.—Preparation for the planting of all kinds of fruit-trees is now being pushed forward. In the first place, all worn-out and useless examples will be grubbed, whether in the open or against walls, and care taken to see that all the old roots are searched for and removed from the soil. Holes for the reception of the new trees will be opened out wherever possible some distance from where the old ones stood, and some fresh compost placed beside them for covering the roots with and to give the trees a good start. The stations for *Apricots* will receive special treatment, a quantity of calcareous matter being added to the staple in addition to some good fibrous loam.

Manuring.—The first frosty morning manure will be wheeled out and spread between the rows of *Currants* and *Gooseberries*, and afterwards pointed in—i.e., after pruning is completed. The *Raspberry* quarter will also receive a liberal dressing.

Bedding plants.—*Pelargoniums* in boxes in heated pits need looking to now and again with a view to removing dead leaves and any cuttings that may be damping off. In fine weather it is always advisable to afford a reasonable amount of ventilation both at the back and front of the pits either by tilting the sashes on wooden hocks or sliding every alternate one down and pulling the others up a few inches. *Calceolaria* and *Pentstemon* cuttings also need the same amount of attention.

Gladioli.—These should now be lifted with a little soil attached to the roots and placed in a cool shed to dry off, when they can be cleaned and put into bags or boxes during inclement weather.

Plant-houses.—The time has now arrived when there should be a sensible reduction made in the temperature of the stove and intermediate-house, 60 degs. to 65 degs. by night and 70 degs. by day being ample in the first instance till after the turn of the year, 60 degs. and 65 degs. being sufficient in the last-named case. With less heat, syringing and damping must necessarily be done with a lighter hand and less frequently. Watering in all cases should be done during the early morning now, or as soon as it is sufficiently light to allow of its being done properly. Shadings and lath blinds should be taken down, dried, and stored in a dry place. The roof glass should then be washed with a view to admitting all light possible during the next three months. The cleaning of the interior can then be carried out the first convenient opportunity.

Tuberous Begonias now past their best require to be placed in a *Peach-house* or *viney* until the tops die down, when any dry frost-proof place will afterwards afford suitable quarters. The same treatment is also suitable for pot-grown *Liliums* in variety. Pot-grown *Fuchsias* may also be rested with them where no other suitable place can be found.

A. W.

MIDLAND COUNTIES.

Fruit-houses.—The pruning, training, and cleansing of *Peach-trees* are being pushed forward as quickly as possible, as there is not so much danger of damaging the buds now as later. Trees which have been unsatisfactory should be attended to. In nearly all cases of failure the trouble will be found at the roots. If the renovation is attended to before the turn of the year the trees will have time to recover from the check before they start into growth. Old trees with plenty of young shoots may have some of the older branches removed to make room for young fruiting wood. A few old branches removed every year will keep the trees furnished with young fruiting wood. After pruning is finished tie the shoots

into bundles and wash the house thoroughly, and finally wash the shoots with Gishurst compound. In training the shoots it may be found that there are still too many of them, and a few more should be cut out, as it is a great mistake to crowd the young wood. When the training is finished the borders must be attended to as described in previous notes. It is important to allow the trees a long period of rest before starting them again into growth, therefore the houses should be thrown wide open during the time when growth is dormant. See that the trees, especially those growing in inside borders, do not suffer from want of moisture.

Hardy fruit.—The pruning and training of all wall trees are being pushed on as fast as circumstances will allow. The Apricot, Plum, and Pear require similar treatment to that recommended for the Cherry. The branches of Apricots and Plums—especially Apricots—sometimes die back without any apparent reason. In such cases the dead branches should be removed before the general pruning is commenced, as it will be necessary to rearrange the whole of the tree in order to fill up the gaps. Both kinds produce their fruit on spurs, also on matured shoots of the previous year's growth. As the best fruits are produced on the previous year's wood, it is desirable to retain as much of this as possible, but never to the extent of overcrowding the branches. Shoots of medium strength may be left intact with the exception of those of the Pear, which usually form a blossom-bud at the point, and need, therefore, to be taken out if the extension of the tree is desired. Strong leading shoots should be pruned to half their length. All spur growths of the current season should be cut back to two or three buds. Old-established trees with unsightly spurs should have a few of the spurs removed annually. Fig-trees have been unfastened from the wall and the branches tied in bundles, so that when very cold weather sets in they may be easily covered with straw and mats. This protection will often save the first crop of fruit the following season.

Primulas require rather drier surroundings during the flowering season than were maintained during the period of growth. A little clear, weak soot-water may be given occasionally. Great care must be exercised in watering. The plants are best kept slightly on the dry side during the dull season, but care must be taken to prevent excessive dryness. If the flower-spikes are likely to fall over they should be tied to neat stakes. In the case of small plants, a few pieces of fibrous loam pressed firmly around the base of the plants will make them secure. Water should be sparingly given to plants in cold-frames, and the mornings of fine days are the best time for its application. Mats and other coverings should be at hand ready to place on unheated frames when frost threatens. It is also well to place similar coverings on very cold nights on the glass of heated frames. This is a better plan than increasing the amount of fire heat.

Celery.—The latest plants will now be earthed up finally, doing the work when the leaves are dry. Make the soil firm as the work proceeds, and take care to leave the top foliage clear of the soil.

Broccoli has made abundant growth, but it is sappy and immature. The plants will, in consequence, be liable to injury by frost directly hard weather sets in, unless laying is resorted to. There is no better method for protecting them, and if properly done will, at least, save most of the plants, notwithstanding severe frost. The work is done by taking out a trench at one end and heeling the plants over, placing their heads towards the north, arranging the soil evenly and firmly over the whole of the stem. The slight check caused to growth will be beneficial rather than otherwise. This work should be completed, if possible, before the end of the present month. Should unusually severe weather occur it may be necessary to lay over the plants some light material, such as Bracken or straw. A very light covering will suffice, and this should be removed directly the weather becomes warmer.

Parsnips are of much better flavour if lifted direct from the open ground when needed

for consumption. Nevertheless, it is advisable, in case of severe frost, to lift a part of the roots and store them in moderately moist sand. If this is not done it will be necessary to cover a portion of the bed with long litter or leaves to prevent the frost penetrating into the ground.

Seakale grown to provide crowns for forcing will now be all lifted, and the crowns stored in sandy soil in a convenient place in the open, where they can be drawn upon as required. The rootlets will be trimmed off, and in bad weather will be made into sets or thongs for planting next spring. I force Seakale in a dark corner of the Mushroom-house, introducing a small batch weekly, thus keeping up a constant supply.

Spinach.—All decaying foliage should be removed from autumn-sown Spinach and the soil between the rows broken up with a hoe. Overgrown plants should be picked over, whether the leaves are required or not, as this will encourage the development of clean, stocky foliage, which will withstand the winter better than fully-grown leaves.

Lettuces in cold frames need to be examined frequently, and all decaying foliage removed. The soil between the plants is stirred occasionally to prevent it becoming sour. The lights are removed on dry days, replacing them at night. Damping is the worst trouble with this crop in winter, and should be avoided as far as possible by tilting up the lights in rainy weather. If any space is available in cold pits or frames, this may be filled with late planted Lettuces from the open borders before they are injured by frost or heavy rains. If lifted carefully with a good ball of soil they will prove a valuable crop before the winter is over. F. W. GALLOP.

SCOTLAND.

Digging and trenching.—There is a scarcity of spadesmen, both skilled and otherwise, so that on all favourable opportunities this important work should be pushed on as rapidly as possible. It is of more importance that the digging and trenching be forwarded than to spend time at this season in tidying up—work which, just now, is, after all, to a certain extent labour in vain. It will be found advantageous to prepare two or three breaks or borders before digging begins. Alley-ways ought to be cleanly spaded, manure wheeled and spread, and the openings taken out, so that there may be no interruption when the digging begins. Trenching, it may be feared, will not be general during the coming season, but where it can be done, even to a limited extent, the trenches can be utilised for burying much rubbish which would otherwise require to be wheeled out. The weather having been favourable for this work, the Onion quarter, and that upon which Brassicas will be grown next season, were trenched in the course of the week. The only other break which will be treated in this way is that which will be devoted to Peas. Manure is being freely used, more especially in those portions which are not being trenched.

Hardy flower borders.—Not for several years has the display endured so long. Generally speaking, in this locality the earliest frost arrives about the middle of October, and is sufficiently severe to destroy the hardy flowers. At this late date there are still many things which are in quite passable condition. Helianthemums, Rudbeckias, Morina longifolia, Gypsophilas, Asters, Pyrethrum uliginosum, Salvias, and many others are yet blooming freely, in addition to plants more particularly associated with this time of the year, such as Eupatorium ageratoides and Schizostylis coccinea. It may be worth mentioning that the Dropmore variety of Anchusa is yet flowering in no half-hearted way. Fuchsias in the hardy flower borders are yet in fine form, and will continue to be gay until cut by frost. Roses, if not quite so good at this date as in more favourable years, are yet fairly numerous, and Clematises continue in bloom.

Shrubberies.—In the course of the week a look round was given among shrubberies—chiefly with a view to observing the likelihood

of a crop upon the berry-bearing varieties. The inspection revealed that, with one exception, the crop will be most disappointing. Hollies are a failure; where there are a few berries it may be safely assumed that the birds will not permit them to mature. The Snowberry, usually loaded with its waxy-white fruits, is but sparsely clad. This, however, is attributable in a great degree to severe wind-storms, which have blown the ripening berries from the branches, besides baring them, in many instances, of foliage. Pernettyas are negligible, and the inconspicuous berries of *Leycesteria formosa* are wanting. The exception alluded to is *Cotoneaster frigidus*, which is laden with its brightly-hued fruit, every tree being, alike, well covered. This variety succeeds here in a very exceptional way, and although a little ungainly in habit, it is certainly well worth its place in any shrubbery. *C. Simmonsi*, on the other hand, is not, during the present year, conspicuous. Among other shrubs notice may be directed to the fine effects produced by the ripening leaves of Azaleas. These range from a pale golden-yellow through various colours to a ruddy bronze. *Choisya ternata* increases in size year by year, its healthy growths giving indications of a fine display of bloom in its season. Pampas Grasses now lend their aid to brighten up the closing season. These fine and massive plants are well suited by the deep, rich, rather peaty soil in which they are grown, and increase in size annually.

Flower beds.—Like hardy plants, the more tender subjects of the flower garden yet go on unchecked. As there will be no spring bedding done, the continuation of the display is not unwelcome. Begonias have done better in their closing stages than was the case during mid-summer. These will be permitted to remain until the stems die, or are frosted down, when the tubers will be lifted and stored in Cocoa-fibre. *Salvia Pride of Zurich* is yet bright, and although *Antirrhinums* are pretty well over, yet there are stray tips of bloom. *Pentstemons*—of the Gem family—have made fine plants. It is intended, by way of experiment, to leave a couple of long beds over winter, observation having shown that, in the garden borders, two-year-old plants have always proved superior to those from the current year's plants. Again, the value of a good strain of *Ageratum*, as compared with *Heliotrope*, for summer bedding has been demonstrated. It is yet quite good, alike in leaf and flower, while *Heliotrope* is leafless and shabby. Some of these flower beds were rather interfered with by some large trees in their neighbourhood, but, during the week, those were felled, and it is hoped that their removal will prove of benefit in the course of the ensuing year.

Aloysia citriodora.—During the week some stock plants of the Lemon Verbena were potted up. The plant is practically hardy here, but it is just as well to have some reserve pieces in case of an exceptionally severe winter. Pots 8 inches in diameter were used, and the plants are, meantime, stored in a cold-frame.

Vegetable garden.—As a consequence of the continued mild weather, growth among green crops is yet maintained. This is not an unimproved benefit, because the same conditions which favour the growth of vegetables encourage the growth of weeds. When time permits, the hoe will be run through the quarters. The sun is now not sufficiently powerful to kill the hoed-out weeds, but, if uprooted, they will fall an easier prey to frost. Cauliflowers are now turning in moderately well. From inquiries made I find that some of my neighbours have, like myself, suffered from a partial failure of this crop; as a matter of fact, in one garden only two heads having been cut so far. Where Cauliflowers are, fortunately, plentiful, it ought to be borne in mind that frost is, probably, not far away, and preparations should be made for protecting them. Moderate frosts can be dealt with by breaking the foliage over the curds, or the plants may be lifted and laid in closely in a deep trench, where they can be protected by mats. Continue earthing up late Celery. Up till now earthing-up has been delayed by unfavourable weather, but now that conditions are more settled it is hoped to overtake this work shortly. W. MCGUFFOG.

Balmae Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 7TH, 1916.

IF, on the first view, the fortnightly meeting held on this date was apparently small, there was much of interest in the several departments, and more than one hardy plant novelty of importance staged. Chrysanthemums were particularly well shown. Nerines, too, were showy and in great variety, the large collection of frame-grown examples from Keston demonstrating greater hardiness—to say nothing of a much-enhanced utility—than many who would like to grow these plants can possibly be aware of. The display of *Gentianella* from Exeter was very fine and showed there is no dearth of that good plant's flowers in that district. Carnations, Begonias, Ferns, cut and pot-grown shrubs from more than one source, and a considerable showing of Orchids were also sources of interest.

HARDY PLANTS.

November is not the month for much in this department, yet the things that are, come as reminders of the wealth and procession of hardy flowers throughout the year. Apparently disdaining the frost, which put an end to all the Michaelmas Daisies, *Aster grandiflorus* was in good condition from Mr. Reuthe, though the species often suffers with the rest. From the same exhibitor came *Crocus ochroleucus*, *C. marathousius* (the finest white), and the mauve-coloured *C. Clusii*. The terminal spikes of *Buddleia auriculata*, with their white and pleasingly fragrant flowers, are distinct from many of its class, though, as shown, the plant did not suggest vigorous growth. *Fagus Cunninghamii*, *Pilostegia virburnoides*, and *Escalonia organensis* (rose-coloured) were also noted. The display of Nerines was very fine, and, as the result of frame culture, showed greater possibilities with these plants. A central display of *N. coruseans* was particularly good. Mr. G. Kerswill again showed the common *Gentianella* very finely, the brilliant colour of the flowers, as also their not inconsiderable numbers, a great attraction. Christmas Roses already in flower, *Viola* *La Clarkson* (a cornuta form of almost royal purple), and *Polyanthuses* were shown by Mr. G. W. Miller. From Messrs. Blackmore and Langdon came a small exhibit of the larger single-flowered Violets, *La France*, *Princess of Wales*, and *Ascania*, all highly desirable and distinct. To these has now to be added the new Governor Herrick, of reddish-purple tone with pronounced white eye. Alone it is handsome and good, but the colour does not harmonise with that of any of the others named.

HARDY SHRUBS.

Quite among the best novelties in this department were the new *Berberis Sargentiana* and *B. rubrostilla*, both of which merited the first-class certificates awarded them. That first named was shown by Hon. Vicary Gibbs, Aldenham House, Elstree (gardener, Mr. E. Beckett). An evergreen kind with leafage not unlike that of *B. Wallichiana*, it is effective now by reason of the green, copper, and scarlet of its leaves, and a bush of it in autumn is striking. In fine contrast are the outstanding ivory-white spines of an inch and a quarter long. The other sort named *B. rubrostilla* came from the Royal Horticultural Gardens, Wisley, and is, presumably, a hybrid, though the parentage was not stated. Deciduous and erect-habited, the elegantly-formed bush is freely branched and is now very ornamental by reason of the numerous ovoid, brilliant coral-red fruits, which, on slender pedicels, depend

from the gracefully arching branches. No hardy plant attracted more attention than these. Of particularly good colour, in the collection shown by Messrs. Waterer, Sons, and Crisp, were *Vaccinium pennsylvanicum*, *Quercus coccinea* (Waterer's variety), and *Acer palmatum septemlobum* (Bagshot variety). These afforded varying shades of scarlet, the last-named very brilliant. *Forsythia viridissima* (bronze, orange, and crimson foliage) and some *Azalea pontica* also gave good leaf-colour. In a like group from Messrs. J. Cheal and Sons *Quercus coccinea splendens* and *Berberis Thunbergii* were the best things, though some of the Azaleas and *Liquidambar styraciflua* also gave good colour-effect. Messrs. Piper showed a collection of shrubs in pots in which *Berberis nepalensis*, *B. japonica* Beali, *B. Wilsonae*, *B. brevipaniculata*, and other species of the genus were prominent. Quite one of the most attractive subjects staged in this section was the group of *Hakea encalyptoides* from Messrs. R. F. Felton and Sons. The leaves, shaped like those of the Mistletoe, though thrice as large, are thick and of a glaucous-blue colour, the globose flower clusters of cream and red appearing in the leaf-axils. Some examples bore buds and fully-expanded flowers. Others showed the mature fruits in their nut-like shells. The plant is of considerable ornament and is said to last well when cut.

GREENHOUSE PLANTS.

Begonia Mrs. J. A. Peterson, allied to the *B. Gloire de Lorraine* set, was among the best new plants in this department. The leaves are dark bronze, above which the crowds of rich carmine flowers are very striking. *Cibran's Pink* we consider one of the best winter-flowering *Begonias* ever raised, the colour good, the blossoms shapely and refined. *Bowden Beauty*, *Emita*, *Optima*, and *Scarlet Beauty* were others of note. These were from Messrs. Stuart Low and Co. *Begonias* of the *sempervirens* set were staged by Messrs. Blackmore and Langdon, *virginialis* and *Brilliant* being good among many. Some good Nerines came from Messrs. Barr and Sons, *Pink Beauty*, *Shelley*, *Vivid*, and Mrs. H. J. Elwes (deep coral-pink) being notable among many sorts. *Cerise* (of almost amaranth tone) was also distinct. *Primula obovata*, *Begonias* of the *Gloire de Lorraine* set, and a collection of choice Ferns were staged by Messrs. H. B. May and Sons, Edmonton. Both hardy and exotic Ferns were on view, and, apart from the choice forms of *Polypodium vulgare*, which were freely staged, we were struck with the beauty of *Polystichum aculeatum pulcherimum gracillimum* Drueryi, a rare form of high ornament, if heavily burdened with names. Nothing new was remarked among the many excellent Carnations staged by Messrs. Allwood Brothers, though the highly-fragrant *Bishton Wonder* has not before been seen in such good condition. *Benora* (white ground fancy) was finer than we remember it before, the large flowers showing well the clear white ground and scarlet markings.

CHRYSANTHEMUMS.

The finest group of these was from Messrs. W. Wells, Limited. Arranged artistically on the floor, representative of many sections of the flower, and backed by handsome Kentias, it looked its best. Three dozen blooms of the white-flowered *Louisa Pockett* (a big exhibition sort) occupied the centre, the foreground being set with a capital assortment of singles, of which *Gem* (white), *Crimson Velvet*, *Max* (reddish-chestnut), and *Supreme* (maroon-crimson) were among the best.

Yellow Jewel and *Cranfordia* were also good. Adjoining was a capital table group from Messrs. H. J. Jones, Limited, who arranged imposing stands of the best exhibition sorts throughout the group, with vases of decorative sorts in front. *Bob Pulling* (the best golden), Mrs. R. C. Pulling (rich yellow), *Frank Ladds* (golden yellow), and Mrs. Tofield (red) were among leading sorts, while singles and some of the many sports from *Caprice de Printemps*, *White Cap*, *Yellow Cap*, *Red Cap*, and others, were in the front. Messrs. Godfrey and Sons had an exhibit wholly of single-flowered sorts, many in spray form. W. J. Godfrey (the best pink), *Western Queen* (Anemone-flowered, pure white), *Reginald Godfrey* (apricot-bronze), and Mrs. Smollet Campbell (cherry-crimson) were some of the best in an imposing lot. The whole of these were raised from seeds sown in early spring, and as such represented a fine strain. Misses Price and Fyfe also showed a goodly lot of single-flowered varieties, including several of recent introduction.

ORCHIDS.

Of these, Messrs. Armstrong and Brown had a centre of choice things, none more chaste, however, than a finely-fashioned seedling of *Laelia pumila alba*. With it were *Cattleya O'Brieniana alba*, *C. Saturn alba*, and *C. Clæsiana alba*, richly-coloured *Odontodas* at right and left making a fine contrast. *Laelio-Cattleya luminosa* was very handsome. Several seedling *Odontoglossums* were on view, one of the best receiving a preliminary commendation card. Messrs. J. Cypher and Sons showed strongly of *Cypripediums*, *Queen Alexandra* (crimson and white), *Leeamum magnificum*, *Rosette*, *Sir Redvers Buller*, and *Gaston Bulteel* were some of a large collection. A superb *Cypripedium*, Mrs. Hilary Jenkinson, from Mr. R. Windsor Rickards, Usk Priory, Monmouthshire, gained a First-class Certificate, an Award of Merit being given to C. A. J. H. Smith, a pretty hybrid of the *C. niveum* set from Mrs. Norman Cookson, Wylam-on-Tyne. Fifty well-flowered examples of *Cattleya Fabia alba*, staged by Messrs. Sander and Sons, demonstrated the sterling worth of this autumn-flowering sort. *Cattleya Katie* and *C. Hardyana*, and the highly-fragrant *Trichosma suavis* were noted. *Sir Jeremiah Colman* sent from Gatton Park, Reigate, *Laelio-Cattleya Epicasta* variety *gloriosa*, *Cattleya Gatton Ruby*, and others. Two good forms of *Brasso-Cattleya Queen Alexandra* were in a group from Messrs. Charlesworth and Co. Of *Laelio-Cattleyas*, *Salonica* and *Numidia* were notable. A giant example with a freely-branched spike 5 feet or so high of *Odontoglossum Lambeauianum*, from Mr. G. W. Bird, Manor House, West Wickham, received a cultural commendation.

FRUIT AND VEGETABLES.

For an exhibit of fruits of *Diospyros Kaki* Voshonani, sent by His Grace the Duke of Devonshire, a silver Banksian medal was awarded, a like award being given to the Hon. Vicary Gibbs, Aldenham House, Elstree, for *Leeks* and *Celery*. The latter was in six varieties and of excellent quality, *Aldenham Pink*, *Aldenham White*, *Superb Pink*, and *Invincible White* were some of the best. The *Leeks* were *Prizetaker*, *Royal Favourite*, and *Improved Musselburgh*. All had finely-proportioned stems.

A complete list of the certificated plants and medals for groups will be found in our advertisement pages.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Salvia patens (A. T.).—The plants should be lifted from the open ground, and, after the soil has been well shaken off the roots, be placed in fine, dry soil in a greenhouse or in a cold-frame, and be so far protected that frost shall not reach them. In this way the roots keep better than when dried and put away in sand or on a shelf. Plants in pots should have the stems cut down and be stood under a greenhouse stage till March. These, if brought into the light then, will, if watered, start into growth, and young shoots thus produced make fine cuttings, which should be rooted in heat and hardened off previous to being planted in the open air. The roots when hardened off may also be planted out.

Streptosolen Jamesoni (Mrs. Lawrence).—This is a free-growing plant of a shrubby character, which should be given much the same treatment as a Fuchsia, except that it must not be dried off to the same extent during the winter. It may be grown as a bush in the greenhouse, or trained up a pillar, while old specimens, if planted out during the summer, will flower profusely. The flowers when first expanded are yellow, but gradually deepen in tint till they become of a red-dish-orange hue. Though best known under the above name, it is by botanists called *Browallia Jamesoni*. When it has done blooming it should be cut hard back and encouraged to make an early growth, so that the wood may become well ripened during the summer, as the flowering to a great extent depends on the proper maturation of the wood. It requires a very light position in the greenhouse. The best soil for it is a mixture of loam, leaf-soil, and sand.

TREES AND SHRUBS.

Pruning Wistaria (Enquirer).—The Wistaria, when doing well, grows very strongly. Pruning should be done as follows: Soon after midsummer all the young shoots on the main stems should be pinched back to within a foot of the main stem. These shoots will again break into growth from the buds just behind where the shoot was stopped, and after growing a few inches they should again be pinched. This will cause the formation of flower-buds at the base of the shoot first shortened. The following spring these shoots may be cut back to within five or six eyes of the main stem, and the young shoots treated as above detailed. If there is any bare space on the wall which you would like filled, you can nail up one of the young growths, at the same time cutting it about half down in order to cause it to form flower-buds at the base. If your Wistaria is well furnished with flowering-spurs, which are formed at the base of last season's growth, the young shoots may be cut back in December to within two eyes of the flower-spurs. In this way they will develop more quickly when the sap begins to rise than if the long shoots had been allowed to remain. As regards the two other plants you mention, *Aristolochia* and *Virginian Creeper*, very little pruning is necessary, merely cutting out any of the shoots where they are very weak or too thick. The best place for them is a pergola or planted against a tree over which they can ramble at will. Name and address should always be given when sending queries. See our "Rules to Correspondents."

FRUIT.

Pruning Black Currants (R.).—As Black Currants bear on the wood made the preceding year, the proper course in pruning is to cut out some of the older growths, shortening back the young growths a little when they are unduly long or project much beyond the other shoots. It is the suckers from the base of the bush that one wants to encourage, and if they are too crowded it is an easy matter to thin them out.

Glou Morceau Pear cracked (Enquirer).—We should not destroy the tree. The cracking is due to a fungus known as *Fusicladium pirinum*, the remedy for which is to spray the tree with a wash containing sulphate of iron in addition to caustic soda, such as that designated Woburn wash. Do this as soon as the tree has been pruned and the ground cleared

of rubbish beneath it. Then before the buds burst, when the tree has flowered and the fruit has set, and again in from two to three weeks afterwards spray with Woburn-Bordeaux mixture. Use both insecticides according to the directions sent with them.

VEGETABLES.

Tomatoes failing (A. M. M.).—Did you renew the soil when you planted out the Tomatoes? Failure invariably follows if the plants are grown for two years in succession in the same soil.

MISCELLANEOUS.

Sawdust as manure (R. A. T.).—We should certainly hesitate to use the shavings and sawdust as manure, as they only promote the production of fungi. Use some of the sawdust on a separate piece of ground, and note the result.

Wood shavings (Sweet Briar).—These are the very worst things you can use when mixed with manure, as they only breed fungus, which destroys the roots of all plants with which it comes into contact. The only thing you can do is to clear out all the wood shavings and substitute some good manure. Lime would be an advantage also. For the wireworm, the best thing you can do is to dig in Vaporite or other of the soil fumigants now to be had. To destroy the mildew, dissolve an ounce of sulphide of potassium in two pints of hot water, then add enough rain-water to make 2½ gallons. Use a syringe with a very fine nozzle and see that the undersides of the leaves are thoroughly wetted. You can always have the numbers of the paper regularly from this office if you become a subscriber. We do not reply to queries by post, and cannot undertake to send a single copy containing an answer to a query as the reply is given in the hope of benefiting other readers who may be in a like difficulty.

SHORT REPLIES.

M. Thomas.—Your Apples were gathered too soon, hence the shrivelling. Fearu's Pippin is fairly late, and ought to have been left on the tree as long as consistent with safety.—**Miss Macdonald.**—The latest single-flowered Red Hawthorn is *Cratægus oxyacanthoides coccinea*, and the latest double-flowered variety is *C. Paul's Scarlet*.—**Middleham.**—See reply, re "Plums cracking," to "Amelia," in our issue of November 11th, page 574.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**Miss Macdonald.**—*Berberis vulgaris* type.—**K. A. T.**—*Cratægus Azarolus*.—**Eleanor Pain.**—The plant is *Zephyranthes candida*, or "Swamp Lily," and belongs to the *Amaryllis* tribe, and not to the *Crocus*, as suggested.—**Donovan.**—*Bulbinella Hookeri* (syns. *Anthericum Hookeri* and *Chrysobactron Hookeri*). See "English Flower Garden."—**A. B. C.**—Quite impossible to name from the wretched scraps you send us.

Names of fruits.—**Anxious.**—Apples: 1, Rymer; 2, *Mère de Ménage*; 3, King of the Pippins; 4, Golden Spire.—**M. S. S.**—Pears: 1, Marie Louise; 2, Glou Morceau; 3, Winter Nelis.—**S.**—Apples: 1, King of the Pippins; 2, Cox's Orange; 3, Bramley's; 4, French Crab.—**L. S. H.**—Apples: 1, Alfriston; 2, Golden Noble; 3, Sturmer; 4, Northern Greening.—**G. S. Y.**—Apples: 1, Annie Elizabeth; 2, Wellington; 3, Lane's Prince Albert; 4, Red or Winter Hawthornden.—**T. D. L.**—Pears: 1, Beurré Bosc; 2, Catillac; 3, Beurré Claireau; 4, Souvenir de Congrès.—**G. R.**—Apples: 1, Fearu's Pippin; 2, Bess Pool; 3, Striped Beaufin; 4, Norfolk Beaufin.

Parcels sent to our office insufficiently stamped will, in future, be refused.

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LIST OF AWARDS AT THE R.H.S. MEETING ON NOV. 7, 1916.

ORCHID COMMITTEE.

First-class Certificate.

Cypripedium Mrs. Hilary Jenkinson, from Mr. R. W. Richards, Usk Priory, Monmouth.

Award of Merit.

Cypripedium J. A. Smith, from Mrs. Norman Cookson, Oakwood, Wylau-on-Tyne (Gr., Mr. H. J. Chapman).

Medals.

SILVER FLORA.—Messrs. Sander and Son, St. Albans; Messrs. Jas. Cypher and Son, Cheltenham; Messrs. Charlesworth and Co. Hayward Heath; Messrs. Armstrong and Brown, Tunbridge Wells.

FLORAL COMMITTEE.

First-class Certificates.

Berberis rustostilla, from R.H.S. Gardens, Wisley
Berberis Sargentiana, from Hon. Vicary Gibbs, Aldenham House, Elstree (Gr., Mr. E. Beckett).

Medals.

SILVER GILT FLORA.—Messrs. H. J. Jones, Ltd., Lewisham, for *Chrysanthemum*; Messrs. Wells and Co., Ltd., Merstham, for *Chrysanthemum*.

SILVER FLORA.—Messrs. Barr and Sons, Taplow, for *Nerines*; Messrs. Stuart Low and Co., Enfield, for *Begonias* and *Carnations*.

SILVER BANKSIAN.—Messrs. Allwood Bros., Hayward Heath, for *Carnations*; Messrs. Cheal and Sons, Crawley, for autumn foliage; Messrs. Godfrey and Son, Exmouth, for *Chrysanthemum*; Messrs. H. B. May and Sons, Edlington, for *Ferns*, etc.; Messrs. Eyer and Son, Bayswater, for *Chinese Berberis*; Mr. G. Reuthe, Keston, for *Nerines*.

BRONZE FLORA.—Messrs. Blackmore and Langdon, Bath, for *Begonias* and *Violets*; Messrs. Waterer, Son and Crisp, Bagshot, for autumn foliage.

BRONZE BANKSIAN.—Mr. C. Boatwright, Herne Hill, for *Aspidistras* and *Palms*; Mr. G. Miller, Wisbech, for hardy flowers.

FRUIT COMMITTEE.

Medals.

SILVER BANKSIAN.—Hon. Vicary Gibbs, Elstree (Gr., Mr. E. Beckett), for *Leeks* and *Celery*; His Grace the Duke of Devonshire, Chatsworth, for *Diospyros Kaki* Yshonani.

GARDENING ILLUSTRATED.

No. 1968.—Vol. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

NOVEMBER 25, 1916.

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OUR ISLAND GARDENS.

THERE is no country in Europe where so many plants of garden value may be grown as in these islands of ours, giving us much of the cream both of northern and temperate climates, and good for vegetable growth as well as tree, flower, or shrub, as one may see who compares gardens in Britain with those in America or Continental Europe.

Take, as instances, Bicton, Caerhays, Fota, and many gardens in the south of Britain. One might think it was a question of the warm south, but it is not so, as we have that of Castlewellan in the north of Ireland, and gardens in the west of Scotland full of thriving things that would not live a season in midland places. Sir Herbert Maxwell, in *The Garden*, has been writing of one instance, showing how difficult it is to offer any ideas which will apply to all parts of our islands so varied in climate.

PLANTS AND ASPECTS.—Summer sunshine is tempered in the West by the humidity of the atmosphere, and, as a rule, the soil is more moist and cool than that of inland counties. Hence, while notes on the value, and in some cases the need, of a northern exposure for certain shrubs will prove most useful to cultivators in Midland and Southern England, they are not equally applicable to gardens subject to Western conditions. *Mutisia decurrens* is far more vigorous and flowers more freely here at Monreith against a brick wall facing south than another plant does facing north. *Berberidopsis* is now in perfect beauty on another brick wall facing south. *Tricuspidaria lanceolata*, *Lardizabala biternata*, *Solanum crispum*, *Escallonia macrantha*, *Tropæolum speciosum*, and *Azara microphylla* appear absolutely indifferent to aspect, the last-named, indeed, promising to attain the dimensions of a forest tree in the open. Cultural directions are not uniformly applicable to all parts of the kingdom. It took me some years before I learnt to accept under reserve such advice in plant catalogues from Southern nurseries as "grow in a moist, shady place," and to find that atmosphere is of more importance than aspect. For instance, *Trillium grandiflorum* is essentially a woodland dweller, but the sun of North America is far more powerful than that of Western Scotland.

The causes of these striking variations

in our climates are first a bold and broken coast-line and wide estuaries bringing the gentle breath of the sea inland. The sea itself is a great aid in our climate considered from the garden, as its genial influence is felt all round our long shores and sometimes far into the valleys that look seaward, and this sea-warmth gives a gain of two degrees over the warmth of inland hills near. It must be clear that this is a great gain to all who love the sea and shore.

Next, after the great influence of the sea we have to think of the effect of hill and mountain air, giving us some freedom from valley cold. There are many instances of the good influence of height on garden vegetation, such as Mrs. Chambers's garden at Haslemere, and Captain Acton's, in Wicklow and Mount Usher. Mountains in Ireland, Wales, and other parts offer these good conditions, but are as yet little taken advantage of.

On the other hand, the influence of midland and cool land is quite another thing, and there we have to avoid planting tender plants which may thrive in the same country on hill or shore. Between the low-level land and the hill there may be intermediate states not always easily understood, and so leading to mistakes.

The lesson of it all is understanding the varied conditions we have to deal with, to note the results of planting in the district we work in, being careful in the colder places to avoid disaster by planting tender trees and shrubs. W.

NOTES OF THE WEEK.

Wilson's Barberry in November.—This is now the most graceful dwarf shrub, with brilliant strings of fruit. Gathered for the house and placed in a Japanese bronze, keeping the form of the shoots, it is the best thing of the day. One or two sprays arrange themselves easily, as well as any Japanese artist in flowers.—W.

Campanula isophylla alba.—This has been lovely all through October on a sunny retaining-wall, where it is quite hardy in any ordinary winter.—NORTH LONDON.

Lageria alba in the open air.—May I submit for your opinion flowers of *Lageria alba* grown out of doors? The plant is in a narrow border, where it has been about four years. It has flowered each year since planted. It is trained on a trellis fastened to a wall facing north-east. The plant, which gets no kind of protection at any time, is now about 5 feet high and 5 feet wide, and has ten flowers look-

ing well considering the wet, windy weather we have recently had.—T. R. ELLIS OLVER, 7, Portland Villas, Plymouth.

[Judging by the handsome flowers sent, the plant is evidently quite at home.—ED.]

Fuchsia macrostemma, mentioned by Mr. J. Cornhill on page 554 of November 4th issue, I would not recommend to your readers. Here, in S.W. Surrey, it is cut down to the ground every winter, but comes up vigorously, producing much foliage, with a very scanty supply of pretty flowers, which are badly displayed, as the shoots are not upright.—S. W.

Sisyrinchium californicum.—The *Sisyrinchiums* are neat, attractive, little plants, with Grass-like foliage and little stary flowers on stalks a few inches long. In this species the flowers are larger than in most, and of a clear, deep yellow colour. It likes a sunny position in gritty soil, and is a very cheerful little plant. It can be divided up easily and can also be propagated from seed, which it produces very freely.—W. O.

Gaillardia Lady Rolleston.—I think the pure yellow forms, such as *Lady Rolleston*, far surpass the more gaudy ones in which red or crimson colouring predominates. The flowers of *Lady Rolleston* are very large and of a deep yellow with the eye of the same colour. It is a very free-flowering form, and, like most of the *Gaillardias*, is a good perennial in a light, sandy, well-drained soil. My plants were throwing up plenty of good blooms throughout October.—N. L.

Early signs of bulbs.—To-day (November 9th), while leaves were being raked along an avenue of pollarded Sycamores, my attention was attracted by the forward state of bulbs planted in the Grass under the trees. Snowdrops are exceptionally far advanced, and the various *Narcissi* are not much behind them. The mild weather and the excessive rainfall have, no doubt, something to do with this earliness, although I have noticed the same thing after a very hot summer followed by copious autumnal rains.—KIRK.

Buddleia asiatica.—This *Buddleia* is now (November 6th) a mass of bloom, and fills the immediate neighbourhood with its honey-like scent. It is said to be tender, but I have found it very free-growing, and it has never been injured by frost with me. A plant growing against a wall has overtopped it in a few years. Rooted cuttings planted in the open survived last winter. Like all *Buddleias*, it grows freely from cuttings. Though the creamy-

white blossoms are not showy, still this *Buddleia* is useful, flowering when there are few other shrubs in blossom.—S. G. P. HUTCHINSON, *Castle Lough, Nenagh, Co. Tipperary.*

Aster King of the Belgians.—This, belonging to the *Novi Belgii* set, gained an Award of Merit at the Royal Horticultural Society's meeting on October 10th. The flowers of the newcomer are large, and, while a distinct advance in this respect, its superiority is even more pronounced when the shapeliness of its flower-heads is considered. The colour is mauve. It is to the early set what *Climax*, at its coming a few years ago, was to the latest of these flowers.

Papaver rupifragum atlanticum.—This seeds about on a rough rock wall, with its pretty apricot-coloured flowers always welcome. Unfortunately, the blossoms are very short-lived, and lose their beauty by mid-day if it is at all hot. In the early morning, however, they are lovely, and, if picked quite early and brought indoors, will last well for a day, but not much longer. It is in bloom from April until cut off by frost in October or November. It seems of the easiest possible culture in dry, well-drained, gritty soil.—N. L.

Gentiana verna.—Whether this capricious little alpine has acquired parasitic habits or not, I agree with Mr. Hyde that it craves close company with some other lowly growth. I have found that it thrives well when grown with the smaller Stonecrops, such as *Sedum anglicum* and *S. Lydium*. *S. acre* grows too rank in soil of a quality to suit the *Gentian*. I am going to try the diminutive *Pratia angulata* or *repens* and *Mimulus radicans* as a carpet for it, though it is doubtful whether they will relish the lime, which is so congenial to the *Gentian*. *Noccea* (*Hutchinsia*) *alpina* is of suitable stature for the purpose, but does not spread so fast as the other two.—HERBERT MAXWELL, *Monreith.*

The weather in Kirkcudbrightshire.—One is surprised to read in Mr. Gallop's notes of the current issue (November 11th) of the early frosts of late October in Northants. Here no frost has yet been registered, and the foliage upon wall-trees is yet quite green and the usual time of pruning will be delayed. Dahlias yet are flowering freely, so, too, are Asters, and the later plants generally. *Tropaeolum tuberosum*, *Nasturtiums*, and suchlike plants, usually among the first to go, are yet unscathed, and such hardy annuals as *Nicotiana affinis*, *Lavatera trimestris*, *Godetias*, and *Eschscholtzias*, although now rather weather-beaten, are still flowering.—W. McG., *Balmac, Kirkcudbright.*

Lothian Stocks.—Those who may be, at the present time, cleaning up, ought to bear in mind that the usefulness of Lothian Stocks is by no means over. Many a lot of good plants, I have no doubt, is annually thrown out, when, had they been left, they would have given sheaves of bloom from March till midsummer. These Stocks are quite hardy, coming through all but the most severe winters with impunity. I have left plants for two years in hardy plant borders, that is to say, they have bloomed for three seasons before being dispensed with. In the case of these plants, however, I found that a percentage of them was apt to succumb if the winter was more than usually damp, or if there was a heavy fall of snow.—KIRK.

Begonias for planting out.—I fear "E. B. S." and "K. R. W." have rather misunderstood my note. I agree that tuberous *Begonias* are far superior, in every way, to Zonal *Pelargoniums* for

summer bedding. Nevertheless, the fact remains that in certain seasons they are what I described as "miffy." What I particularly meant, however, was that they are not adapted for cottage gardening. There, if anywhere, we expect to find more of the older perennials, *Roses*, *Tiger Lilies*, *Lavender*, and suchlike. Among these, *Begonias* are—at least, in my opinion—out of place. I know of one lovely old cottage garden which contained all the plants above mentioned, and more, which was ruined by a new tenant, who rooted out all the old plants, made what he called a lawn, and cut small, grotesque beds upon it. These, some 3 feet in diameter, he filled with *Begonias*, with edgings of *Lobelia*. He was both surprised and indignant when, at the annual competition, his "flower garden" was not even highly commended. One of the judges summed it up neatly as "a pale reflex of the garden of the neighbouring laird." *Begonias* are all very well in their way, and in their place, but there are many more suitable plants for the cottage garden.—KIRK.

Pittosporums in Co. Tipperary.—*Pittosporums* are not often seen in gardens, though they are fairly hardy and have all the good qualities of an evergreen shrub, except that the flowers are insignificant. In the case of *P. tenuifolium* (*P. Mayi*), *P. Colensoi*, *P. undulatum*, and *P. eugenioides* the foliage is striking, looks well all the year round, and is useful in the winter for cutting and mixing with flowers. The plants form shapely bushes, do not get bare at the bottom, and will grow in poor soil and in partial shade. Some bushes are thriving on a dry bank under a row of large Ash-trees, where few plants will grow. *P. tenuifolium* has grown over 12 feet high in seven or eight years. *P. eugenioides* appears to be the least hardy, as one plant was cut to the ground about five years ago, but it grew up again and is now 5 feet high. There is a variegated variety which is very handsome and which makes a good shrub for a wall. Cuttings of *P. tenuifolium* put into the open ground two years ago have rooted and survived 15 degs. of frost. Some small plants of *P. Tobira* were killed by frost a few winters ago, though it is said to be one of the hardiest, but larger plants survived. *P. undulatum* has ripened seeds, which germinated freely.—S. G. P. HUTCHINSON, *Castle Lough, Nenagh, Co. Tipperary.*

Hypericum patulum.—The variety of this fine shrub known as *Henryi*, having been introduced from China by Professor A. Henry in 1898, is superior to the original Japanese plant introduced by Oldham in 1862, in stature, in size and colour of blossom, and, it is said, in hardiness; but in one respect it must be pronounced inferior to the older variety. *Henry's St. John's Wort* flowers in July and August, making a very beautiful display while it lasts, but it is all over by the beginning of September. Oldham's variety, on the other hand, beginning simultaneously with the other, maintains a profusion of bloom until cut off by the first frost. We have escaped frost here so far, and this *Hypericum* is still putting forth quantities of flowers. I measured a plant this morning (November 7th), 6 feet through and 4 feet 9 inches high, a compact green dome studded with hundreds of golden blooms. I have compared the flowers with the beautiful coloured plate in the *Garden* of September 22nd, 1877, page 280, and can testify to its fidelity. It was that plate which first induced me to obtain the plant, and I have never been without plenty of it since, for it sows itself freely in odd corners. The *St.*

John's Worts are remarkable in this respect, that although in the wide range which they cover, extending from the mountains of Java close to the Equator, through temperate Asia, Europe, and North America, the different members of the family assume an infinite variety of forms. Only a single species has been found unfaithful to the hereditary golden hue of the petals, *H. leve rubrum* having hoisted a freakish orange-scarlet flag of its own.—HERBERT MAXWELL, *Monreith.*

FRUIT.

GUMMING OF FRUIT-TREES.

If it were always possible to trace everything to its source, it would be found that gumming in stone fruits in most cases had its origin in a deficiency of lime in the soil. Other causes doubtless may lead up to it, such as deep planting, or planting in too rich soil. Much injury is done by cropping the borders in which the choicer kinds of stone fruits are planted. The digging and manuring of the ground to meet the wants of the surface crops are sure sooner or later to throw the trees out of gear and bring on many evils, not the least of which is frequently a host of suckers, caused by the spade or fork injuring the roots, or by the manures which are used for the crops growing in the border. It is well known to most experienced cultivators that Peaches and Apricots do best in firm soil, but if the top spit is under spade culture, the roots must go down to a lower stratum for the firmness they need, and far away from the beneficial influence of solar warmth; the growth comes late and cannot ripen properly, and is more susceptible to insect attacks. And so a false step at the beginning may be the precursor to many difficulties later. It may be thought when a young tree is first planted, that as the roots cannot occupy all the soil the border may at least be used for something until the trees require it. This is plausible reasoning, and so early Peas, Potatoes, Tomatoes, and other crops are planted, the man with the spade goes to work, and the bad system once begun is continued. Again, very few think when planting young trees that it may be necessary in most soils to mix a little old plaster or lime in some other form with the soil, but to obtain clean, healthy growth, lime is an absolute necessity. Of course, on a chalk or limestone formation the natural soil contains sufficient lime for the wants of the trees, and those accustomed to note such things can tell by their appearance if the trees are getting their wants attended to.

DRAINAGE.—This is also very important. The Peach and Apricot are Eastern fruits, and a low temperature may be made still more hurtful if the drainage is not free. Perfect drainage is an absolute necessity if the trees are to do well. In cold soils with a clay base lift the borders up and mix some old plaster and charcoal dust or charred material with the soil in which the trees are planted. If the natural soil has a limestone base the consequences of deep rooting are not so noticeable: still, under any circumstances deep rooting is bad and in the long run will have injurious consequences, and for this reason alone Peaches and Apricots should have at least 5 feet or 6 feet of the border to themselves undisturbed. Most of us can call to mind instances where Apricots growing against the front or the gable end of a building, with the roots under a hard gravel path, have borne immense crops and were never troubled with gum or canker.

PLANTS AND FLOWERS.**ROOM AND WINDOW.****ROSE IRISH BEAUTY AND BLUE HOUND'S-TONGUE IN HOUSE.**

Both are very good plants. The Rose I have had for many years, and it blooms all the month of Roses. The other plant is a newly-bought annual flower, very easily raised, a constant bloomer, excellent as a ground-work among shrubs recently set out and the bare patches that often occur, and also good for flower garden work, the blue being a very good one.

W.

JAPANESE FLOWER GROUPING.

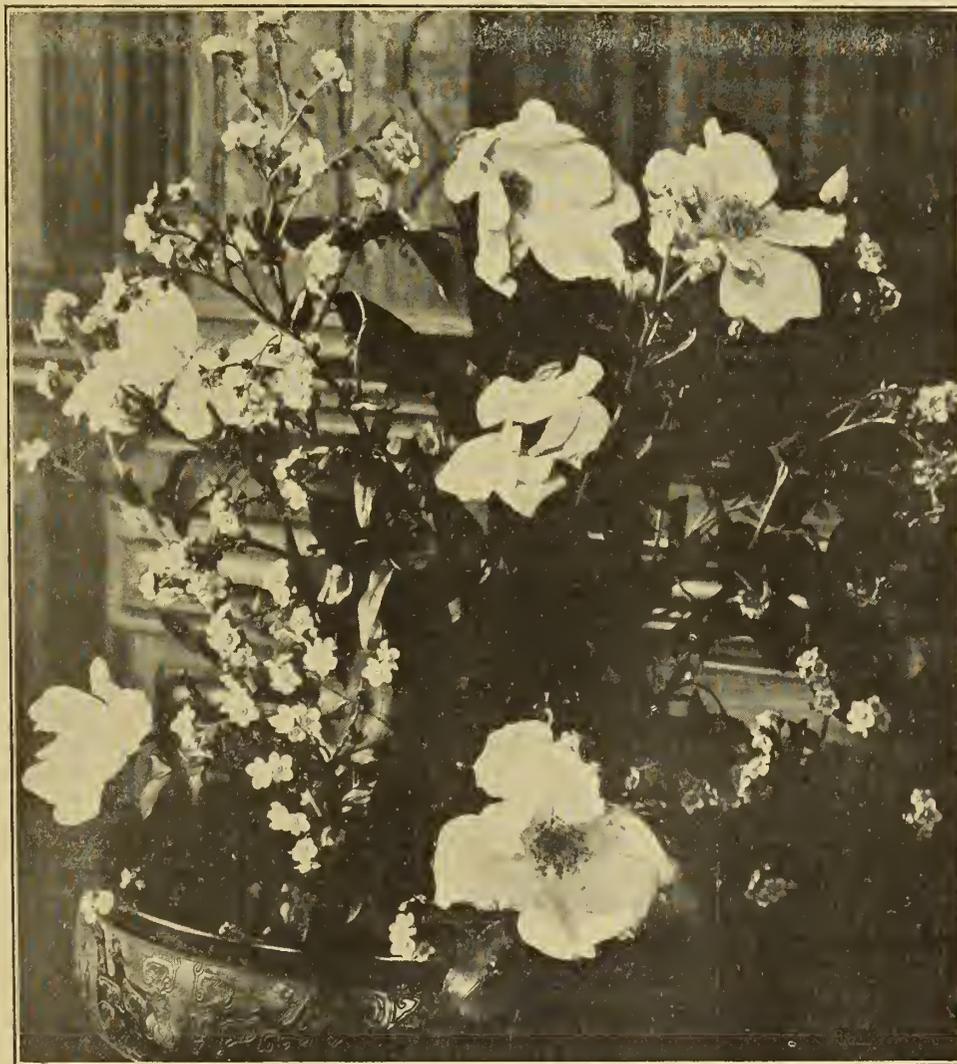
This, counted one of the essential parts of a Japanese girl's education, is very

natural branch or flower and place it in a vase, but subjects it to certain treatment, manipulating his materials as a painter would his colours, to form the design, according to traditional rules, which have to be carried out most faithfully.

GROUPING.—Very few flowers are used, but are perfect of their kind, as every small leaf or branch has its particular value in the composition of the picture; superfluous ones are clipped away to attain the desired effect. But perhaps the beauty, rather than the philosophy, of the flower art appeals more readily to the Western mind, though the designs show Nature in her active and passive moods. A creeper in one of their hanging Bamboos becomes a trail hanging over a cliff, shaken by the wind. A modest little Japanese

fully proportioned so as to give balance and symmetry to the group.

PREPARATION OF THE FLOWERS.—The different parts are carefully prepared before being put together, the right-sized flowers, buds, and leaves chosen, they are then cut to the right length, the bottom of Flag leaves sliced into a point, and stalks cleanly cut. To get a leaf to bend the right way it is damped and pressed gently over the hand. Japanese hands are soft and flexible, and the flowers seem to respond to their gentle touch very readily. Branches of Fir or Juniper, Bamboo, or flowering Plum are pruned, bent, and twisted into the right shape and curves for the desired effects. The parts being carefully prepared, a number of short pieces of stalks and leaves are cut into



Rose Irish Beauty and Cynoglossum in a bowl.

generally known among those of the better classes; there are a good many flower schools in different parts of Japan, one of the largest being at Kyoto, the ancient Western capital. The methods taught in these schools are lengthy, the instruction of a pupil can stretch over a period of five or six years, although to meet the requirements of the modern age these instructions are somewhat modified and curtailed, and a simpler course may be undertaken for a period of six months.

This art of flower grouping and arranging is in its graceful effects rather a linear than a colour study. It is undoubtedly a fine art, and represents a scientific study of Nature in grouping branches and blossoms to form a decorative picture. A Japanese flower artist does not merely take a pretty

group of water plants, in a flat stand, will give the effect of flags or reeds growing by the riverside in a way that a bouquet arranged in European fashion can never do. A Juniper, or Fir branch, properly fixed in a Japanese vase makes one think of a calm forest tree, whereas in an English one it may mean a piece of greenery, while their curved branches of Plum blossom fully convey the life and virility of a fruit-tree in springtime. The simpler arrangements of the groups are made in three parts—*shin*, or highest, *soye*, middle or support, and *tai*, the lowest or finish, which may be described as the equivalent of a picture composition, background, middle distance, foreground. In the more elaborate designs these divisions are increased to five or seven parts. These are all care-

corresponding numbers, about an inch long. The high vase, or stand, may be either of bronze or Bamboo, and across the top of it is fixed a short forked stick, in which the flowers or branches are placed in the right positions, the middle part leaning slightly either to the right or left—for Nature is never straight—and each leaf and flower is separated by a piece of short stalk, and this needs most careful handling. While the flowers are held in place with the left hand, the little pieces, or wedges, are slipped in by the right, and when properly made should be as firm as a growing plant. A loosened leaf or flower will spoil the harmony of the whole design, for to keep the right lines is most important. For the grouping of flowers in the low vases, or flat earthenware stands, heavy metal

separate stands, or holders, are used. They have little partitions in them, and are made in a variety of shapes and sizes.

SEASONS AND THEIR FLOWERS.—For a summer group of Iris fully-developed blossoms are used, and for a spring arrangement more buds. Dividing the leaves and blossoms into three parts, take the highest for the first division, those a third part shorter for the second, and for the lowest use a flower and leaves about half as high as the whole; the latter come into the foreground. The ends of the leaves must be cut to a sharp point, and other short pieces cut exactly to the height of the metal stands are slipped in firmly between every leaf and blossom as it is put in its proper position, wedging them in the stands as steadily as in the forked sticks. When placed in the dish little pebbles or stones are put in to conceal the stands, and when the water is added the effect is complete. Any water-loving plant may be used successfully for this style of arrangement. The water can be changed without any fear of disarranging the group, which will be found to last a long time, keeping fresh. Simplicity is the keynote of the Japanese taste, and where the English will have a dozen vases the Japanese will have only one, but that one, placed in the *tokonoma* or alcove of the room, will, as well as the flowers it holds, be perfect of its kind. It will generally be a flower of the season, as for decoration each season has its special flower, beginning with the Plum (*ume*), which comes into bloom at the end of January and lasts till March. The middle of April sees the Cherry (*sakura*) in full bloom, followed hard by the Azaleas (*tsutsuji*) on the mountain sides and garden banks. The Tree Pæony represents the month of May, at the end of which the Wistaria comes into bloom. The Iris and Lotus and the Convolvulus come in full summer; the glowing Maples and Chrysanthemums finish the floral season.

SYMBOLISM.—Colours have their values in Japanese flower grouping also, and red, which represents the male, and white for the female, are the suitable flower colours for a wedding. The mourner's colour in Japan is pure white. Purple is forbidden, and certain flowers, Willow branches, and plants are considered unlucky. The heads of Daphnes and Camellias fall off too easily to please the ancient Japanese. Pine-trees and Bamboos represent longevity.

Floral design, as understood in Japanese painting, when known more generally to the Western schools exercised a wide influence in them, and possibly their flower art would bring its teaching to bear upon our floral arrangements, were its methods better known among us here.—*The Times*.

WINDOW PLANTS.

VIOLETS IN POTS.—Probably very few ever think of growing Violets in pots, but it is one phase of culture which may afford much pleasure. I do not remember having seen Violets in windows, where, during the winter months, they would be even more happy than in frames, and, if properly grown, would flower to a certain extent during the dull months and would bloom abundantly in early spring. Half-a-dozen Violet blooms will diffuse a fragrance which is very pleasant and refreshing in the dwelling. I have grown the Parma Violet in this way and used the plants for conservatory decoration, and on entering the house in early morning the air seemed full of fragrance. The plants must, however, be thoroughly well grown so that plump crowns are secured. Growing the plants in pots all the summer will not do. I have tried this plan, but the Violet must have a free root-run in

rich soil during the growing time and be put into pots at the end of October, when the crowns are fully plumped up. Let them stand in the open until the end of November, so that they strike root again before taking them in. Never put them into a constantly-heated room, or they will become so weakened that the few flowers produced will be malformed and poor in colour. Let them stand in a cool room where air is given in mild weather, as this is absolutely necessary. In this way they will bloom as well as if wintered in frames, and they will be more secure from damp. Those fine double varieties, the Neopolitan and Marie Louise, can be had in good condition in this way, and Princess of Wales, considered to be the best single, is of easy culture.

FUCHSIAS will be quite out of bloom and will have ripened their wood, but they must have water when dry to keep them plump. If they suffer in the resting time from over-dryness at the roots they will not start so freely as they should do the following spring. Fuchsias at rest are not very attractive, and are apt to be neglected when the leaves have fallen, but this will not do if it is expected that they are to start strongly into growth the following year. It will not hurt them to get dry in late autumn and through the winter, but they must not become dust-dry or the tissues will shrivel to a certain extent, which is not seen at the time, but the effects of which are perceptible in early spring when they are pruned. No one cares to keep plants denuded of foliage in the windows, so that the Fuchsias have to take a back seat until growing time comes round again. From November up to March they may be stored in any out-of-the-way corner, only, as before said, they must not become too dry. I have known good-sized plants stored in an out-house. In very cold weather they were laid on their sides and covered with litter. In order to economise space they may be pruned moderately, but not back to the old wood, as this might cause them to break prematurely.

BULBOUS FLOWERS.—No time should be lost in potting up any kind of bulbous flowers that are so useful early in the year. There are, apparently, no Hyacinths to be had, but there is a wealth of Tulips, Narcissi, Crocus, Scillas, etc. Pot them in nice, free soil with a fair amount of drainage, and let them stand in the open until wanted.

BYFLEET.

FERNS.

FERNS IN HANGING BASKETS.

DESPITE the trouble which is involved in watering and attending to Ferns in hanging baskets or similar receptacles, they are always ornamental and interesting, and they tend to take away the bare appearance of roofs or of rafters upon which it is not considered advisable to grow the orthodox climbing plants. Baskets made of galvanised wire of a good gauge, and fitted with chains for suspending, are perhaps the best. These, lined with Moss and filled with the ordinary compost used for the particular variety to be grown, will prove very satisfactory and durable.

There are certain forms of Ferns which are peculiarly adapted for the purpose under notice. Chief among these are the Davallias, one of the finest for basket-work being *D. bullata*. Others of the family well adapted for hanging baskets may be found in *D. Mooreana*, *D. fijiensis*, and *D. canariensis*. The long, trailing growths of *Lygodium scandens* are seen to advantage when employed in this way, and *Cheilanthes hirta*, Ellis's variety, is much better grown in a basket than in a pot.

Many of the *Nephrolepis* tribe are excellent as suspended plants, none more so than the old *N. tuberosa*. Another good variety is *N. davallioides furcans*, while *N. exaltata* and *N. Fosteri* are almost equally good. *Adiantums*, too, may be used, including, as well as the familiar *A. cuneatum*, such sorts as *A. concinnum*, *A. Williamsi*, and especially *A. amabile*. I have seen *A. Farleyense* used as a basket Fern; but it requires stove heat, and even so is apt to suffer either from the rays of the sun or from incautious ventilation, unless particular attention is paid to its requirements. Very seldom met with in collections of present-day Ferns is *Hypolepis distans*. This pretty variety is a gem either in pots or in hanging baskets. For very large baskets, *Phlebodium aureum* or *Goniophlebium subauriculatum* may be employed with satisfactory results. Certain of the Spleenworts, notably *Asplenium rhizophorum* and *A. longissimum*, are very effective, especially the former, with fronds nearly 2 feet long. These, if pegged down, produce a very fine effect. *Polypodium Lingua* is hardier than many of those above enumerated, and may be used freely in a somewhat cool house. Most of the varieties named will do in the atmosphere of the greenhouse or conservatory; but in no case should they be too freely exposed to strong sunshine, and, above all, they must be regularly and liberally supplied with moisture. When established, if occasional supplies of liquid-manure or of chemical fertiliser in solution be given, the need for over-hauling annually does not arise, and the baskets increase in beauty year by year.

KIRK.

INDOOR PLANTS.

FUCHSIAS.

I HAVE not been to the London exhibitions for some years, and therefore do not know if big specimen Fuchsias are still exhibited. I have seen no mention made of them in recent years, so I suppose that they are not in favour nowadays. They have, I imagine, gone the way of the monster Cape Heaths and New Holland plants, which were some thirty to forty years ago such a prominent feature at the London exhibitions and some of the biggest provincial shows. These big specimens were marvels of high culture and always attracted a lot of attention. The cuttings were taken as soon as they could be got from plants placed in gentle warmth early in the year. Many a time when a young man I have looked at these plants and wondered how specimens 5 feet high, and correspondingly broad, perfect pyramids of floral beauty, could be produced in so short a time. Such plants have a very different appearance from the two or three year old specimens that one usually sees in private gardens. The power is not given to everyone to produce such large plants, and it is quite certain that there must be the convenience for doing so. I cannot say exactly how they were grown, but I should not wonder if in their earlier stages they had the advantage of mild bottom-heat, such as is afforded by leaves and dung. It is not only the stimulus to the roots which this mixture imparts, but atmospheric conditions are created which the Fuchsia loves and which have in some way to be created if plants of high excellence are desired. Those marvellous plants in 6-inch pots which are to be seen in Covent Garden Market could never be produced unless special means were taken to give them the atmospheric conditions in which they delight.

Market men do not mix things. They

never have more than one kind of plant in a house, and as their energies are concentrated on the few things they cultivate they naturally are able to bring them to a higher degree of perfection than the amateur who has perhaps a score of things all differing somewhat in their requirements, and has only one house for them. Without saying that the amateur can quite rival the market grower in perfection of growth it is certain that he may produce plants which would not compare unfavourably with them. In an ordinary greenhouse, and in company with Zonal Pelargoniums and other similar things, I have grown plants which would not discredit a market grower, but they got a lot of attention. The market men grow their plants in span-roofed houses, where the conditions are much more favourable than in the lean-to structures generally seen in small and medium-sized gardens. Fuchsias love a moist, genial atmosphere in the later hours of the day

is of supreme importance—*i.e.*, maintaining the soil in an equable state of moisture. In market gardens the plants, when growing freely, are sometimes watered six times a day, and whoever desires great excellence must not grudge labour. Better fewer plants and better quality.

BYFLEET.

NOTES AND REPLIES.

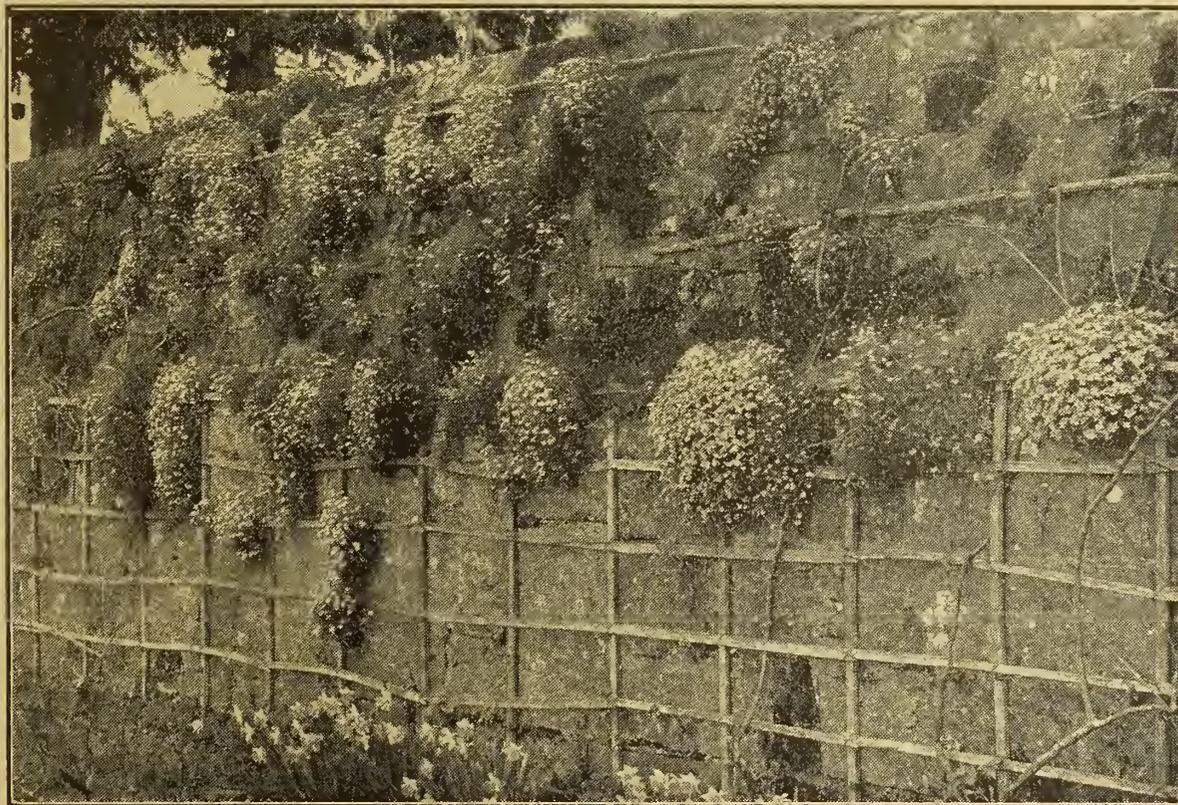
Fumigating the greenhouse—past and present methods.—Older readers will recollect the primitive methods of dealing with insects under glass by means of Tobacco-paper and rag fumigants. The introduction of the liquid nicotine that is vaporised over a spirit-lamp marked a great advance. Those of us who remember the old-time fumigants hailed this with considerable satisfaction. This vapour fumigation now has another competitor in "sheets" and "shreds." Nico-brand, supplied in small sheets, is a most convenient and labour-saving provision; so

the several modern preparations of nicotine now to be had it would seem a matter of choice as to which is the best. The aim in each case seems to be a minimum of cost with a maximum of value.—W. STRUGNELL.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

ROCK CRESS (AUBRIETIA) ON OLD WALL.

This cut shows an old sandstone wall upon which the purple Rock Cress has sown itself. There was one plant near the top of the wall from which the seeds scattered themselves over the wall. It need hardly be said that the effect is very good, and very welcome in early spring. It also shows how many old walls and buildings might be adorned by simply scattering a few seeds of the plant over them. It is simply the ordinary old kind of Rock Cress,



Purple Rock Cress on old garden wall, Gravetye.

and at night, and in order to ensure these genial conditions the last watering is given late in the afternoon, the house well damped down, and the plants well syringed. If your readers could see a house of Fuchsias when in bloom and ready for market they would be surprised not only at the quality of individual plants but their general condition. They are bloomed in 6-inch pots and are so arranged that by the time they come into flower they touch each other and form a solid mass of bloom, the plants being so evenly matched that one is the counterpart of the others. This perfection is, of course, only to be attained by years of experience and special convenience. These conditions can to a certain extent be imitated in the amateur's greenhouse. The Fuchsias should be placed together at one end, where they can get special attention in the way of syringing and shading lightly in very hot weather, for they are apt to suffer in lean-to houses during periods of great heat. One thing

simple and yet so effective in dealing with the various insects. The manufacturers claim that both red spider and mealy bug succumb to this nicotine preparation, but my experience has not borne this out. Green and black fly can be destroyed, and the Tomato fly succumbs to its deadly fumes. All the apparatus needed is a stake or a piece of wire, on which to hang the sheet, which may be broken into sections to suit small or large structures. The vendors claim that a match is all that is necessary for lighting, but I have found a wax-taper or a lamp much better. The lighting of the sheet is expedited if torn here and there on the edges. There is no possible risk of harm to plant life, because the sheets will not flame and no attendance is required. In shred form it has been on the market for some time. These shreds need only to be put down in small heaps, and, when lighted, no after attention is required. The strength of this preparation is such that but a small quantity is required at a time. As to the efficiency of

which varies very prettily. It may also be noted that there was no soil at all between the stones, and that the only nourishment for the plants is from the decayed lime, if that be any nourishment.

THE SANDWORTS (ARENARIA).

It must be sixty years ago that *Arenaria* (then termed *Spergula*) *caespitosa* seemed likely to occupy an important position in gardens generally. I cannot remember, for I was only a boy at the time, where or with whom the idea originated of using this Sandwort as a substitute for Grass, but I do remember the varying opinions expressed by gardeners on the occasion of our local flower show. The experiment, which seemed to promise well at first, was, in the end, a dismal failure. The hot weather browned it and the damp of winter finished it. As a fact, this species, free-growing though it may be, is liable to die off in some soils. It suffers from dry heat when much prolonged, and the delicate roots will assuredly suffer if the soil

becomes at all close in winter. Its needs are, however, easily met, a light, rather gritty soil, occasional waterings in the most trying time, and, where possible, shade during the hottest hours of the day fulfil its requirements. In the full glow of healthful vigour this Sandwort, planted thickly, makes a charming carpet, and one is not surprised that it should have been considered worthy of employment in the way above-mentioned.

A. BALEARICA is one of those things that may find a happy home in any garden, however small, and will rejoice in conditions inimical to the majority of hardy plants. In any dark, very much shaded corner it will grow luxuriantly, and only give it a big stone or a bit of old wall to ramble over and it will be as happy as any hardy plant can be. It is a delightful little thing, this Sandwort, and when the rich green foliage is lavishly besprinkled with the little starry blossoms it has a very pleasing effect. With me it has taken possession of an old brick edging in a semi-shady position, and now (in November) the attractive shade of green is even richer than was the case in early autumn. The finest member of the family, however, from a decorative point of view, is

A. MONTANA, and were I restricted to a score of rock plants this would be one of them. It has every quality that a rock plant should have, without any of the defects which detract from the usefulness of some alpine plants. It will thrive in any free soil, extends with freedom, and, what is very much to the purpose, does not need the watering-can. Plant well and leave it alone, and so long as it gets plenty of sunshine and air, and is kept free from weeds, it will yearly increase in bloom-bearing power. When covered with its large white blossoms, so abundant that they nearly hide the foliage, it is, in the form of a large specimen, most telling. It should be planted well up on the rock garden, and looks best when drooping over a big stone. Can any of your readers say whether there are two forms of this *Arenaria*? I think that they must be identical, as in some trade growers' lists it is given simply as *A. montana* and in others as *A. montana grandiflora*. If there are not a typical form and a larger-flowered variety the varietal term *grandiflora* is certainly out of place.

A. PURPURASCENS is not so showy and not nearly so vigorous as the preceding, but displays a quiet beauty that pleases.

A. TETRAQUETRA is the aristocrat of the family and an alpine of the first water. It is not of difficult culture, but resents neglect in any shape or form. Unless well cared for it is apt to die off suddenly.

J. CORNHILL.

NOTES AND REPLIES.

Primula cortusoides.—This is useful for a cool place in the rock garden and is of very easy culture in any light soil with plenty of leaf-mould incorporated with it. I mix mortar-rubble with the soil, but I do not think this is essential, although many *Primulas* seem to appreciate it. It seems to be constantly in flower and is always welcome. There are many different colour-forms. It ripens plenty of seed, from which it can easily be raised, and it is also readily increased by division. It was flowering with me right into November.—N. L.

Half pots for alpenes.—"Cecil A. P. Osborne," who inquires about half pots, so useful for many small alpenes, can get them in all sizes from Mr. William Branton, Linslade, Leighton Buzzard, Beds. I use a great many of them.—CHAS. OAKFORD, *Mells Park Gardens, Frome.*

VEGETABLES.

MILDEW ON ONIONS.

SOME amateurs strew short manure along the rows of Onions when the plants are from 4 inches to 5 inches high. The grower off whose ground I sent you mildewed specimens in 1915 did this, with the result that his Onions were attacked with mildew and maggot, and the whole went bad, row after row. It stands to reason that when a wet season sets in it must make the young bulbs sodden, and, therefore, cause them to decay. I have seen it done repeatedly. Ground well prepared before sowing certainly does not need it. In my twelve years' experience I have had neither maggot in my Onions nor had them attacked by mildew, the only overhead dressing they ever get being soot from the flues. I start this immediately they appear above the ground, even before the "loop" allows the stem to come to the perpendicular. I never sow without giving a dressing of soot, neither do I plant out any of the Cabbage family before dipping the plants up to the "collar" into a puddle of thick soot and water, and club-root is unknown to me, heavy clay soil though mine is. I have never bought a pennyworth of artificial dressing (manure, guano, or pest-killer) in my life, and, what is more, do not intend to while I can get the matter to dig in for the roots to feed on, and leave the rest to the hoe and Nature. My idea is that soot is the finest thing for preventing pests in the vegetable garden, putting everything underneath for the succour of the plants. This year I grew over 80 lb. of Shallots from rather under 9 lb. of seed-bulbs, with never a maggot in the whole, and employed nothing but soot after planting. As soon as the green shows I start dusting, and all has been well. The same thing obtains with Broad Beans and Runners immediately they are "up." R. S. W.

SCOTCH POTATO CROPS.

DISCUSSING the Potato yields and prospects, a correspondent in the *Yorkshire Post* states that the average crop in Scotland is about four tons to the acre, against an average in 1915 of about 6½ tons. The largest acreage of any variety was the King Edward, which divides popular favour in North Britain with the Arran Chief, a larger acreage than in previous years being planted with the Chief. It is undoubtedly the best Potato in Scotland, and has yielded very good crops where grown on loam or light land. British Queen has also been extensively cultivated north of the Tweed.

The comparative failure in weight of tubers in Scotland this year means that the merchants in Glasgow and the other principal markets cannot find sufficient satisfactory samples of good ware in Scotland to meet the requirements of their trade, and we find for the first time for many years English Potatoes selling in Glasgow, Edinburgh, and Leith, at prices obviously remunerative to the English grower. Ireland, too, where the crops in the main are abundant, is exporting to Glasgow, quotations for good Irish ware Potatoes being £6 10s. f.o.b. at an Irish port, equivalent to about £7 in Glasgow.

Supplies have gone from Cambridge-shire and the Midlands, as well as Ireland, but Yorkshire is placed in an especially favourable position for the Scotch market, by reason of the splendid samples grown there and the shorter railway journey. There is an abundance of seed in Scotland, the majority of the produce being of seed size, and if the merchants in Glasgow and the other markets can con-

tinue to draw ware supplies from England and Ireland they will decline to purchase Scotch-grown Potatoes. Therefore, the native farmer will have to find an outlet for his produce for seed purposes in England, after supplying his own needs.

NOTES AND REPLIES.

Growing Leeks in trenches.—Many people are disappointed in growing Leeks for the reason that they omit two important points in their culture, viz., a long season of growth and liberal treatment. Too many, I fear, are content with sowing seed in March and planting out in soil that cannot, by the widest stretch of imagination, be termed rich. The result, obviously, is spindly plants lacking that vigour which characterises those well grown. To have thick, blanched stems, one must be prepared to do them well, and to this end seed should either be sown in a cold frame in the autumn (which I regard as the better method) and planted out in April, or from seed sown in heat in February, subsequently hardening the plants and getting them out of doors. The old plan of dibbling a hole and dropping the young plants in is gradually being superseded by getting them into trenches previously well prepared, as for Celery, and, like Celery, earthing up. Leeks are so useful, and may be left in the ground until actually wanted for use, that every effort to bring them to table in the best condition should be tried.—DERBY.

Storing seed Potatoes in bags.—For some years I have stored my maincrop seed Potatoes in bags, and for some reason there seems less activity of the eyes, and, consequently, less attention to removing the growing shoots in winter is necessary. I do not mean to say the eyes remain latent until planting time comes round, very much depending on storing space. A cool shed is an essential even for storing them in bags, and so long as frost is kept off, the cooler one can keep them the better. I cover the bags with hay or straw litter—bracken is better when procurable—when the weather becomes threatening, and this is removed directly mild weather returns. Storing space, too, being limited, I have found storing in bags an advantage, as the bags can be piled up one above another, if need be, in any dry, covered shed. The bags being porous admit air pretty freely, and the bulk not being considerable, air can reach the tubers, hence, presumably, the reason why they remain less active in the bags. In the winter the tubers will need to be overhauled, and, after removing the forward shoots, returned again to the same receptacles unless other and more favourable conditions offer themselves. The direct advantages of bag storage would be found by those whose space is limited.—W. S.

Parsnips.—Complaints were rife last spring that Parsnip seed failed to germinate. This may be due to its having been badly harvested or to the fault of the season, but the majority of cases occurred in fresh ground, which, through shortness of time, was not properly prepared. Instances came under my notice where seed started well, and then in August, after a spell of dry weather, the plants deteriorated, a further source of trouble being the fly, which infested the foliage. To have good Parsnips, ground heavily manured the same season should never be selected, as such is apt to produce forked roots. It is essential that the soil should be well trenched, and if this can be done to a depth of 18 inches and a good layer of dung placed at the bottom it will help the plants in early autumn. No other manure need be applied, but if the ground is at all deficient of lime it will be found profitable to give it a dressing.—TOWNSMAN.

TREES AND SHRUBS.

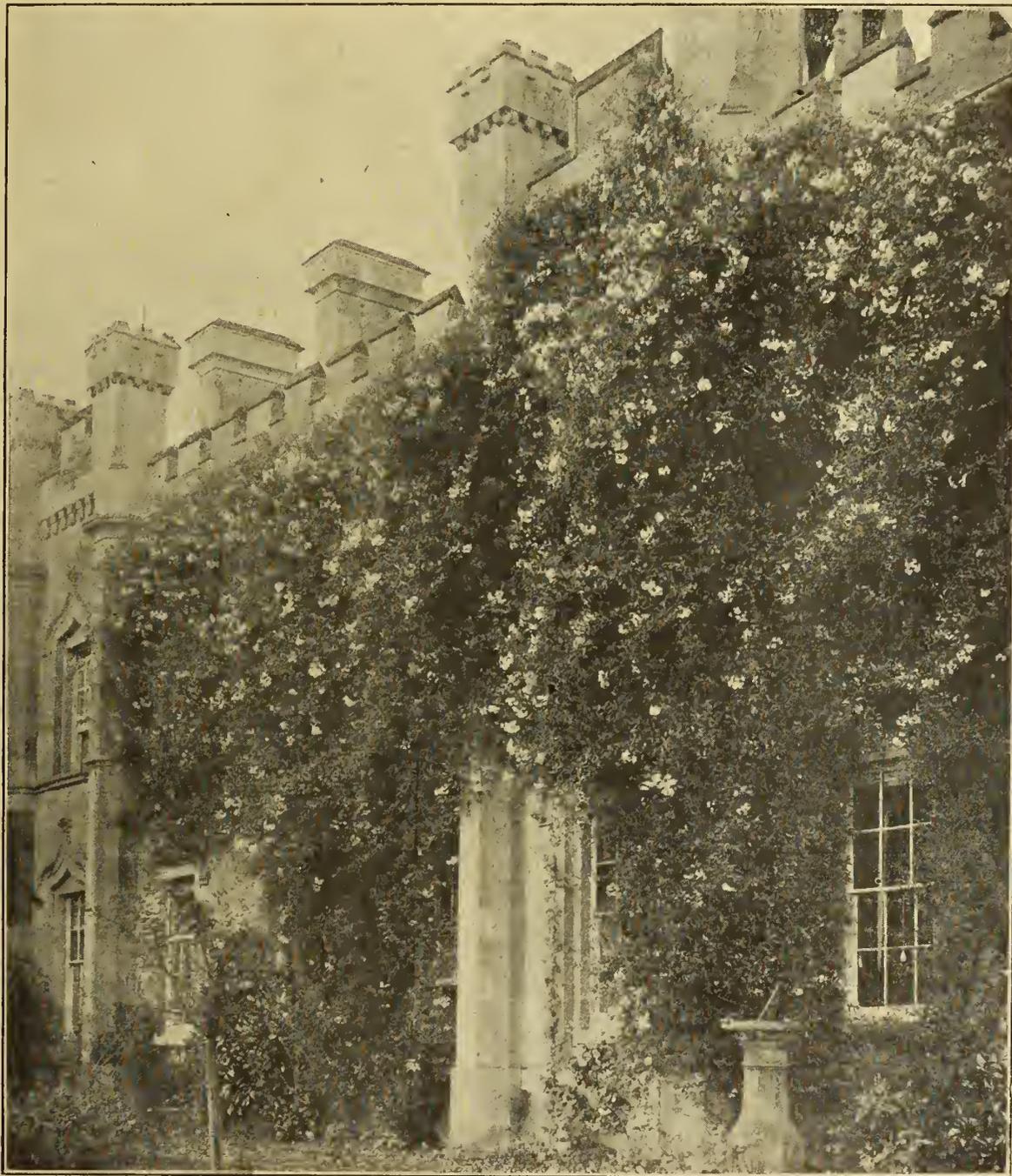
SOLANUM JASMINOIDES.

This is the finest example of the growth of a noble climber that we have ever seen. Long familiar to us as it is in the West Country and in gardens in the home counties, where it has a fair chance, it is not often grown so well as it deserves to be. The culture is quite simple. In this par-

mental evergreen shrub that reaches a height of 5 feet to 6 feet. The dark green leaves, supported by reddish stalks, vary a good deal in size, the largest being about 3 inches long and 1 inch in width. The flowers, which are of a clear rosy-red colour and nearly $\frac{1}{2}$ inch across, are produced in densely-flowered terminal panicles. Where not perfectly hardy it is well worth the protection of a wall, especially as the blossoms are borne at a season when most flowering shrubs are past. It

nearly white in colour. It is said to have been raised in the nursery of Mr. Robert Veitch, of Exeter, as the result of a cross between *E. pterocladon* and *E. rubra*.—K. R. W.

Light from an Oak.—Many of the peasant class in Spain make use of the bark of the Cork Oak to light their cottages. The bark is placed in a kettle, and when it is hot enough it gives off a gas which burns brilliantly. The lighting is not expensive, and the peasant saves the carbonised cork refuse, for he can



Solanum jasminoides on house at Sheffield Park, Sussex.

ticular case there is a stone footpath very near the border where it grows, and perhaps this helps the plant.

NOTES AND REPLIES.

Escallonia organensis.—This very distinct and uncommon species of *Escallonia* has been several times shown at the autumn meetings of the Royal Horticultural Society. Though more tender than some other species, it forms, in the favoured parts of these islands, an orna-

was introduced in the 40's of the last century, but had been previously discovered by Mr. Gardner in the Organ mountains of Brazil. A mistake has before now been noted in the name being spelt *oregana*, thus suggesting that it is a native of Oregon, but, in reality, its specific title is derived from the range of mountains where it was first discovered. Another *Escallonia* just now flowering freely is *E. exoniensis*, a hybrid shrub or small tree with terminal panicles of flowers white or

sell it, as it is known as "Spanish black," one of the intensest black-browns known among pigments.

Vitis inconstans.—Now that the foliage has fallen, let those who grow this rampant creeper upon the walls of houses give an eye to it. The plant will invade water-pipes, get under slates, and, in fact, take every opportunity of encroaching. If not regularly kept trimmed in such neighbourhoods as those referred to, the grower of the plant will find that he is laying up trouble for himself in the not distant future.—KIRK.

CHRYSANTHEMUMS.

NEW CHRYSANTHEMUMS.

J. H. BLYTHE (Japanese), bright chestnut, very handsome; CORDELIA (Anemone-flowered), fawn and bronze with yellow tipped centre; THORA (Anemone-flowered), rose, yellow centre. Shown by Messrs. Cragg, Harrison, and Cragg.

THOMAS BODMAN (Japanese), rich crimson, gold reverse. Shown by Mr. W. Baxter.

SHIRLEY GOLDEN (Japanese), deep rich yellow, said to be a sport from William Turner, one of the best exhibition varieties. From Mr. H. Woolman, Shirley, near Birmingham.

MRS. ALGERNON DAVIS (Japanese), of the drooping type and of refined deep lilac. Handsome variety of exhibition standard. From Mr. Norman Davis.

MRS. W. SMITH, a pure white exhibition single of high merit. From Mr. A. Robertson.

ALICE JINKS (Japanese), ruby-crimson, very handsome. Shown by Mr. Walter Jinks.

ALICE BENSON (Japanese), pure ivory-white, very handsome; GOLDEN WEST (Pompou), rich yellow; MARY (Pompon), deep orange-gold, of good form and colour; and BABY FELTON (Pompon), of almost amaranth colour. These were shown by Messrs. W. Wells, Limited.

EDITH DIMOND (single), golden-bronze, a fine decorative sort. From Mr. Phillip Ladds.

Each of the above received a first-class certificate from the National Chrysanthemum Society when shown on November 9th, 1916.

PROPAGATING CHRYSANTHEMUMS.

I SHOULD be grateful if you would tell me how and when to take good Chrysanthemum cuttings from indoor plants, or refer me to a book (not too expensive) which deals with the subject.—E. H.

[Many growers get these in during the latter part of November and the succeeding month, but it is doubtful whether much is gained by making a start before the New Year. Provided the old stools have been given a light position while in flower, and since been cut down, stronger growths will be forthcoming by the first or second week in January than would have been the case at the earlier period mentioned. Exception may be made in growing for exhibition, especially large blooms, but for ordinary decoration January will be found a suitable date. Comparatively cool treatment is the best for Chrysanthemums except while in flower, when a little artificial heat is generally necessary, as a preventive to damping of the flowers and mildewed foliage.

Many are the methods employed in rooting the cuttings, close cases or quite small garden-frames being stood in a lateinery, Peach-house, or an ordinary plant-house, where a little heat can be turned on in case of severe frost, while others rely upon quite cold-frame treatment in the warmer counties, where long spells of frost or heavy falls of snow are of rare occurrence. Strong cuttings are best placed singly in pots 1½ inches or 2 inches in diameter, keeping the cutting in the centre, while weaker ones, four in number, may be set around the side of a 3-inch pot. Sucker growths should be given preference when 2½ inches or 3 inches long, cutting these close up to a joint, and making each one fairly firm in the soil, which should be an equal mixture of loam and leaf-soil, with sand added, and a dash on the surface of each pot, which will work down with the dibber for the base of each cutting to rest

on. Water in the cuttings, and allow them to dry as much as possible before putting into the cases or frames, which need to be kept close, or nearly so, and lightly shaded from strong sunshine. In this position they will take rather longer in forming roots, but they keep clean and sturdy from the start. Any damping foliage must be promptly removed, and a strict look-out kept for slugs, which quickly devour the succulent growths. Here very little water will be necessary, but on a very bright morning, should the foliage be dry and inclined to droop, a very light dewing from the syringe may be given. Some varieties root more quickly than others. These should be removed to other frames, where a little ventilation can be afforded.]

NOTES AND REPLIES.

Chrysanthemum Kathleen Thompson.—Of all the sports of Chrysanthemum Caprice du Printemps, I think Kathleen Thompson is the best, its dark red blossoms being very effective either on the plant or for cutting. If disbudded, the individual flowers are of quite a good size. The plant is of moderate growth, scarcely reaching in pots a height of 3 feet, while its habit is all that can be desired. Further south, I understand the variety blooms in the open. Here, however, it must be taken indoors on the approach of frost. At the present time (November 7th) Kathleen Thompson is at its best.—W. McG., *Balmac*.

Chrysanthemum Sœur Melanie.—I was glad to read "Kirk's" appreciative note anent Chrysanthemum Sœur Melanie. My experience of this variety dates back twenty-five years ago, when I grew a number in quite small pots and edged a group of plants at an exhibition. It was then comparatively little known, and though one could not claim for it bigness in bloom, it had other good points—viz., free-flowering, dwarf habit, with foliage well to the pot, the blooms which gradually developed to pure white, generally being produced in clusters. It speaks much for it in these days, when so many sorts have joined the majority after a brief existence, to find that this pretty little variety has survived. It is one of those old sorts, like Source d'Or, that "time does not wither, nor custom stale." Sœur Melanie is a capital sort for growing in small pots from cuttings struck in May.—LEAHURST.

OUTDOOR PLANTS.

NERINE BOWDENI.

I THOUGHT this the most beautiful of hardy plants exhibited before the Royal Horticultural Society on October 24th last, when a fine group of it was brought from Guernsey by Mr. Frank Lilley. Welcome at any time, it is doubly so in October, when choice-flowering plants are becoming fewer in the garden. It is welcome, too, by reason of hardiness, and in this connection it has within it the possibilities of creating a new feature where the chief of the gardening done is in the open air. The warmth of its rosy-red flowers, produced in fine, spreading umbels, produces a quite unique effect. In well-grown examples an umbel may contain a dozen or more flowers, not of transient beauty, but giving a succession lasting two or three weeks. Radiating from a common centre at a slightly inclining angle on 2-inch-long pedicels, the flowers are bereft of the density and, to some extent, the formality of the majority, though modern hybrid Nerines are tending in a like direction.

A native of Cape Colony and first discovered in the mountainous district near King William's Town, it owes not a little of its hardiness, doubtless, to that fact, and is proving as hardy as the Belladonna Lily and some other Cape bulbs. To ensure its safety, however, it should be planted 5 inches or 6 inches deep, selecting as for the other plant named a warm,

sheltered spot like the foot of a south wall or that fronting a greenhouse. It was first exhibited and certificated in 1904 as *N. excellens major tardiflora*, the name being subsequently changed to *N. Bowdeni* on the plant being accorded specific rank. Eighteen or so inches high, its leaves are usually retained till the new flower-scape appears, when they perish. A warm and sunny position in loam, freely incorporated with old mortar and sand, and the deep planting already noted, are the conditions calculated to ensure its success.

E. H. JENKINS.

—Planted on a sunny south border in well-drained soil, this Nerine is proving a valuable autumn flower. Under conditions favourable to the Belladonna Lily, *N. Bowdeni* thrives at the foot of a south wall, and during October is very showy. When first introduced from South Africa about 1900, and distributed by Mrs. Cornish Bowden, of Oaklawn, Newton Abbott, it was thought to be a hybrid or variety. The bulbs first flowered in Ireland in the late Mr. W. E. Gumbleton's garden. One of, if not, the largest-flowered of all the Nerines, the rose-pink blooms are borne on robust scapes up to 18 inches high. It is a very distinct species. It seeds freely, and by this means and offsets it can be readily propagated.—*Irish Gardening*.

LILIUM REGALE.

THIS is, without doubt, the most valuable addition to the genus of modern times. It is also an acquisition from every point of view. Full of promise from the first, it has not only proved quite hardy in various parts of these islands and in America—in the latter Mr. E. H. Wilson reported in 1913 that "with the thermometer registering 42 degs. Fahrenheit of frost, and the ground frozen for 10 feet down, the bulbs came through unscathed"—but for amenability to cultivation and free-flowering it has no equal in the trumpet class to which it belongs. To these attributes must be added a prodigality of seeding which at once provides the cultivator with the means of gardening with it on a lavish scale, and, apparently, so far as present experiences go, without the misgiving that seed-production in its case means the loss of the bulbs. It has all those desirable qualities which go to make a good garden Lily, not being surpassed in this respect by the much better known *L. Henryi*.

First discovered by Mr. E. H. Wilson in August, 1903, when travelling in Western Szechuan for the Messrs. Veitch, it was originally named *L. myriophyllum* at Kew. Later it was discovered to be distinct from that species, and the above name adopted. Originally only some 300 bulbs were introduced, but in October, 1910, Mr. Wilson was responsible for the substantial importation of 6,000 bulbs, which arrived in America in the April ensuing, and, being planted, flowered well and ripened a good crop of seeds. It has been repeatedly shown in this country, and gained an Award of Merit in 1912, though, probably, no Lily has more richly merited "First-class" honours. Be that as it may, Lily specialists and all who have tried it recognise it as a first-class plant, and the demand for it is considerable notwithstanding the price is high.

CULTURE.—From the cultural point of view, while succeeding in sun and shade, it appears to revel and to attain its maximum—4 feet or so—in a good depth of cool loam, with which a free addition of well-decayed leaf-mould, a sixth of peat, and an equal amount of thoroughly-decayed manure and some sand have been incorporated. A stem-rooting kind, it is important that it be planted 6 inches deep at

least, in order that a maximum of such roots be formed and, in turn, afford support to the plant. For the same reason, too, an annual mulch of fairly rich soil or a renewal of the surface portion would prove beneficial. As promoting longevity at flowering time a partially-shaded position is best. The linear, lance-shaped leaves are each 4 inches to 6 inches long, frequently sickle-shaped, and densely crowd the stem to the base. Moreover, they are retained right into November—provided severe frosts are absent—and the cultivator has no better sign than this that all is well with his plants. Two to four of the great horizontally-disposed, trumpet-shaped flowers crown the growth. Flushed with a reddish colour externally, they are white and yellow within. The bulb, to those seeing it for the first time, usually disappoints, and it is quite possible to get a dozen into an ordinary cigar-box. Unlike any other trumpet Lily known to me, the bulbs are conical or ovoid in outline, the scales acutely pointed, and coloured a

spicuous by the presence at the base of the inside of the flower of a black, three-armed cross edged with gold. It is a beautiful late-flowering Tulip, which may be planted up to November, and in light soil needs hardly any attention, except lifting when the bulbs become crowded.—S. A.

Reseda glauca.—This perennial Mignonette is not often seen, but is a capital rock-garden plant. It has tiny leaves of a pretty, glaucous hue, reminding one somewhat of an *Ethionema*, and slender spikes of cream-coloured flowers, which are produced in great profusion. It likes a fairly rich soil with plenty of lime in it, and appears to be quite hardy. It is easily raised from seed.—N. L.

Verbascum Caledonia.—This is a true perennial, and of very good habit, having stout spikes of large bronzy-yellow flowers, which do not grow too tall. It can be increased readily by careful division of the root, and a good stock can be raised in this way. A good group looks very handsome when associated with other tall-growing plants, and it is not at all fastidious as to soil.—N. L.

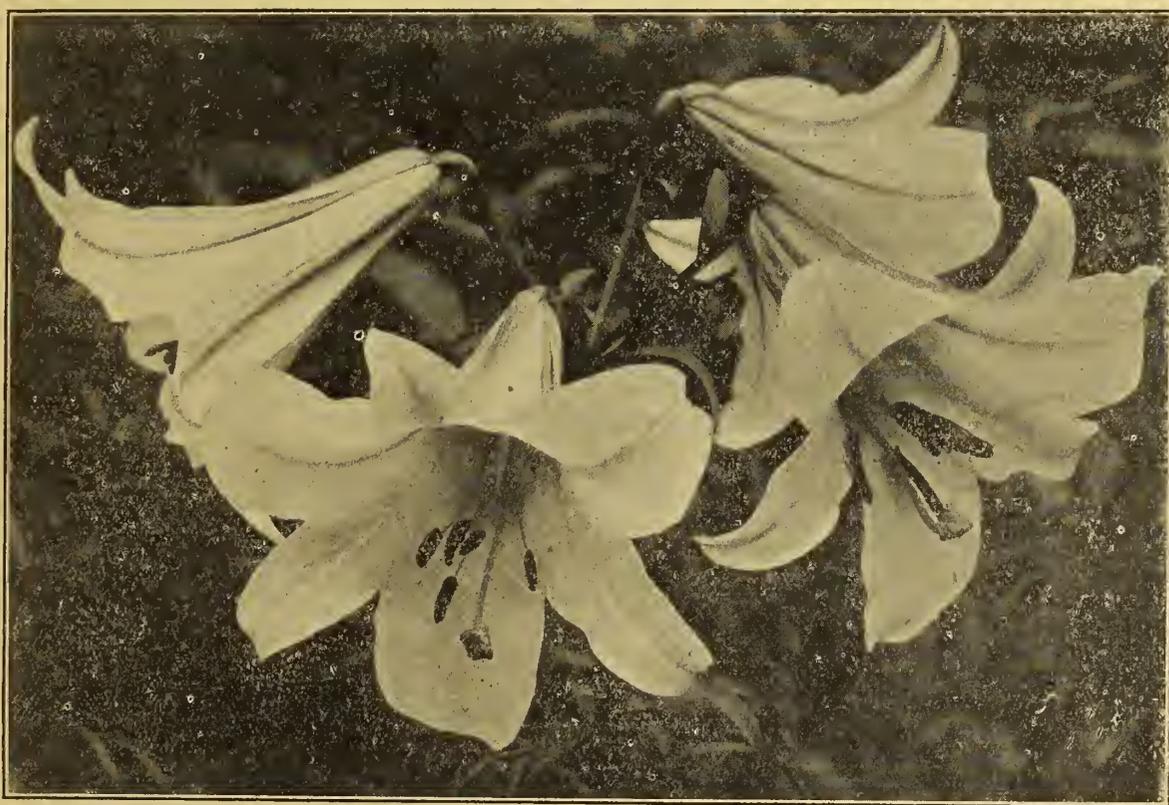
Saponaria Boissieri.—I have grown this on rock work for a few years, and find that it does

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM NOVEMBER 15TH.—*Abelia rupestris*, *Ceanothus* (in variety), *Hardy Fuchsias*, *Veronicas* (in variety), *Solanum jasminoides*, *Andromeda polifolia*, *Correa magnifica*, *Jasminum nudiflorum*, *Laurustinus*, *Clematis* (in variety), *Roses*, *Myrtle*, *Choisya ternata*, *Hydrangea paniculata grandiflora*, *Phygellius capensis*, *Pentstemons*, *Antirrhinums*, *Michaelmas Daisies*, *Erigeron mucronatum*, *Potentillas*, *Fumitory*, *Mexican Poppy*, *Androsace lanuginosa*, *Parochetus communis*, *Sternbergia lutea*, *Hardy Cyclamens*, *Crocus speciosus*, *Dwarf Campanulas*, *Lobelia cardinalis*, *Primula japonica* (this year's seedlings), *Polyanthus*, *Nepeta Mussini*, *Ericas*, *Menziesias*, *Violets*, *Pampas Grasses*.

THE WEEK'S WORK.—The principal work during the past week has been the lifting and re-planting of trees and shrubs, the weather having been very favourable and the soil in perfect condition for the work. Not only is it a gain to have this work completed before the busy season, but the plants benefit greatly.



Lilium regale.

dark reddish-purple, much deeper, indeed, than those of *L. Henryi*.

So far as my experience goes, the plant is immune from disease. Retaining its leaf-growth till frost, and not ripening seeds before late October or November, planting should be done during the latter month where possible. Hence, collectively, we have here a species which, while ranking high with the best of its fellows, bids fair to surpass them all in permanent garden merit and value, which, after all, is the true test of any plant's worth.

E. H. JENKINS.

NOTES AND REPLIES.

Sedum primuloides.—"A shy bloomer!" seems to be the general verdict of those who have tried this, and it would be rather useful to have some details as to how those who grow it flower it. It is quite a pleasing plant, and is evidently quite hardy.—S. A.

Tulipa Eichleri.—Each flower, frequently 9 inches across, is of a most glowing deep scarlet, whose brilliance is made more con-

not differ very greatly from some plants of *S. ocymoides*. Any differences which exist are pointed out by Mr. Jenkins in the note which accompanies the illustration on page 503. It seems, in addition, to be rather less subject to being destroyed by an unusually wet winter—the cause of occasional disaster to old plants of *S. ocymoides*.—S. ARNOTT.

Labels in the hardy flower border.—At no time of the year is it so important to label plants as in the winter. Especially is this so in a garden where hardy-flowering plants are grown. It is so easy to unwittingly run the spade through a clump of Lilies when there is no foliage to indicate its whereabouts. Labels save much inconvenience and are often the means of preserving plants that would otherwise be possibly lost.—TOWNSMAN.

Convolvulus lineatus.—This is a beautiful Convolvulus of non-climbing habit, and is, in fact, one of the dwarfest of the genus. It is only about 6 inches high, with small silvery leaves, and bears pale red-purple flowers about the month of June. So far, however, it has proved a shy bloomer with me. The orthodox treatment—a warm position in dry and sandy soil—is not always effectual.—S. ARNOTT.

The ground being still warm, the roots will take possession of the soil at once, and, therefore, be much better able to withstand the drying winds which tax newly-planted shrubs so heavily during the spring. Successful transplanting depends to a great extent upon the care exercised in lifting. Secure as large and solid a ball of soil as possible by digging a wide trench round the specimen at a distance according to its nature and size. When re-planting, dig holes sufficiently large with a good margin for spreading out the roots and for fresh loose soil around the latter. Trim the points of roots that were broken and bruised in lifting, and lay them out carefully, covering with fresh soil, and making firm as the work proceeds. Give a soaking of water to settle the soil about the roots. Stake securely, and mulch with any loose protective material available. Charming effects can be obtained by planting suitable climbers on tree stems, and the present is the most suitable time for the work. In most cases the soil will need to be trenched and manured. Many varieties of *Roses* are very suitable for this purpose. The planting should be done at a distance of about 3 feet from the stem, and the roots placed with

their growing points from the tree, the object being, whilst training the growths of the plants up the trunk of the tree, to attract the roots away from the trunk by placing manure and suitable soil where the roots are wanted to extend. The chief points to observe in cultivating Roses in these positions are to keep them clean and well supplied with water in dry weather. In addition to Roses, many climbers may be planted in this way, including Clematis montana, C. flammula, Polygonum baldschuanicum, P. multiflorum, Rubus Bambusarum, Actinidia chinensis, Schizophragma hydrangeoides, Wistaria, Vitis (in variety), and Tropæolum speciosum. There are few plants to equal Michaelmas Daisies for late autumn flowering, but their beauty is often spoilt by allowing them to grow undisturbed for a number of years. They should be lifted and replanted every season if the best results are desired. The most suitable time to do this is immediately after they have finished flowering. Select only small pieces for replanting, as each shoot will make a good specimen. Although most commonly grown in the mixed border, they are seen to better advantage when planted in bold groups by themselves and on the margins of shrubberies or the banks of a lake or stream.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Fruit-room.—Particular attention should be paid to both Apples and Pears, and care taken that specked and decayed fruits are not allowed to remain on the shelves to endanger those which are sound. The temperature should be kept as cool as possible and light excluded. When a separate place is not provided for the storing of Pears, these should be put at the warmest end of the Apple-room.

Pruning.—Where there is much pruning to be done during the coming winter it would be a good plan to make an early start. Currants and Gooseberry bushes may first be dealt with, as the ground between them can then be manured and pointed over the first convenient opportunity. In pruning Red and White Currants, all side shoots and growths on spurs are cut back to two buds, and, unless necessary to extend the main branches, the leading shoots are cut back to four buds. Where necessary, shoots are left and shortened one-third to make good any gap occurring in any of the bushes through a branch dying or as the result of an accident. Young shoots or suckers springing from the base are remorselessly removed. With regard to Gooseberries, we prune these in accordance with the purpose for which the fruit is required. Those which supply berries for gathering in a green state have the wood left much thicker, the same being partly shortened instead of being spurred back. Very heavy crops generally result from this method of treatment; but if the produce had to remain on the bushes and ripen, the berries would, from want of a sufficient amount of sunlight and the fact of the crop being a heavy one, be inferior both in quality and flavour. Fruit for the dessert is, therefore, grown on bushes which are kept well thinned and the young wood spurred to two and three buds, the leaders being shortened or tipped just as circumstances demand. By growing them on this principle it is unnecessary when the break is not enclosed with wire netting to net in the whole of the bushes when the fruit commences to ripen.

Black Currants.—These require no spurring, but to have the heads of the bushes kept well thinned instead. The object to aim at is to have as much young wood as possible in them, to attain which the oldest should be cut out annually. This, with good cultivation in the shape of affording the roots a plentiful supply of manure, maintains the bushes in vigorous health and in a productive condition. When bushes are numerous and a partial loss of crop is of no serious moment, every other or one or two rows of bushes may be cut back hard now and again with the object of securing an abundance of young, vigorous growths. This course of treatment if followed up keeps the bushes free of old and decrepit wood. Where the Black Currant-mite is present to a limited extent the affected wood, as far as cir-

cumstances permit, should be carefully cut out and burnt, and the swollen buds picked off from all portions which cannot be spared. The mite-infested buds as picked off should be dropped into a bucket containing a sufficiency of paraffin oil to kill the mites they contain. If the attack is a bad one the only thing to do is to grub and burn the bushes forthwith and plant breaks in another part of the garden as far removed as possible from the old one.

Early-flowering Gladioli.—The planting of these should now be done, making groups of them in the borders and the forefronts of shrubberies where an effect alone is desired, and where required for cutting in quantity planting in a series of beds or in a border in the kitchen garden. Each group should consist of one variety only. Plant the corms 3 inches to 4 inches apart and about 4 inches deep, and place some sharp sand at the base of each. Lightly mulch the surface afterwards. When the soil is not suitable it always pays to remove it or otherwise to render it so by adding a goodly portion of fresh loam and leaf-mould.

Planting of Daffodils.—The value of these for embellishing those portions of lawns overshadowed by trees as well as under them when they are of a deciduous nature and do not form too dense a canopy is well known. Irregularly-formed groups planted in the Grass, in front of shrub borders, on banks, and in well chosen spots in the more outlying portions of the grounds are always effective, and once planted afford a display for years afterwards. The soil being in such a moist state, planting can, as a result, now be carried out in an expeditious manner. It should, however, as the season is so far advanced, be brought to a speedy conclusion.

Sweet Peas.—Where the plants are known by previous experience to pass through the winter satisfactorily, one or more rows should be sown at once with a view to obtain early flowers for cutting. A warm, sheltered, and well-drained position should be chosen, and every attention paid the plants when they appear above ground or they will speedily fall a prey to slugs. Sparrows also have to be reckoned with in the vicinity of towns.

Rose planting.—The planting of all kinds of Roses must be pushed on so that—weather conditions permitting—it can be brought to a conclusion by the end of the month. We have planted as late as the third week in December and with excellent results, but, when possible, prefer to finish at the before-mentioned period. In spite of so much wet weather, the soil is in good working condition, and there is not the slightest difficulty in getting plenty of it with which to cover and surround the roots before filling in the holes. If standards are to be planted the stakes for their support should be driven in first. Mutilation of roots is thus avoided. Trellis work for the support of Ramblers is now being erected. This is constructed of Larch poles in two sizes—those of a larger diameter for the uprights, and the less sized ones for the crosspieces and bracings. When the planting is completed a mulch of leaf-mould and spent Mushroom manure will be afforded.

Edible Peas.—The old-time practice of sowing a few rows of Peas in autumn now seldom obtains, but is, when climatic conditions are suitable, well worth doing, as if the plants survive the winter they yield an early supply. A warm border is the best position for them, and the variety should be one of the hardy or round-seeded types.

Broad Beans.—These are hardier than Peas, and can generally be depended on to come safely through the winter. A good sowing where pods are required as early as possible should be made forthwith on a well-drained, sheltered plot in the usual way, a good hardy variety for the purpose being the Dwarf Mazagan.

A. W.

MIDLAND COUNTIES.

Late Grapes have been cut and the stems placed in bottles filled with water. Two or three pieces of charcoal are placed in each bottle to keep the water sweet. The Grape-room is kept quite dry and a temperature of

45 degs. to 50 degs. maintained. When the bottles require refilling remove them from the room for the purpose. Under these conditions the Grapes will keep just as long as if they were left on the Vines. The removal of the bunches will permit of watering the roots, which are in need of a good soaking. Unless theinery is utilised for housing flowering plants the ventilators should be thrown open at all times. The welfare of the Vines must be considered, and air admitted freely whenever the weather permits. Partially prune the Vines to facilitate the ripening of the wood. The pruning and cleansing of mid-season Vines should be hastened as it is important to get as much of this work done as possible before the beginning of the New Year. The pruning of

Bush fruit will be proceeded with as soon as wall trees are finished. On Red and White Currants all side shoots should be cut back to within an inch or rather less of their origin, leaving about 6 inches of new growth on the main branches if extension is necessary. In the case of Black Currants the finest fruits are produced on wood of the previous year's growth. A few of the best-placed basal growths should be left to take the place of old and exhausted branches, which should be removed. Any young shoots of undue length should be cut back, and others not required entirely removed and the lateral growths on the main branches spurred back. Gooseberries may be pruned in two different ways—one by spurring back the shoots made during the preceding summer (which must be practised with cordon-trained Gooseberries), and the other (which I prefer for bushes) by retaining entire any shoots needed to form a well balanced bush, shortening those that exceed 1 foot in length and entirely removing any old branches and other shoots not required for furnishing the bush. In gardens where birds destroy the buds of Gooseberries the best remedy is to enclose them in a wire-netting cage, the sides of which should be removable to admit the birds at certain seasons. Failing protection, they should be syringed two or three times during the winter with some distasteful ingredient, choosing a fine day for the spraying.

Calanthe Veitchi and C. vestita are now ripening their foliage and pushing up their flower-spikes. Very little water will now suffice for the plants, but they must not be allowed to become dry until after they have finished flowering. Lillium speciosum, which has finished flowering, is kept rather on the dry side, and when all the foliage has fallen the stems will be cut down to the level of the pot before placing them in a cool and dry place, where they will remain until early in the spring, when it will be necessary to shake them from the old soil before repotting. Retarded bulbs potted in August are growing freely and are given weak liquid-manure.

Carrots.—Late crops that were raised from seed sown in July have had some partly-decayed leaves spread between the rows to afford protection during severe weather, as these roots will be allowed to remain in the ground until required for use. The reason for using the leaves in a partly-decayed condition is that they are not so likely to be blown about by the wind.

The herb border has been put in order. Useless and untidy growths have been cut away, weeds removed, and the soil neatly forked over. Roots of Tarragon and Mint have been lifted, planted in boxes, and placed in a warm-house.

Winter salads constitute an important part of the daily supply, and every attention is now given to the blanching and protecting of Endive. The plants have been removed from the open ground to cold-frames, and good batches are introduced to the Mushroom-house as required, thus keeping up a good and constant supply of first-class salad. Late sowings of

Turnips have made good progress, and a little soil has been drawn over the bulbs as a protection from frost. The largest that are fit for use have been lifted and stored in sand.

Jerusalem Artichokes have been lifted, the largest and best-shaped tubers sorted out for consumption and the smaller ones reserved for planting next season.

Digging and trenching are now the principal work. The sites for next season's crops have been fixed, and the ground is treated accordingly. On no account should heavy land be dug while very wet. When carrying out the work leave the surface as rough and lumpy as possible, thus exposing the soil to the weather.

F. W. GALLOP.

SCOTLAND.

Anemones.—In some districts the spring planting of Anemones may be necessary, but in these gardens it is found that good results are obtained if the corms are put out in late autumn. In the course of the week, therefore, a considerable planting was made. Departing from the old practice of putting Anemones into beds, it was decided to plant them at the foot of a fruit wall protected by a glass coping. It is hoped that they will give a good account of themselves in this position, and that the flowers will be available at a slightly earlier date than in the case of those planted in the open. A quantity of *A. fulgens* was put out, and the soil was lightened by a free use of lime rubble.

Irises.—At the same time, and under precisely similar conditions, a planting of Irises was made. We grow many of these in cold-frames merely for cutting; but the Algerian Iris (*I. stylosa*) does well under the glass coping of a Peach wall. The present planting included a good number of the Snake's-head Iris (*I. tuberosa*). This is not generally considered quite hardy; but our comparatively mild climate sometimes provides surprises for visitors, and I see no reason to doubt that *I. tuberosa* will do as well as *I. stylosa*. *I. histrio* and *I. histrioides*, like *I. reticulata*, appear to be difficult to obtain in quantity at the present time.

Ixias.—Encouraged by the success which has attended *Ixias* grown in the open, further plantings were made in the course of the week. These small bulbs may be planted quite thickly, and, so far as present experience of their requirements goes, they appear to relish, like Anemones, a mixture of lime in the soil. Their value for cutting where batches of a good size of one particular subject may be from week to week required is great. *Ixias*, it may be said, are very satisfactory as pot plants, but they do not seem to care for much forcing.

Stove.—The time is at hand when a slight reduction in the temperature may be safely practised. In October it is quite a simple matter to run the thermometer up to 65 degs. to 70 degs. with a mild expenditure of fuel. Now the nights get colder, and if a minimum of 65 degs. is aimed at it will be found that firing must be correspondingly brisk. Most practical men will not strive after a steady and unchangeable heat in the stove. It is much better to vary it according to the outside thermometer. At the present time the maximum at ten p.m. in the ordinary stove may very well be about 65 degs., and if at daylight the thermometer indicates 62 degs. no fault can be found. Less syringing is now needed—once a day being sufficient. I prefer to do this syringing in the early morning, but many like to do it about 3.30 p.m. It is merely a matter of opinion.

Chrysanthemums.—Every endeavour should be made during the present dull and rainy weather to keep down damp. Near the sea we suffer in an especial way from the humid atmosphere, and Chrysanthemum blooms are very readily affected by this. Ventilation is given amply both by day and by night, and a comfortable heat is allowed in the pipes. With full ventilation at 10 p.m.—full, that is, by comparison—a temperature of 55 degs. seems to be about the correct thing. Blooms are expanding well, and the Chrysanthemum season seems likely to be a prolonged one. I do not know how it may be in other places, here cuttings are developing much too rapidly. These if suppressed only result in weaker growths, and it is yet too early to put in cuttings with any prospect of success. It is difficult to know what to do for the best in such cases; but, following the advice of a gardener under whom I worked at one time, the cut-

tings are being put in. "The best time," he said, "at which to put in Chrysanthemum cuttings is—when you can get them."

Vermin.—At this time of the year in country districts there is generally an outbreak of vermin—rats, voles, and other pests—which draw in to the more sheltered regions of the garden on the approach of winter. During the week signs of such an invasion were noticed, and steps were taken to deal with it. Traps and poison were used, and after a few days quite a satisfactory clearance has been effected.

Digging is being persevered with on all suitable occasions. Broken weather has to some extent interfered with this work, but yet appreciable progress has been made. A Strawberry break which it was decided to dispense with has been well trenched, and a crop of Potatoes will be taken from it next year. A quarter occupied by Rhubarb had got rather untidy, and it was cleaned down and, for appearance sake, was lightly pointed over.

Hardy flower borders.—There has not yet been any frost, and there remains a fairly good display of Asters, Dahlias, Chrysanthemums, and the ordinary run of border plants. In these gardens these things are generally cut over about mid-October, so that the present season seems likely to set up something like a record for the duration of hardy flowers.

Among the vegetables.—A little time was devoted to removing decayed leaves from Brussels Sprouts during the week. The earlier lot of these useful vegetables has turned out well; but, as in the case of Cauliflowers, those put out at midseason have not been a success. At the same time, they may probably turn in at a very useful time. Growth is yet maintained among Leeks, these and Kale having been suited by the cool and moist summer. In the course of the week it was found possible to earth up the late Celery—a task which had been delayed by the continued wet weather. Jerusalem Artichokes, which have been rather severely dealt with by high gales, will shortly be cut over. These are hardier than is generally supposed, and may be left out all winter if the cut stems are laid crosswise over the bed. A look round was given to recently planted Cabbages, and any blanks or unsatisfactory plants were made good. Cauliflowers are now turning in fairly well, and if frost holds off this crop will not, after all, prove to be such a failure as was at one time anticipated.

W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

NATIONAL CHRYSANTHEMUM SOCIETY.

NOVEMBER 9TH AND 10TH, 1916.

THE annual exhibition of this Society took place on the dates named in the Royal Horticultural Hall, Westminster, when flowers of the highest quality were seen. Many larger exhibitions have been held though few indeed have contained flowers demonstrating higher cultural excellence. This was so, indeed, in the large Japanese classes, where Mr. Stevenson, the gardener at Woburn Place, Addlestone, took the leading prizes for thirty-six, twenty-four, and twelve Japanese respectively—with blooms of uniform excellence throughout; and again in the large class for twenty-four incurved varieties, where Mr. A. B. Hudd (gardener to Mrs. Chalmers, Bickley) scored so well with perfectly-finished flowers. This class, indeed—a big test of cultural skill and judgment—attracted gardeners freely and was among the most admired in the show. We were pleased, too, to see those old types of incurved Mrs. G. Rundle and Mrs. G. Glenny figuring prominently in one of the exhibits, and should not be surprised to see a revival of them at any time. Exhibition blooms in vases are ever a big attraction and add greatly to the good effect by their handsome long-stemmed flowers. To those who prefer smaller or more elegant blooms the

singles, of which there was a great wealth, would appeal strongly, while the Anemone-flowered sorts, in greater excellence than of yore, are obviously attracting an increasing number by reason of their distinctive characteristics. Pot plants, whether decorative or grown on the exhibition plan, find little or no room in the exhibition hall to-day, and, indeed, these phases of culture are not catered for in the schedule. The most imposing exhibit in the show was a non-competitive one from Mr. Phillip Ladds, and constituted the feature of a good all-round display. Such exhibits tend to show the enterprise and enthusiasm which still prevail among horticulturists, and in all probability no finer group has ever been seen. Generally, competition was keen and but few classes were unrepresented. Several novelties received first-class certificates. Quite a crowd thronged the hall on the opening day.

The one confusing thing about the exhibition was due to the arranging of the exhibits, neither order nor sequence finding place. Classes 5 and 17, for Japanese blooms on boards and a display of singles in vases respectively, joined without rhyme or reason, and for a Society in its sixtieth year we expect perfection in such matters. It was but one of many like instances, and caused much inconvenience. Much time, too, was lost in an attempt to find the new varieties, and officials seemed powerless to assist. Following are some particulars of the show:—

In each of the leading classes for thirty-six—twenty-four and twelve Japanese blooms, distinct—Mr. T. Stevenson (gardener to Mr. E. G. Mocatta, Woburn Place, Addlestone) took the premier award with blooms of the highest quality throughout. His thirty-six were magnificent, and we select Mrs. Algernon Davis, Edith Cavell, William Turner (grand white), A. E. Roope (orange-yellow), Bob Pulling (rich yellow), and Miss E. A. Tickle (deep pink) as six of the indispensables in the lot. We have, however, rarely seen finer quality or a more uniform standard. This exhibitor also scored easily against seven competitors in the class for one vase of three Japanese blooms (white), employing that grand incurved variety William Turner, probably the best white in the exhibition. For three Japanese (yellow) Mr. H. Woolman, Shirley, near Birmingham, was in the place of honour with his new Seedling Shirley Golden. It is handsome and rich in colour. For twelve vases of cut Chrysanthemums (Challenge Trophy Class), three each of Japanese, Incurved, Single, and Anemones or Pompons, each vase to contain five blooms, the trophy was won by the Finchley Chrysanthemum Society, some half-dozen growers contributing the blooms. No other Society competed. Frank Tristan (bronze), Decartes (crimson, Anemone-flowered, and very distinct), and Mrs. Luxford (crimson Japanese) were three of the more weighty vases in a good all-round lot. The class for twenty-four incurved blooms, as already hinted, was a great attraction, and only rarely are such finely-finished examples seen. Of more exacting requirements, culturally, than the Japanese, their uniform quality merited the highest praise. The exhibitor who gained first prize was Mr. A. B. Hudd (gardener to Mrs. Chalmers, Farrants, Bickley, Kent). White Empress, Godfrey's Eclipse (golden), Buttercup, Hanwell Glory (bronze), and J. Wynne (pink) were a few in a nearly faultless lot. This exhibitor also carried off the leading prize in the class for twelve. For a collection of disbudded blooms in vases Messrs. Cragg, Harrison, and Cragg, Heston, were unopposed, their blooms being

very fine; the exhibit received first prize. E. Cox (incurved white), Pioncer (golden incurved), Max (very distinct red and gold single), Crimson King (a decorative sort), and T. Page (pink) were among the best. Messrs. Cragg and Harrison alone exhibited a collection of partially disbudbed or undisbudbed blooms, six vases of Anemone blooms securing the first prize in each. In the last-named, Aphrodite (deep lilac-pink) and Cordelia (red and fawn, with gold-tipped central boss) were the varieties shown.

Mr. A. R. Robertson (gardener to Mr. F. J. Yarrow, St. John's Wood Road) took the leading prize for a display of single-flowered varieties, Mr. A. B. Hudd (gardener to Mrs. Chalmers, Bickley, Kent) taking first for large-flowered singles, which have probably never been better shown. His set comprised Kathleen Wells (crimson), Isabel Felton (yellow), Stewart Smith (first-class certificate, a grand white), Caledonia (light amaranth), Bertha Fairs (terra-cotta), and Alberta (of reddish tone).

Mr. D. B. Crane, Archway Road, Highgate, was unopposed in the table class, and took first prize for an artistic arrangement of yellow and red single Chrysanthemums associated with coloured leaves. Mr. Crane also scored in the single vase class, Mr. Stevenson being second. The last-named exhibitor was in the place of honour for three vases of Chrysanthemums, in one of which the original types of incurved (Rundle and Glenn) were shown. Mr. Crane had the finest basket of Chrysanthemums and took first prize.

NON-COMPETITIVE EXHIBITS.

By far the best of these was that from Mr. Phillip Ladds, fine flower quality and artistic effect being combined. In a central position at the western end of the hall it constituted a most imposing display. Fifty big blooms of the white Mrs. Gilbert Drabble were in the centre, with vases and stands of such as Sandown Radiance (brilliant crimson single), Edith Dimond (single golden-bronze, first-class certificate), Edith Cavell (bronze), Phyllis Cooper (golden single), and many others. Rosamund, an exhibition variety of old rose colour, was one of the most distinct. A Gold medal was awarded. Messrs. Cragg, Harrison, and Cragg showed good Anemone-flowered sorts in their lot, Snow Queen, Aphrodite (pink), Ceres (rich yellow), Cordelia (fawn and red, first-class certificate), and Mabel Weston (white) being some of the best. Mr. Norman Davis had Mrs. Algernon Davis (clear pink) and Mona Davis (pink), both exhibition varieties, among many; also Sandown Radiance, one of the most brilliant. (Gold medal). Messrs. W. Wells, Limited, Messrs. H. J. Jones, Limited, and Messrs. Godfrey and Sons were also given gold medals for collections already noted in a previous report. A dozen or so new varieties, described on page 596, were awarded the first-class certificate.

CORRESPONDENCE.

PLANTS AND FLOWERS.

Blue Hydrangeas (G. H.).—These are very popular, but there is always a large amount of uncertainty about obtaining the flowers of the right colour, even when, as far as our knowledge goes, we adopt what is considered the best means to secure the object in view. The following compost for plants in pots has been recommended:—One half should be turfy loam, broken up with the hands, but not sifted, the other half a mixture of peat, crushed charcoal, and about 2 lb. to the bushel of iron filings. It is generally supposed that the blue colour is due to soil which contains iron.

Azaleas in bad condition (Rex).—Your Azaleas have been badly attacked by thrips and red-spider. Syringe or spray them with paraffin emulsion, Quassia extract, or Tobacco-water. If you could move them into a small house and fumigate them well, this would clear off the pests. A cheap insecticide for destroying these pests is as follows: Tie up a peck of soot in a canvas bag, and place it in a hogshead of soft water. Stir the bag of soot about daily for a week, and then when clear syringe the plants, diluting if need be. Try it on one or two plants first. This is an excellent syringing mixture, not only freeing the plants from insects, but giving health and vigour to them.

Salvia splendens (A. T.).—The old plants, which during the winter should be given sufficient water to keep them from being dried up too much, should next spring be given a temperature of 50 degs. to 60 degs., when, if kept moderately moist, they will soon push out new shoots, which, when large enough, must be taken as cuttings. The cuttings should be put into pots of sandy soil, and in a warm propagating case will soon root. After this they must be potted singly, and as soon as the roots take possession of the new soil the tops should be pinched out in order to encourage a bushy habit of growth. If shifted later on into 5-inch pots, and kept growing in the greenhouse, they should form good-sized plants, which will flower during the autumn and early winter months.

FRUIT.

Cracked Pears (G. Whiting).—The spotted and cracked condition of the Pear you send is due to the malady termed black-spot, or Pear-scab (*Fusicladium pirinum*). The remedy is to spray the tree with Bordeaux mixture at full or "winter" strength when the buds are about to burst in the spring, and at half or "summer" strength after the fruit is set and swelling off, and once or twice afterwards, allowing fourteen days to elapse between each application. As this fungoid disease is often to be found on the young wood, it is essential that the trees be thoroughly sprayed when resting in the winter. A combined fungicide and insecticide, such as Wohurn wash, is best suited for this purpose, and this, together with the Bordeaux mixture, can be obtained from any garden sundriesman. The cracking of Pears is sometimes brought about through the roots having descended into the subsoil, which in all likelihood has happened in your case. The remedy, then, is to lift and lay out the roots anew in a nearly level position and to place some new compost consisting largely of fibrous loam and some charred refuse round them to encourage the formation of fibrous roots.

SHORT REPLIES.

Halesby.—See reply to "R. A. T.," re "Sawdust as manure," and that to "Sweet Briar," re "Wood shavings," in our issue of November 18, page 587.—**G. Hill.**—If the wood in the trees is all like that sent, they will never do any good, and the best thing you can do is to grub them and put young, healthy trees in their place. On such a soil as you have it would be well to clear out the stations to a width of 3 feet and 2 feet deep for the fresh trees and substitute good loamy soil before planting.—**Gerald Martyn.**—The Rose you mention is said to be of vigorous growth, and should do in the position into which you have put it. We should, however, have chosen such a Rose as Mme. Berard.

NAMES OF PLANTS AND FRUITS.

Name of plant.—**C. M.**—*Schizostylis coccinea*.

CATALOGUES RECEIVED.

W. WATSON AND SONS, LTD., Clontarf Nurseries, Dublin.—List of Fruits, Roses, and Shrubs. THEODORE TURNER, Dale-street, Liverpool.—Bulb List, 1916.

DOBBIE AND CO., Edinburgh.—List of Scotch Grown Seed Potatoes.

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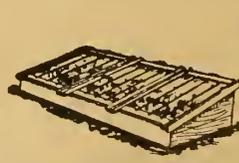
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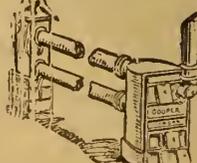
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GARDENING ILLUSTRATED.

No. 1969.—Vol. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

DECEMBER 2, 1916.

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CATTLE POISONING AT OCKHAM.

If any record could be kept of the deadly effects upon horses and cattle through eating even small portions of Yew it would show an amazing destruction of useful creatures. Recently one such sad accident which has taken place in a beautiful place in Surrey should open all eyes to the danger of planting Yews as freely as is now done without any artistic aim.

On Ockham Park Estate, Surrey, six of a number of heifers which had been turned out to graze on land in the occupation of Messrs. Gimmell, of Bridgefoot Farm, were found to be dead, and a number of others were in a serious condition as a result of their having eaten portions of the foliage of the Saffron Yew-trees, of which there are a number in the enclosures around Ockham Park House. The animals, the property of Mr. Ewings, of Bramley, had been taken in for grazing on that part of the Ockham Estate which is included in the Bridgefoot Farm. A gate leading to one of the enclosures was, it is said, inadvertently left unfastened, and the cattle thereby gained access to the Yews. A seventh heifer afterwards died.

The animals seem to die quickly, and apparently without much suffering, as if the heart were paralysed. Just as the French speak of the harm to cookery done by cooks, so we may say of our pretended landscape architects who scatter this murderous tree about the country place. It is the common resort of all who copy plans to plank down dark lines of Yews, although there are other evergreens much better for the purpose. The idea is common that cattle will not go into the garden or where these trees are placed, but they do get access to garden or pleasure ground, and often with a fatal result.

The right place for our native Yew, which is so deadly to animals, is in the wood or in some way cut off from any possible access to it by animals. Where the trees are old their stems should always be cleared to a height of at least 15 feet of all the lower branches, which are often worn out and useless to the tree, and merely hide the handsome boles. Often I see old Yews clad to the ground, their noble stems and colour concealed from the eye. Properly treated, the Yew is a noble ornament, and may, with care, be harmless.

From the point of view of beauty the tree may give, it should be enjoyed without risk of loss. The old and stately tree, with the finely-coloured stems, may be considered safe, and also old trees in woods which, from their woodland associates, often lose their lower boughs. If not, trees should be boughed and the

cuttings burned on the spot, also branches broken off in storms. Stock so often breaks through fences that where Yews abound there is danger of great loss, as occurred at Fillingham Castle. It is well, therefore, to have woods looked through and all boughs taken off and burnt. This practice does no harm to the old trees. In my own case I have young trees in woodland pruned up out of harm's way, and this practise helps the tree to get out of the spreading habit.

A fact that puzzles some and leads to vain discussions is that Yew-trees may exist for years in a place and do no harm, and then a sudden fatality may come. Growth is so rapid in some soils that boughs may come within reach of the animals, and it is likely an animal may be more liable to injury at certain seasons or states of the stomach. W.

NOTES OF THE WEEK.

A mare's nest!—We see in a paper that there is a new gain to our flora! Some forms of the South African plant one can hardly stop the growth of even in poor soil. No doubt it got thrown out in soil.

An addition to the flora of the British Islands has been found in the Montbretia—a near relative of the Iris and a native of South Africa—which recently was seen in bloom between the stones of the beach at Cobb, near Lyme Regis, in Dorsetshire.

Cotoneaster microphylla.—The illustration (p. 557) shows the value of this plant for covering objectionable sites. As a wall plant it shows to good effect when covered with its handsome berries through the autumn and winter. On a cottage close here the south front, 12 feet high, is covered, and has been so for many years, the plants flowering and fruiting freely. A pity it is not seen more often, seeing how easily it is increased from cuttings, or, better still, layers.—S. P., *Hants*.

A charming rock spray (*Cotoneaster Hookeri*).—Thinking I had some just idea of these shrubs, dwarf or tall, I saw one at Sheffield Park which surprised me by its brightness and distinction, the berries as gay as those of any, but the shrub standing erect, yet throwing its arms as gracefully as *C. horizontalis*. We owe the increase of this to Mr. T. Smith, of Newry, who saw its merits early and has a fine stock of it, so I have planted several groups of it in various aspects. What we owe to these precious shrubs is not always seen in gardens, there are so many, and they ask for some knowledge of their ways and forms to get their true value.—W.

Verbena venosa poisonous.—I was sorry to see this plant classed as poisonous by "K. M.," page 575. What does "K. M." mean by saying he trained the plant? A few sticks, twiggy or straight, according to fancy, is all this plant requires, making much handling of it unnecessary, unless one takes up the plants and pots them (as I have done) to ensure a safe wintering. Even so, I have not experienced any ill-effects, nor have I heard of any other gardener having done so. It will be a great service if other growers of this *Verbena* will give their experience.—C. TURNER.

Cotoneaster rugosa Henryi.—This pretty Chinese species is, by reason of its habit of growth, admirably suited to growing against a wall. Its peculiar habit of growth is such that it may be trained horizontally in fan-shaped outline against a wall with good effect. The wrinkled lance-shaped leaves, each 3 inches to 5 inches long, are distinct from those of most members of its tribe, while the clusters of brownish-crimson berries at their base in August and September are a considerable attraction. No member of the genus is more distinct, and few are so ornamental.—S. S.

Carnation Bishton Wonder.—To attempt to describe the colour (or colours) of this remarkable variety is a little risky, though it may safely be said of it that it is one of the most fragrant Carnations of the Perpetual-flowering class which has up to the present been introduced. The perfume is that of the old Clove in very pronounced measure, and the fact will ensure for it many admirers. It is of the fancy class, and that phase of it in particular which embraces the "heliotrope" and other nondescript shades, which would be even more out of place elsewhere. It is a large and handsome flower, and distinct in its way. Messrs. Allwood Brothers have shown it freely of late.—E. H. J.

Chrysanthemum Ceddie Mason in the open air.—It is not often this fine single *Chrysanthemum* blooms out-of-doors; but at present (November 18th) it is in good form in a border. This, of course, is attributable to the mild weather so far experienced, no frost having as yet been registered. I have been comparing the colour of blooms from the open with that of flowers from plants in the greenhouse, the comparison being decidedly in favour of the former. There is a greater richness in the blooms from the open, and they are quite two shades darker than those grown under glass—the latter being more of a reddish shade, while those from the open

almost approach maroon in colour. *Sylvia Slade*, too, has bloomed here out-of-doors during the present season.—W. McG., *Balmoe, Kirkcudbright*.

Hakea laurina.—Cut branches recently shown by Messrs. R. H. Felton and Sons of this South-west Australian shrub attracted much attention. At a short distance the exhibit was frequently mistaken for one of the several blue Gum-trees (*Eucalypti*) which the firm named shows from time to time. The foliage is thick, firm, intensely glaucous, Mistletoe-like in outline, though twice or thrice its size. The reddish stems are very effective in conjunction therewith, the ball of crimson and sulphur-yellow constituting the floral parts and appearing in the leaf-axils. Like the *Eucalypti*, it is well suited to decoration, lasting many weeks in presentable form.—S. V.

Cynoglossum amabile.—This is one of the most beautiful annuals of recent years. On seeing a bowl of it recently arranged with pink Roses I was charmed with its beauty. In some instances this plant had been used as a groundwork to yellow Roses. The bunches of good blue flowers are abundantly produced on stems 18 inches or so in length, and are useful for cutting. The plants continue to flower the whole season through. The seeds should be sown about the end of February and the seedlings pricked off into boxes. When hardened off they may be transferred to the open. The plant is so easily grown in this way that there should be no difficulty in securing plenty of plants.—E. M.

The wild Clematis (*C. Vitalba*).—The note by "W." (page 575) afforded me no little satisfaction, for I also have failed to appreciate *C. Vitalba* as warmly as Mr. Cornhill does. Mr. Cornhill is in error in regard to this *Clematis* being found only "on a chalk subsoil." It flourishes with us here where there is no lime or chalk. Indeed, there is an immense bush of it at this moment in a neighbour's garden. It looks like a very dirty sheep of gigantic stature, and one of these days the seed will be scattered over our borders, shrubberies, rock-gardens, and walks. This it does with unflinching regularity every year, so maintaining a succession of seedlings which spring up where they are least desired.—A. T. J., *N. Wales*.

Rose Tea Rambler.—I see in GARDENING ILLUSTRATED for last week (November 18th) your correspondent speaks of *Rose Tea Rambler* as being unsuitable for places where the winters are inclined to be severe. I have grown it here (at Ely), where the winters are intensely cold and damp, with the greatest success. I have two, both well over 10 feet high, and in June they are a mass of the loveliest pink Roses, growing in beautiful clusters, and the branches festooning themselves in the most graceful and luxuriant way, the foliage as well as the flowers being very beautiful. It blooms earlier than any other *Rose* of the kind, and for that reason, and for its wonderful beauty and extraordinarily strong and quick growth, seems to me a most valuable *Rose*, and I am quite sorry to see it depreciated.—AGNES RANDOLPH, *The Almonry, Ely, Cambridge*.

Flowers from N. Devon.—I picked these blossoms this morning (November 13th). The plants from which they were gathered have all wintered several years out of doors. We mat them in the coldest weather and cover their roots with leaf-mould and stable-manure rotted down together. Of course, I might lose them any year if we had unusually severe weather, but last winter was very trying, as we had a "wet frost" and the mats froze to

the creepers. I cannot understand why I do not succeed with *Streptosolen Jamesoni* out of doors when these things succeed all right.—ROSAMOND A. CHRISTIE, *Tapley Park, Instow, N. Devon*.

[With the above note was sent a gathering of flowers, among them being those of *Passiflora*, *Abutilon*, *Salvia Greggii*, *Buddleia asiatica*, *Cytisus racemosus*, *Cassia floribunda*, *Habrothaunus elegans*, *Plumbago capensis*, *P. c. alba*, *Correa*, and *Fuchsias* in many varieties.]

Prunus Miqueliana.—This species of *Prunus*, which was first introduced by Mr. T. Smith, of Newry, a few years ago, was at that time known as above, but since then the names of *P. microlepis*, *P. microlepis* Smith, and *P. subhirtella autumnalis* have been applied to it. The question of which is the correct name can be left for botanists to quibble over. It is remarkable among the *Cherry* family from the fact that the pretty semi-double flowers are borne during the late autumn months. They are each about an inch across and are freely produced on the leafless branches. A pleasant fragrance adds to their attractive features. When first expanded they are white, but become suffused with a little colour afterwards, especially towards the centre. Its origin is unknown, but it is generally supposed to be a cultivated form from Japanese gardens.—K. R. W.

The Blue Hound's-tongue (*Cynoglossum amabile*).—I take the English title conferred on this plant on page 551, but it is not very distinctive, for have not all the *Hound's-tongues* blue flowers? This one deserves all the praise bestowed on its beauty by "W.," but unpleasant experience prompts me to utter a word of caution in regard thereto. It ripens seed in greater profusion than others of the family, and the nuts are little burrs of extraordinary adhesive power. Under a lens it may be seen that they are so closely studded with little hooks that when they get into a dog's hair or a cat's fur it is impossible to relieve the animal of the intense irritation caused, except by cutting away part of its coat. I rejoiced when this plant took to sowing itself in open parts of the woods. The lovely sky-blue blossoms persist long after most flowers have disappeared, but it is not good to think of the suffering inflicted upon wild furry animals. Even the obnoxious rabbit is entitled to expiate his iniquity in a less excruciating manner.—HERBERT MAXWELL, *Monreith*.

Chrysanthemum Florrie King.—Although generally classed as a variety for flowering under glass, I find this one of the best kinds for growing in the open air. The habit of the plant is tall, but the stems are stiff and well branched, and, therefore, staking is an easy matter. The single flowers are large, of fine form, and of a delicate pink colour, and develop wonderfully when cut and placed in water. I do not think it is necessary to stop this variety, but the buds should be thinned. If a spray of good-sized flowers is desired the principal central bud of each shoot should be removed, as the side blooms are on longer stems. Very large flowers, each from 3 inches to 4 inches across, can be had by retaining the central bud and removing the surrounding ones. The growth and foliage of this variety are very satisfactory, even when the new shoots proceed from the old ones cut down the previous autumn. Root-suckers are not freely produced on my plants, but would probably be induced if the old stems were cut down to ground level. As grown by me, this variety flowers during the first three weeks of November.—G. L. J., *Croydon*.

FRUIT.

PRUNING AND NAILING FRUIT-TREES.

MANY gardeners commence to prune and nail the trees on south and east walls, leaving those on the north walls till last. This, in my opinion, is a mistake, for those trees on warm aspects that are nailed and pruned early commence to grow too soon, while those on the north are retarded. To show that this is so, you have only to hang a thermometer against them to determine this. The walls often get warm, and as the heat is absorbed they will retain it for some time, giving it off later in the day when the sun has declined. Here, then, is the cause of so much mischief from early nailing on these walls. We often experience bursts of bright sunshine in early spring after a cold, frosty night or a sharp frost follows a bright day; the sap, being active, gets frozen and causes a check. This, no doubt, is in a great measure the cause of *Apricots* growing against south walls doing so badly in the southern counties. If these were left unnailed till late in the season they would doubtless be considerably retarded in their growth. I commence on the *Morello Cherries*, and follow on with all the trees on north walls. Those on western aspects are done next, then those on the east, leaving the south walls till last. If *Morello Cherries* have been taken in hand during the late mild weather the work will have been done with more comfort and in much less time than when deferred till cold, frosty weather sets in. The walls, too, can be cleansed more effectually than when they are frozen. One of the great secrets in the successful cultivation of this fruit is to rid the trees and walls of any insect pests during the winter, and this can readily be done as soon as the leaves have fallen. It should be the practice to unnailed and liberate all growths every second year. If half be done each autumn the task will not be so great as when all are left to be done at once. When the trees are liberated the walls should be washed with strong soft-soap water to which a little sulphur has been added. New shreds, which should be cut as narrow as possible, should be used. The stout branches should be fastened to the wall by pieces of golden *Willows*, as these are much neater than shreds, and not so liable to cut into the wood as tarred twine. It is not well to overcrowd the shoots, as the trees would not be able to support all the fruit that is set. Where the trees are not liberated the walls should be thoroughly syringed with soft-soap water after nailing is completed. *Plums* on north walls should next receive attention, the wood being washed and made clean. All dead spurs should be removed and others cut back to two or three eyes. Where trees receive due attention during the summer, and the ground is light, there will not be over-much growth to remove, but where neglected and the soil is stiff, strong growths will have been made which are by no means the most useful. Having completed the *Plums*, attention should next be directed to *Pears*. Trees should be freed from scale and other pests, every shoot being examined to make sure that the shreds or ties are not defective, for when the fruit is approaching maturity it is very annoying to find that some of the branches are broken down by its weight. By the time such trees are nailed, the winter will be getting advanced, so that it will be safe to prune and nail *Cherries* on the various aspects. These may be followed by the *Apricots*, and finally *Peaches* may be taken in hand. The advantages of leaving these till the

last are manifold. Not amongst the least is the retarding of the blooming period by keeping them away from the warm walls, as previously noted.

Nailing forms an important part in the successful cultivation of fruit, in the south, at least, and those who make close observation of time and seasons will be able to note the difference between the growth of trees that are nailed early and those that are left loose till late in the season.

T.

NOTES AND REPLIES.

Strawberries in fruit outdoors.—On established Strawberry beds I find many of the plants are flowering and fruiting, some fruits being now ripe. It may have been possible to lift some of these plants and place them under glass, and thus save

berry, because of its shallow root-hold; more, of course, in some soils than in others. Whether the soil be light or heavy, shallow or deep, drought affects all Strawberries, more or less, and I am satisfied it is premature ripeness, set up by drought, that has promoted this autumn cropping.—W. S.

The Himalaya berry.—This new berry is an extraordinarily prolific Blackberry, and, unlike most of its cousins from the States, it has the real Blackberry flavour and continues to fruit over a long season. In growth it rivals, if not surpasses, the Loganberry, and plenty of room must be allowed. Large bunches of fruit will be produced on the current year's growth, and it also continues to fruit from the old wood.—*The Garden.*

Old Vines—pruning.—Some years ago, when taking charge of a fresh garden, I found some

TREES AND SHRUBS.

ESCALLONIA MONTEVIDENSIS.

This is the handsomest flowering shrub in the garden at the present time (November 2nd), and is worthy of more extensive cultivation. Unfortunately, it is somewhat tender, but it succeeds in the open here, planted in a sheltered, well-drained border, and has stood 16 degs. of frost without protection, beyond a mulching of leaves. The plant from which the sprays figured were cut is about 7 feet high and 4 feet through; it has been in flower for more than a month and promises to remain in bloom for several weeks longer. The white blossoms are borne very freely in large terminal panicles and are useful for cutting.

F. W. G.

Lilford Gardens, Northamptonshire.

PLANTS UNDER TREES.

From a list of plants suitable for covering ground under trees, which appeared in a recent issue, Periwinkles are unaccountably omitted. They thrive in rather dense shade and where the tree-roots are near the surface. We have the plain-leaved kinds in variety, and the silver variegated and golden variegated varieties. Some pieces of the latter were planted some years ago under a big Wellingtonia from which I was obliged to cut some of the lower branches, leaving a naked stem several feet high. The Periwinkle has now covered the ground with a dense carpet of foliage some yards square, and to those who do not object to variegated plants, has a nice appearance, especially from now onwards through the winter. This variety blooms, but not freely, but the green-leaved kinds are fairly free in this respect. I do not think that the Epimediums get quite the attention they deserve. In one way they are remarkable, for they thrive in the sun and luxuriate in the shade. I have seen a dry bank in the full sun covered with them, and after some two months' dry summer weather they looked fresh and bright. At the same time, they are quite at home under trees, and certainly keep their verdure better there during the winter than when exposed to icy winds. There are pretty well a dozen varieties in cultivation, and they all bloom with more or less freedom, *E. sulphureum* being, I think, the best, the pale yellow blossoms contrasting nicely with the bronzy-tinted foliage, which is characteristic of this family and which renders them valuable not only in the outdoor garden, but also for cutting where evergreens are needed for indoor decoration during the winter. Another thing that I have always thought is not thoroughly appreciated for this purpose is *Cyclamen neapolitanum*. One sees this generally as isolated specimens or several plants together in the rock garden, and frequently not in perfect health and vigour. The true way to use this *Cyclamen* is in the form of colonies, more or less large, and under deciduous trees where the bulbs are naturally fed by the leaves that annually fall on them, and where they enjoy a certain amount of protection from hot sun when the foliage is completing its growth. The leaf development under such conditions is very different from the pinched growth made in the open where there is no natural mulch. Two years ago I planted about fifty good bulbs at the foot of a Douglas Fir which has a clear bole of some 8 feet. The soil is eaten up with roots, but the *Cyclamens* are doing splendidly and have covered the ground with finely-developed foliage, and they bloom well. The needles from the Fir, which is some thirty years old, furnish just the



Flowering shoots of Escallonia montevidensis.

these unseasonable fruits, but my experience is that Strawberries do not find much favour at this time of year. These crowns that are now giving this premature crop may not respond again in the spring. I am not quite sure that this is true, for there have been years when the same thing has happened, and the pessimist has said that a short crop would follow, because of the autumnal bearing. This was by no means apparent when the flowering time came round in the following year. It may be that these precocious crowns do not give a spring flower-truss, but the subdivision of the Strawberry plant into so many separate crowns will relieve any anxiety as to the future prospects. This fruiting in autumn occurs on both young and older plants, and may have been set up by the short spell of drought in July. This is always acutely felt by the Straw-

old Vines that had been hard pruned for many years. The first time I pruned them I began to lay in young shoots from the bottom, and in three years I had new rods, which gave me larger bunches. Treated thus, these old Vines improved. When at Hampton Court, I noticed how much larger the foliage and bunches were where young wood had been induced to start from the base of the Vines.—DORSET.

Red Currants.—A beginning has now been made with pruning Red Currants. In the case of old bushes the operation merely consists in cutting out decaying or unfruitful branches and in shortening back the current year's growths. An eye must be kept to the due extension of the plants, and, above all, to keeping the centre of the bushes open. Do not permit prunings to lie about. If laid out in handfuls as the pruning goes on they are much more easily collected than when they are allowed to fall as they are cut. The above remarks are also applicable to White Currants.

nourishment they need. Primroses do remarkably well under deciduous trees, the protection from early frosts when in bloom and from hot sun later on is what they love.

J. CORNHILL.

NOTES AND REPLIES.

Arbutus Unedo and the birds.—In a recent issue of GARDENING ILLUSTRATED "W. O." refers to the unusual freedom of the fruiting of this tree in his London garden, and remarks, "What a lovely sight it will be when the Strawberry-like fruits are fully developed." The vagaries of birds are such that the pleasure of seeing the fruit is very often denied to the owner. The habits of birds vary from year to year, and in one garden I can recollect the Arbutus fruits remaining over a prolonged period, birds not preying on them, at any rate, as soon as coloured. In another locality birds seem to be in waiting, and, attracted by the bright scarlet colour, the berries disappear very quickly. It is discouraging to plant with the object of providing such a fine winter feature when there is a danger of the fruits being destroyed by the birds. Thrushes, and perhaps blackbirds, are the culprits; possibly the missle thrush is the greatest offender. In order to obtain the fullest advantage from such fruiting trees they need to be planted where they come under the eye, or it may happen, as in my case, that the birds will soon clear the fruit. Some three years since our trees were laden with fruit, but, being somewhat isolated, only occasional inspection was possible. By the time the fruits were fully coloured all were cleared. I can recall a group of this Arbutus growing on an elevated bank in a Somerset garden, the soil being poor and heavy. Here birds did not molest them. The growth, being somewhat thin and stunted, displayed the bright fruits to much advantage, and the trees were attractive for weeks. When planted in rich soil the growth is vigorous and the fruits are not borne so freely. I cannot understand why birds take the fruits with such avidity, for they, as far as I remember, are tasteless and insipid. It may be other food is short when birds raid Arbutus, while the colour and shape, suggesting the Strawberry, may deceive the birds.—WEST WILTS.

Cotoneaster congesta.—For the rock garden I consider *C. adpressa*, *C. congesta*, and *C. humifusa* far the best of this genus as we know it to-day. Quite recently I have written in appreciative terms of the first and last named, and now direct attention to the above-named in order to complete a trio of rock garden indispensables. In the mind's eye there is a blunt pinnacle piece of rock 2 feet high, with rugged base from which the point rises, the whole $3\frac{1}{2}$ feet high. Doubtless it was the lateral spread of the base of the rock which suggested the planting of the Cotoneaster now in mind, and which today garnishes its summit and sides in quite a unique way. No word-picture can convey the good resulting from this association of rock and shrub, though a knowledge of the plant, in conjunction with the character of the rock against which it was placed, would reveal much to the intelligent planter. It is by the studied use of some of the best of these rock shrubs that the rock gardener of today has advantages. *Cotoneaster congesta* (syn. *C. microphylla glacialis* or *C. glacialis*) is a neat-habited, slow-growing evergreen alpine shrub, spangled in autumn with scarlet fruits. In its rock-clinging character it is charming.—E. H. JENKINS.

Escallonia macrantha.—This should be more extensively employed as a hedge plant, in the shrubbery or as a wall plant on any

aspect. To cover a north wall or fence it is especially valuable. In South Hants it luxuriates in all sites in which I have seen it planted. In North Wales, near the sea, especially about Colwyn Bay, it is the plant for small seaside gardens, growing freely and flowering abundantly. In Cornwall it grows even more freely. Cuttings taken in September strike freely in a cold-frame and quickly make bushy plants; indeed, in the open they root readily if inserted in gritty soil on a north border.—S. P.

The Lemon Grass perfume.—Once a year the hillsides of the Malabar coast of India are the scene of great commercial activity during the Lemon Grass harvest. Oil extracted from the Grass is employed in the manufacture of perfumes. The hillsides are burned over to destroy the old and useless Grass. Six months later the fresh crop is ready to be cut, and at once the countryside is dotted with furnaces and stills.

PLANTS AND FLOWERS.

FERNS.

THE ROYAL FERN (OSMUNDA REGALIS).

This is undoubtedly the most stately of the numerous British species belonging to the genus, as it attains proportions unknown in any other native kind, the usual length of its fertile fronds being about 3 feet, but its barren ones, which are much more numerous, attain an average of about 6 feet, and frequently double that height when found growing in a particularly suitable spot. The Royal Fern is distinguishable at first sight from all other native kinds through its peculiarly massive fronds, furnished with broad, somewhat heart-shaped, and almost stalkless pinnae of a light glaucous green colour. It is equally distinct from all other native Ferns by the peculiar conformation of its fertile fronds, which have caused it to be sometimes called, though erroneously, the Flowering Fern. In these fertile fronds the upper pinnae are divided and changed, as it were, into dense clusters or spikes of terminal capsules, which form a compound, loose cluster or panicle, while the basal parts of the said fronds are in all respects similar to those of the barren ones. Both are borne on smooth stems of a reddish hue when in a young state, but turning with age to a pale green colour. It is not alone by its foliage that this most noble of all British Ferns can be recognised, for its peculiar mode of growth is unique. Its fronds rise from the crown of a root, which, unlike that of any other native Fern, is tuberous, of a woody nature, scaly, sometimes rising erect as much even as 2 feet above the ground, and forming then a miniature Tree-Fern of somewhat bulky appearance, while at other times its root-stock extends horizontally, or nearly so, for about the same length; but it is, in all cases, furnished with numerous strong, fibrous rootlets.

Though not by any means common in all parts of the United Kingdom, in places congenial to its growth the Royal Fern is found plentifully, and in such positions has grown into huge masses. The *Osmunda regalis* is of easy cultivation; for open-air culture it prefers a damp, shady situation, where it requires but little care, and when planted in spongy peat and allowed abundance of water at the roots it grows vigorously, and soon makes a dense mass. When grown in pots it is indispensable that it should have plenty of root-room and abundant and continuous supplies of water, even during the winter, when the fronds have all died off. In the case of pot cultivation a compost of three parts

of peat and one part of fibrous loam is that which produces the most satisfactory results. Though sometimes propagated by the division of its crowns in early spring, the *Osmunda* is more generally raised by means of spores, which ripen in July or August, and which, if sown at once, germinate freely, and, if grown in a cool pit or in a greenhouse, form young plants in a short time.

—Though the Royal Fern loses its fronds in early winter it ought never to be allowed to become quite dry at the roots, and the withered leaves should be permitted to remain as a protection for the tender growths in spring. *O. regalis* was formerly quite common in some districts of the Stewartry of Kirkcubright, more especially near the sea, but it has been practically eradicated by so-called collectors—a fate which has also befallen the rarer and more delicate *Hymenophyllum*.—W. McG., *Balmac*.

NOTES AND REPLIES.

Nephrolepis exaltata.—Despite all the recent introductions, I hold that *N. exaltata* is one of the most useful of the family. It is especially adapted for use as a basket or hanging-basket. If used as a basket plant, *N. exaltata* may be associated with *Ficus repens*, which will furnish the basket until the strong, erect fronds assume the drooping habit which follows as growth matures.—KIBK.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

ROCK GARDENS.

MISTAKES in the construction of these are often ludicrous. I came across an instance the other day of misplaced zeal in this direction. A short, slightly curving drive about thirty yards long, leading to the front of a house, was flanked on either side by a few trees in the background, faced by some very much neglected shrubs. A new tenant had the shrubs cleared away, and, instead of trenching the ground and planting it with a few choice things, has built up a rough perpendicular wall about 2 feet in height on either side next the drive, and another wall 3 feet inward from the first, the intervening space being filled with soil and planted with Wallflowers, Daisies, and the like. I should hardly think any attempt will be made either to plant among the stones or have anything to hang over and partially clothe them, so one is faced at the entrance with the two stretches of bare, ugly stones. Bareness is also often a striking—perhaps the most striking—feature of many so-called rock gardens, the area covered by the plants bearing a very slight proportion to the great masses of stone. All plant lovers admire and appreciate a well-made, well-covered rock garden, but it is certain that this branch of gardening is getting a little overdone. Looking at the matter more especially from the view of the owner or tenant of the small garden, it is certain, so far as flowers are concerned, that one has to consider how to get the best and most enduring display in the garden and for cutting at a minimum of labour and expense, and this can be best effected by the utilisation of the best hardy border plants, not by building expensive and too often grotesque rock gardens. E. B. S.

Hardwick.

NOTES AND REPLIES.

Geranium striatum.—I agree with all that "N. L.," page 570, says regarding this *Cranesbill*. Its only fault is its very encroaching nature; indeed, in a small piece of rockwork it has practically ousted everything else, the smallest piece increasing at a very rapid rate. By the way, I wonder if "N. L." has noted the fine "autumn tints" assumed by the foliage late in the season.—W. McG.

INDOOR PLANTS.

PHYLLOCACTI.

WITHIN the last few years there has been a considerable revival in favour of these showy-flowered, easily-grown plants. To the amateur with but a single greenhouse, provided a minimum winter temperature of 50 degs. can be ensured, these Phyllocacti have much to commend them, for such constant attention as is necessary in the case of many plants may be dispensed with in their case. Generally speaking, shading is not required except during the flowering period, as direct sunshine at that time tends to lessen the duration of the blossoms. In the dwelling-house a sunny window just suits their requirements. The period of blooming of most of them may

April and continue growing until August. They should be repotted, if necessary, after flowering. During growth the plants should be kept fairly moist at the roots and syringed overhead once or twice a day in hot weather. They like full sun, plenty of fresh air, and a temperature not less than 65 degs. at night. When growth is finished the plants should be kept dry and allowed more air. From the end of October to the beginning of March they may be stood in a light, airy greenhouse with a temperature of not less than 50 degs. and be kept dry, though not so dry as to cause the shoots to shrivel.

NERINES.

ONE of the brightest features at the meeting held at the Horticultural Hall on October 24th was furnished by a number

now known as *N. curvifolia major*, and *N. corusca* must on no account be omitted. They both flower somewhat earlier than many of the newer forms. A section that I do not care for is that in which the flowers are more or less of a leaden hue. Of white-flowered kinds some good forms have been shown, but the principal white that can be obtained from ordinary trade sources is *Nerine flexuosa alba*. In this particular kind the segments of the lower part of the flower are widely removed from those of the upper, and thus, as it were, form a lip to the bloom. In this the segments are undulated in a remarkably pleasing manner. The

CULTIVATION of these Nerines in pots is not at all a difficult matter. The fact that they resent being disturbed at the roots more than is absolutely necessary should be borne in mind, therefore the potting compost should be of a good, lasting nature. Manure, with its attendant risk of worms, should be avoided. The most suitable compost consists mainly of good yellow loam of a fairly holding nature, lightened to the necessary consistency by a mixture of silver sand. If the loam is too heavy it may have a little well-decayed leaf-mould mixed with it, but, if possible, I prefer to omit this last-named. The pots must, of course, be effectually drained. It should be borne in mind that Nerines are essentially greenhouse plants, though on this point opinions seem to differ, for I read in a contemporary under the head of "Gardening for the Week" that "when Nerines have done flowering, leaf-growth should be encouraged by frequent applications of liquid-manure. The plants should be kept growing in a temperature of 60 degs. at night till growth again stops, when cooler and drier conditions are necessary." I consider that a minimum temperature of 60 degs. would have a weakening effect on the constitution of the plants, and I would much prefer 10 degs. less. A very essential point in the successful flowering of Nerines, especially those of the Fothergilli section, is to take care that they have a good roasting in the sun during the summer. At that time no water will be needed till the flower-buds are seen. The possibility of a hardy race of Nerines has of late been brought forward, for under conditions such as the Belladonna Lily delights in, *N. Bowdeni* has proved very satisfactory at Kew.

W. T.

NOTES AND REPLIES.

Zonal Pelargoniums.—These are a valuable addition to the stock of flowering plants at this time of year, and, when well grown and flowered, make a fine display. To have them at their best they need a house to themselves, a low span-roofed structure being more suited to their requirements than any other form of house. If heated sufficiently to command at all times a temperature of from 50 degs. to 60 degs., so that air can, in moderation, be admitted night and day, they will keep blooming for a long period. If a water-tank is situated under the staging it should either be covered over or emptied for the time being, as moisture in the air quickly brings about decay in the trusses. A mild dose of Clay's fertiliser every week not only prolongs the blooming, but serves to intensify the colour of the flowers and increase the size of the individual pips.—K. P.

Potting up Wallflowers.—Owners of greenhouses—especially cold houses—do not always make the best use of them in the early spring months, not a few people confining their operations to a summer display. It is within the province of everybody with a greenhouse to have a charm-



A seedling Phyllocactus.

be set down as during the months of May or June. Cuttings are not at all difficult to root if side-shoots from 4 inches to 6 inches in length are pulled out of their sockets with a side twist, and inserted into well-drained pots filled with a mixture of loam and sand, lightened, if the loam is very heavy, by a little leaf-mould. Enough water should be given to keep the soil slightly moist, but an excess must be guarded against. In potting, the basis of the soil must be good loam with a mixture of sand or brick rubbish and a little well-decayed cow-manure in a dried state. The first half of the summer is the best time for taking the cuttings, as by so doing they will be well rooted before winter.

When coddled, over-watered, and often shifted into larger pots, Phyllocacti soon get into bad health and never flower. The plants commence to make new growth in

of flowering examples of Nerines. Within the last decade or two there has been a considerable revival in favour of Nerines, and great numbers of seedlings representing almost every possible cross have been raised. Many have during this period been given Awards of Merit at the various autumn meetings of the Royal Horticultural Society. The different forms now in cultivation vary in colour from white to deep crimson, numerous intermediate tints being freely represented. Though some of the rosy shades are very beautiful I must confess to a liking for the brightly-coloured kinds. Of them the scarlet and vermilion tints, particularly those whose petals are studded with jewel-like coruscations that differ in appearance when viewed from various standpoints, appeal most strongly to me. In any selection of the best the old *Nerine Fothergilli major*,

ing yet cheap display by the beginning of April by potting up Wallflowers. This can be done almost at any time now, when weather permits, lifting each plant separately with a good ball of soil. A 6-inch pot is a suitable size. Water well after potting, and let the plants stand out of doors for a few days before bringing them indoors. Air must be admitted to the house freely. When showing bud it improves the blooms very much if they are given weak liquid manure. Blood Red, Purple Queen, Orange Bedder, Fire King, and Primrose Dame are all well known and excellent sorts, being not only valuable for their rich colours, but for their delightful fragrance. These qualities are never more appreciated than when the plants can be had in bloom some few weeks before they flower out of doors.—W. F. D.

Perpetual-flowering Carnations.—Plants which were rooted from cuttings and potted off a few weeks ago have now been placed on a shelf near to the roof glass in a light, airy house. For the next two or three months top-growth will be slow, but the plants will be making roots, and at the turn of the year it will be found that the young shoots will develop satisfactorily. The foliage should not be syringed during the winter, nor must the roots be allowed to become sodden. The flowering plants are now at their best, and are producing large quantities of blooms. To enable the blooms to last in good condition as long as possible every precaution is taken to prevent the atmosphere of the house becoming very damp. The temperature at night is maintained at 50 degs., a little air being left on unless there is severe frost. Abundance of air is given on all favourable occasions. Watering is done as early in the day as possible, and an occasional application of an approved fertiliser afforded the plants.

Greenhouse climbers in winter.—To admit all the light possible to greenhouses in winter can only be achieved where climbing plants cover the roof by reducing their growth to a minimum. Some plants, like Passifloras, for instance, are so rampant that it becomes needful every year to use the knife in no unsparing manner if the plants on the stages below are to be given a proper chance. In summer, with sunshine to obscure, it is different, but in these shortened days one can only save the daylight by wielding the knife.—W. F. D.

Fuchsias—keeping them in winter.—Very often the plants have to be moved from the stages to make room for other subjects in bloom or for the accommodation of bedding plants, and sometimes they are crowded together under the stage close to the hot-water pipes, where, if they do not become dried up, they are forced into growth long before it is necessary. The coolest part of the house should be assigned Fuchsias, and, failing this, they ought to be put into a spare room or shed away from frost.—TOWNSMAN.

House-warming in Korea.—When a Korean begins to build a house he first lays down a system of flues where the floor is to be. These flues begin at a fireplace, usually built in an outer shed connected with the house. From the fireplace the flues branch out like the ribs of a fan and end in a trench at the back of the floor space. This trench, in turn, opens into a chimney, usually built at some distance from the house. When the flues are completed the builder carefully covers them over with flagstones; he then cements the whole floor and covers it with a sort of thick oiled paper for which Korea is famous. The rest of the house is then built round the completed floor. When it is time to cook the rice for the morning meal the wife lights a little straw or brushwood in the fireplace in the shed. While the rice is cooking the heat from the fire passes through the flues, heating the stone flags of the floor and diffusing a pleasant warmth that lasts until it is time to prepare the next meal. Two heatings a day suffice to keep the floor warm.

GARDEN FOOD.

NUTS AND THEIR VALUE.

WHEN considering the question of food-values and their relations to expenditure there is much to be said in favour of Nuts, which contain a large amount of protein matter and are also, if used in the right way, able to afford a supply of necessary oil. Housekeepers of experience know that to spend less money on food does not necessarily mean economy, and if Nuts are to form an occasional substitute for meat they must be used fresh—when they contain the largest amount of oil—and they must be presented in suitable form if they are to be digestible. Towards this end purchase a small mill—the cost of which is very trifling—in order that the Nuts used may be freshly ground, and have them slightly roasted before grinding. Thus they will have a better flavour and more food-value than when bought in ground form.

NUT AND POTATO RISsoles.—Take 2 teacupfuls of cooked Potatoes, 1 teacupful of mixed Nuts, 1 egg-yolk, a tablespoonful of white sauce, salt and pepper to taste. Have the Nuts lightly roasted in the oven; then put them through the mill or chop them finely. Rub the Potatoes through the sieve, and mix them with the Nuts. Add seasoning to taste, and then mix in the egg-yolk—keeping back a little with which to brush over the rissoles—and bind together with the sauce. Turn the mixture on to a plate and let it cool. Now form it into balls on a floured board; egg and breadcrumb these, and fry them in hot fat. Drain them and serve with good meat-gravy.

CHESTNUTS IN BROWN SAUCE.—Owing to the large amount of starch they contain Chestnuts should always be well cooked. If nicely boiled, then tossed in a little fat, and seasoned with salt and pepper, they make excellent substitutes for Potatoes, crops of which have been very disappointing in some districts this season. Prepared as follows Chestnuts make a very good stew: First remove the outer shell and the inner brown skin of the Nuts by making a slit at the side of each with a sharp knife to prevent bursting, and then put them on a tin in the oven for eight or ten minutes. Now take out a few at a time, and remove the skins with the point of a knife. Care must be taken not to have the oven too hot, or the Nuts will brown, which is undesirable. Have ready half a pint or more of ordinary brown sauce, put the prepared Chestnuts into this, and let them stew very gently until tender.

BAKED NUT SOUFFLE.—Into a saucepan put half a teacupful of breadcrumbs and a cupful of milk, and cook over the fire until quite smooth. Then remove the pan from the fire and to the contents add a cupful of mixed Nuts, chopped finely; a small stick of the white part of Celery, finely chopped; a teaspoonful of minced Parsley; and pepper and salt to taste. When well mixed stir in the beaten yolk of an egg, and then fold in lightly the whisked white. Pour the mixture into a greased pie-dish, sprinkle the top with ground Nuts, and bake in a moderate oven for about twenty minutes. Serve as quickly as possible.

NUT ROLY-POLY.—Take $\frac{1}{2}$ lb. of flour, a teaspoonful of baking-powder, 2 oz. of Nut butter, a pinch of salt, brown sugar, mixed Nuts and raisins. Have the raisins and Nuts well chopped. Rub the butter into the flour, add a pinch of salt, the baking-powder, and sufficient water to make a smooth paste. Roll this out into a sheet a quarter of an inch in thickness, cover first with a layer of sugar, and then with chopped Nuts and Raisins. Roll up, brush over with sugar moistened with milk, and bake in a moderate oven.—Guardian.

Tomatoes—keeping powers of fruit.—When these are cut just as they are commencing to colour they will keep a long time. Such fruits, however, are poor in flavour and not to be compared to those ripened on the plant. The best flavour can only be obtained by allowing the fruits to hang till dead ripe. Having some

fine fruits under glass in a cold house this autumn, I allowed them to remain on the plants, and was astonished at the time they hung after being coloured. When used they were delicious. Many people do not know the true flavour from having to obtain them from shops. When cut in a green state they will keep for two months if needed.—W., Surrey.

GREEN INDIAN CORN.

I do not know the exact age at which green Corn or Maize should be gathered, but the right time is when the grains are fully grown, but still full of a milky substance, which, when ripe, hardens into the Maize of mature growth. The most delicious way of cooking green Corn is to gather the cobs, remove all the outside sheath, leaving just one or two leaves to cover the grains, and boil until tender (the grains, not the centre) in salted water. The cobs should be placed in water when it is boiling fast, and the water should boil briskly during the whole process. Take up the cobs, remove the leaves, and send to table very hot. The usual way to eat is to take up the cobs with a napkin and eat off the grains. But the nicest way, to my thinking, is to hold the cobs upright, and, with a sharp knife, cut off all the grains. Pour a little dissolved butter over, and sprinkle with salt.

The simplest way of cooking any vegetable is always the nicest, to my way of thinking, but green Corn can be used to make very delicious dishes. One dainty way of cooking it is to take a cupful of the green Corn after it has been boiled and cut off the cob. Pound in a mortar until it forms a paste, add sufficient pepper and salt to flavour, and one tablespoonful of flour. Beat two eggs well and mix with the rest of the ingredients. Fry in spoonfuls in butter, drain on kitchen paper, pile high on a serviette, and send to table very hot. A sprinkling of chopped Parsley makes a pretty garnish. H. T. C.

NOTES AND REPLIES.

Apple Allington Pippin a failure.—This with me is poor, not a keeper and not a good quality Apple, compared with our best. Why should such a fruit be brought out in the face of such as Sturmer, Ribston, Roundway Magnum Bonum, Blenheim, Cox's, or D'Arcy? The truth is, the growth in market quantities of our best native Apples is a far more important affair than buying novelties that often prove failures. The trade should be more careful, and certificates to fruits should not be given until a fruit has been tried for at least ten years in gardens.—W.

Italian Chestnuts.—Mr. N. Lewis Solomon writes me from Covent Garden:—

“I am afraid the large Italian Chestnuts are not coming this year. The growers say that they are required at home for food, and therefore will not allow them to leave the country. Whether this is right or not I cannot say, but up to the present no Italian Chestnuts have been seen on the market. I have sent you the next best, and hope you will like them.”

THE Roman soldiers, who made such wonderful roads and carried a heavy weight of armour and luggage, lived on coarse brown bread and sour wine. They were temperate in diet and regular and constant in exercise. The Spanish peasant works every day and dauces half the night, yet eats chiefly black bread, Onion, and Water Melon.

IRISH agricultural returns for 1915-16 show a decrease of 10,092 acres under Wheat, 17,071 under Oats, 831 under Rye, and 66 under Beans and Peas, while there has been an increase of 8,477 under Barley and Bere. Green crops decreased 22,335 acres, and fruit 318 acres, but Flax increased 38,311 acres.

OUTDOOR PLANTS.

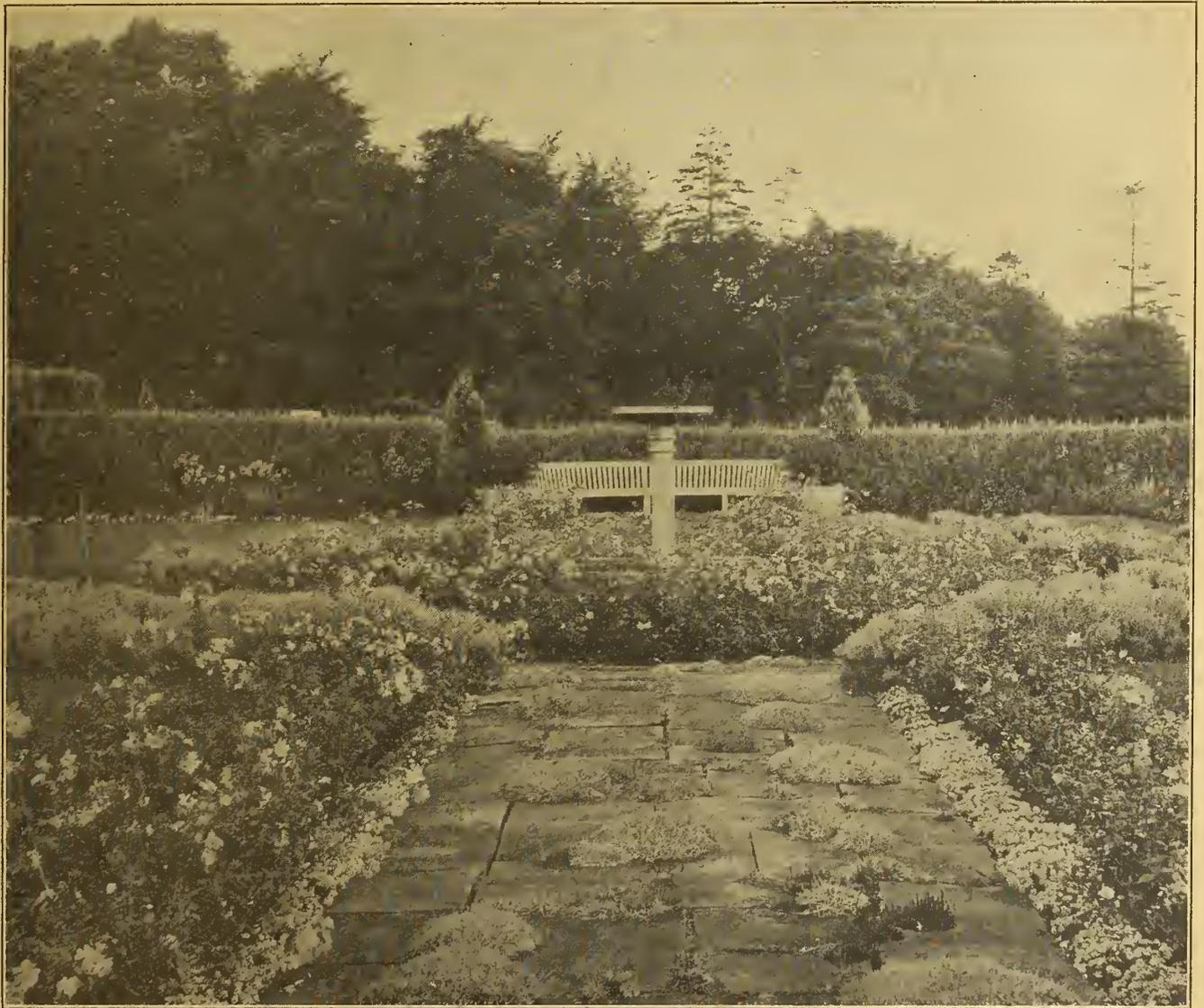
THE FLOWER GARDEN AT EMMETS.
This is one of the pretty incidents at Emmets, and there is no reason, however, for calling it a formal garden, as is the new and silly way nowadays. The garden is right in all ways, though I do not think the clipped hedge is the best thing for surrounding it. It would be as easy to get a fence that did not want clipping, and a wall of some local material would be as pretty as anything, or, next, a good Oak post and rail fence would be right and graceful with climbing Tea Roses and other climbers, and would get rid of the

is necessary. It is a showy Sage from Kashmlr, whence it came more than eighty years ago. It sends up a spike bearing a number of whorls of flowers. Of a beautiful blue, and as the spike is 2 feet or more in height, *S. hians* is a capital plant for the border in June. It is hardy and lends itself readily to ordinary border culture.—**S. ARNOTT.**

AMONG THE HARDY FLOWERS.

CUTTING DOWN HARDY FLOWERS IN AUTUMN AND WINTER.—This, it appears to me, offers a most useful question for our consideration. The garden should be kept as neat and tidy as possible, compatible with its style, even the most informal garden look-

OLD FOLIAGE ON THE BLUE AFRICAN LILY.
—I have tried leaving on this the old leaves until late spring after the young growths had pushed through the old, and I find that they are an excellent protection. It is claimed for it that it is the natural one, but that, I should say, is not a conclusive argument, seeing that the conditions in our country are absolutely different from those in its native land. However, if we find it answer for our purpose it matters little whether it can be defended on such grounds. Last spring, I thought when the frosts of any severity were over, and the new growths of the African Lily had grown through the old, pulp-like leaves, that they, in turn, were



Flower garden at Emmets, Kent.

barber's clipping, always a mistake. I never clip anything in my own garden. What is meant is that a clipped line of shrubs is a dead line, involving much annual labour and giving nothing back, whereas a low wall of local stone may be a garden of choice plants that want a little more warmth than our climate gives in the open ground. **W. R.**

Salvia hians.—As a good June-flowering, hardy border plant *Salvia hians* deserves attention. It only appears to have one defect. This is that it produces few flowers for the size of the plant. It is possible that frequent division may be necessary, but *Salvia hians* is not yet common in cultivation, and some experience

ing as if robbed of some of its charm if it is neglected and unkempt even in the depth of winter. But it is a question if we do not sometimes carry this too far, particularly in the colder districts, where the spring frosts are severe and often do harm to the young growths of certain plants. One of your contributors has drawn attention to this subject and has mentioned several plants which he does not recommend should be cut down in autumn and winter, but allowed to retain the old stems, etc., until the young shoots are well through and hardened off. It cannot be denied that old stems and decayed leaves are not specially pleasing, to say the least of it, but we must put up with a good deal to obtain better results.

injured by frost. I was in despair, thinking the plants would do no more good. I left them alone, however, and, to my delight, new leaves again appeared and the plants flowered splendidly in due course. It is contended that this is much better than covering with straw.

COVERING OTHER PLANTS.—I have also been trying other and hardier plants, and I find that the old stems, if left until new growth has taken place, afford an excellent shelter, not only for the young shoots, but also give some needed shelter to many very early flowers which are apt to be nipped by late frosts. These old shoots are untidy—there can be no denying this—but it is worth considering whether the gain is not greater than the loss.

TENDER CLIMBERS ON WALLS.—I find that covering these with a close mat, as is so often done, is very risky if we have sharp frosts after the plants have made some growth. In winters which are mild in the early part (and we have many such) growth is fostered by the covering of the mat, and if we remove the latter too early there is always the risk of frosts destroying the young growths, made tender by their covering and stimulated by the warmth the mat affords.

TORCH LILIES IN SPRING.—It is curious how badly Torch Lilies suffer in some springs in certain gardens. In many seasons they suffer a good deal if left unprotected. Some folks put ashes or litter over the crowns, while others tie the old leaves together so as to throw the winter rains and snow off the crowns. This is all very well if there are not many late frosts, but I am not sure that this tying the old leaves like a sheaf over the crowns is a good plan. The other winter I lost some plants through doing this. It was rather a mild spring, and when I examined the plants I found that they had made some growth. I removed the old leaves, and the growths were coming on nicely when a "killing frost" came and the plants were so badly crippled that they did not recover. Those with litter over the crowns survived.

AN AMATEUR OF HARDY FLOWERS.

HERBACEOUS PLANTS FROM SEED.

ALTHOUGH in the majority of places little attention is given to raising a stock of herbaceous plants in any variety from seed, it is a question if it is not a branch of flower gardening that does not deserve more attention. One is sometimes met with the argument that we have plenty of bedding plants for the formal garden, and many herbaceous plants are short-lived so far as their flowering season is concerned, and are, therefore, hardly admissible in prominent places where a good and constant supply of bloom is required for a given time. This may be partly true, but in the case, for instance, of Antirrhinums, Pentstemons, Carnations, Violas, etc., we have even a longer flowering season than is obtained from the majority of tender plants; whilst others that are more quickly out of flower, as Pyrethrums and Columbines, are beautiful in their foliage, and may, at any rate, be planted sparingly in clumps with other things. Take also the case of herbaceous borders. Are they full of good things, or is there a mixture of weedy rubbish and a lot of shrubs and small conifers that are quite out of character on such? If so, by all means (as excellent strains are obtainable from all the best firms) secure packets of seed of such things as Poppies, Pyrethrums, Carnations, Polyanthus, Antirrhinums, Pentstemons, Foxgloves, Aquilegias, Campanulas, Verbascums, and Delphiniums that will in their respective heights furnish a grand display. Even if not wanted for flower garden planting they are sure to be useful, and in all cases where there is a great demand for cut flowers never be without a nursery bed of perennials. A small stock in variety once obtained, the best seedlings can be selected for future seed saving and sowing. Fortunately, too, in the case of the majority of hardy plants one is, with careful selection, fairly certain of a good plant, good average flowers, both individually and in the spike or truss, and occasionally some interesting new departures. All species that will flower the same season should be sown early, say about the end of February, either in a pit or, preferably, in boxes, placing the same in a vinery that is at work not too far from the glass. Those who are contemplating raising a stock of such plants

should not attempt more in the spring than they can well manage. If other work press rather hard it is best to defer the sowing until the end of the summer, transplanting and planting out in the following spring. E. B.

ENGLISH AND SPANISH IRISES.

Too frequently the importance of planting these in due season is by no means fully appreciated, and so long as the bulbs remain apparently sound in the dry state, planting is deferred and often neglected. But if those that remained undisturbed in the ground were examined, it would be found that several inches of new roots had been produced even as early as the beginning of October. This alone should prove that too long a season of dryness is not desirable or even necessary. Frequently when the resting is enforced beyond reasonable limits a dry rot sets in that plays havoc in a short time. This is true of the English section so-called more than of the Spanish in my experience, and may in some degree possibly owe its origin to an imperfect system of drying after lifting the bulbs. Indeed, once thoroughly dried, I find they are safer stored in perfectly dry sand in shallow boxes in a well-ventilated place rather than exposed to the fluctuating influences of weather and consequent atmospheric changes. Completing their flowering and growth by the middle of July the period of rest immediately ensues, while during autumn and winter they are quite active at the root. In the case of heavy soils and such as are cold I believe in a short rest each year as a preventive of deterioration of the bulbs. To this end I would lift them, if possible, any time after the middle of July and rest them for six or eight weeks. Failing this, place lights over the beds and rest them in this way for at least ten weeks.

As pot plants these lovely Irises do not receive much attention. While not capable of enduring anything approaching a forcing temperature, they may be forwarded in pots in a greenhouse quite easily. Under this treatment the exquisite beauty of their flowers is enhanced. Any required for this purpose should be potted early in autumn and remain plunged 6 inches deep in ashes or Coconut-fibre till the end of February, or they may be introduced at the beginning of this month into a cold-house and brought on gradually. The Spanish section being the earlier are better for this purpose, and of these some of the pure white kinds are lovely. From the moment growth commences plenty of water will be needed at the roots. H.

NOTES AND REPLIES.

Romneya Coulteri.—What is the proper treatment for this plant? Do I cut it down to the ground in the same way as other herbaceous subjects? I should also like to know whether it can be propagated by means of side shoots or cuttings. Any information will be greatly appreciated.—G. H. S. R., Bristol.

[This is quite hardy in warm soils, and in your district you should have no trouble with it. Where it will not grow in the open it would do so in many places against a wall with a southern aspect. When once planted it is very averse to root disturbance, often dying, even though well cut back. Planting should always be done in the spring just before growth commences. It is also advisable to procure a plant in a pot. A little protection over the roots, such as rough Cocon-fibre, is advisable during the winter. During severe weather a mat may be placed over the branches, removing this directly the weather becomes warmer. It can be increased from root cuttings. You might during the dormant season take up a few stout roots from

established plants—if you have such—cut them into lengths of about 2 inches, and dibble them into sandy soil in a pot or deep pan. They should be put in in such a way that the top of the cutting is about half an inch below the soil. These root cuttings need to be kept in a frame where they are quite safe from frost and be watered when necessary.]

Spanish Irises and lime.—I was interested in reading your notes re "Iris not flowering," in October 28th issue, and should like to know if *Iris hispanica* requires lime or basic slag, and, if so, what quantity? Some of the blooms are very short in the stem—i.e., 3 inches to 4 inches—whereas they should be from 12 inches to 18 inches long. I have given a light dusting of soot over the beds as the slugs eat the foliage when it comes through the soil. Please state at what season the lime would have to be applied.—S. J. HUBERT, Guernsey.

[All the "Bearded" or "Flag" Irises are partial to lime, and it was to a variety of this set that reference was made in a recent issue. Those of the Spanish set usually grow freely enough in all light, loamy soils, and often also those of medium texture. If lime is required by the soil it should have been added prior to planting, and in the case of very light, sandy soils, which are usually deficient of lime, a dressing would be helpful. It should be, however, incorporated with the soil for the benefit of the roots and plants, and surface dressings of either this or basic slag would avail but little. The latter, too, is very slow of action, and results are not quickly apparent. If we understand you rightly that your Spanish Irises attain only 3 inches to 4 inches high at flowering time something more than you have told us is wrong with them. How long have they been planted, and at what depth? What is the nature and depth of the soil? Cannot you send a bulb or two for our inspection? In your favoured locality we should have expected they would have been in the nature of weeds. You had better send us fuller particulars.]

Weeds in drive.—Can you tell me the best and quickest method of getting rid of Grass—a heavy crop—on a neglected drive? Would weed-killers act at this time of year, or what would? Labour to weed it is impossible to get?—S. B., Newbury.

[There will be no difficulty in clearing your drive with a good weed-killer, such as can be had from Bentley, Hull. Apply it very carefully so as not to let it come near any plant to kill it. It will not only clear your drive of Grass and weeds, but will leave it in better condition than any other way of clearing would do.]

Staking hardy plants.—Some years ago, when in charge of a large garden in the West, I grew hardy plants largely. Having a long border within sight of the Abbey rooms many things had to be supported. From the first I did this by using strong Pea-stakes, according to the height of the plants. During the twenty years I lived there nothing but these were used. Stakes were placed amongst the growths, and, if necessary, a thin bit of raffia was tied round them to keep the shoots in place. When at Hampton Court in the summer I noted in many cases that one stick was used to each shoot, taking three times the labour and looking very stiff. Now the winter is with us those who have not adopted this method should prepare their stakes.—J. CROOK.

Asperula hexaphylla.—Looking through the hardy-flower borders the other day, I was reminded that the present is a very good time to increase the stock of this useful Woodruff. Flowering as it does in May and June, its light and graceful panicles are valuable for associating with the earlier Sweet Peas, and it fills a gap until the more generally used Gyp-

sophila paniculata is available. *A. hexaphylla* is readily increased by division, and is not without value in the rock garden as well as in the border.—KIRK.

DIERAMA (SPARAXIS) PULCHERRIMA.

DIERAMA PULCHERRIMA appears to do well in a light and gravelly soil, though it is said to prefer plenty of moisture. The



Dierama (Sparaxis) pulcherrima. From a photograph sent by Mr. S. G. P. Hutchinson, Castle Lough, Nenagh, Co. Tipperary.

plants are very difficult to move, and it is best to sow the seed where it is required permanently. Plants grown from seed sown four years previous had flower-stems up to 8 feet high. The graceful bell-like flowers on slender but strong stems vary greatly in colour, from almost white, through various shades of pink, to a dark maroon. Self-sown seedlings have sprung up in quantities, and there are many patches of them one and two years old.

Tipperary. P. H.

OURISIA COCCINEA.

MR. CORNHILL writes (page 570) that he fears the "position of this plant at Wisley would be no guide to him." One would have thought that so signal a success would have been of the greatest help to anyone, more particularly those who, like Mr. Cornhill, have experienced little but failure with the plant. Your correspondent quotes an experienced hardy plant grower who said: "You can do what you like in the way of soil, but you cannot make an atmosphere." The idea is quite wrong. The very rocks and sheltering background, in the case of the Wisley group, create an "atmosphere" of the highest importance—virtually an essential—and were these same plants bereft of it, were they taken up, divided, and planted out in full exposure in the hot, sandy soil obtaining, their failure would soon be as complete as their success is now evident. Rocks and sheltering background, however, need not in every garden be slavishly imitated in order to secure success with *Ourisia*, though the recognition of all these mean much to the plant, and the adoption of the nearest possible equivalents will assuredly pave the way to ultimate success. To ignore them, or be studiously blind to all that they would convey because we do not all happen to have a Wisley to toy with, or the belief that there is some subtle influence in the place not available else-

where, are not likely to lead anyone to success. The spirit that succeeds is that shown by "North Yorks," who (at page 553) writes both interestingly and instructively of "Plant Vagaries." Failing five years in succession, failure is at length turned into complete success by the simple expedient of "a lump of rock in front of it." That "lump of rock" created the "atmosphere" the *Ourisia* needed. In-

identally the experience of "North Yorks" is a complete endorsement that the *Ourisia* may be "lifted and divided"—a matter concerning which both Mr. Arnott and Mr. Cornhill appear so fearful—with impunity. The value of experience so gained cannot well be over-estimated, while the pleasure and satisfaction of conquest are considerable. Mr. Cornhill enquires why did I "not plant out at once in the open ground instead of nursing the divided portions in a frame." The answer is, that I did not desire to court failure. My bit of garden soil to-day is sandy Heath soil, in summer time powder-dry, and I would as soon think of planting in this as throwing the pieces into the dustbin. Moreover, they were not "divided portions," as Mr. Cornhill, for his own purpose, continually asserts, but pieces of the extending rhizome just beginning to root. Knowing my subject, I potted and put them into a frame. In other words, by creating an "atmosphere" to their liking, I gave them the chance of doing, and results have fully justified it. Mr. Cornhill further remarks that my "instructions" might be "acceptable to inexperienced amateurs," ignoring the obvious fact that so far as this *Ourisia* is concerned he is as one of the most "inexperienced," having nothing but failure to record. He is a little unreasonable, too, in expecting me to divine the cause of his failure, since all I know of the circumstances is from a line or two of letterpress. The most interesting part of Mr. Cornhill's note is the final sentences, his remarks going to show that he has been sufficiently impressed with what I have written that he is attempting an imitation. My only wish is that he will succeed and realise some of the beauty this brilliant *Ourisia* has to give. E. H. JENKINS.

Hardy Dahlias.—Some time ago a query appeared in GARDENING ILLUSTRATED con-

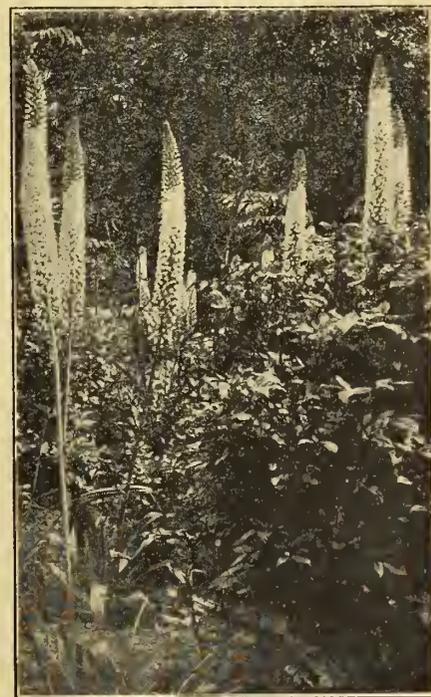
cerning a hardy Dahlia. I am not aware that the Dahlia, strictly speaking, can be considered hardy, but in some favoured places it may be said to be practically so. In these gardens there are many roots of Dahlias which are never lifted—especially some of the Paony-flowered section—and which, year by year, increase in size. One plant of *Souvenir de Gustave Duzon*, a giant-flowered variety, has stood the winter for ten years, and was over 7 feet high and covered with bloom during the present season. *Pompon* and *Cactus* varieties, too, have been left in the ground for a series of years without damage. Of course, our climate is comparatively mild.—KIRKCUDBRIGHT.

Galtonias.—When planting bulbs in autumn consideration is mostly given to those that are intended for a spring display, others, whose time of blooming is in summer, not being taken into account. One such bulb that may be planted now—when weather admits—on sheltered borders is the *Galtonia (Hyacinthus) candicans*, whose tall, stiff stems are laden with ivory-white bells in July. If planting is deferred until spring, they bloom somewhat later.—TOWNSMAN.

Erysimum Golden Gem.—Already (in mid-November) the yellow flowers of this neat *Erysimum* begin to be noticeable, and will continue throughout winter unless very severe frosts are experienced. At one time, *Erysimums* used to be favourite plants for spring bedding, and, in view of their accommodating and hardy nature, it is strange that they have lost their popularity. *Erysimums* may be sown at the same time and given the same treatment as Wallflowers.—W. McG., *Balmac*.

GIANT ASPHODELS GROWN WITH SHRUBS.

THIS is an effect we lately saw at Kew, showing the spread of this good idea of



Giant Asphodels among shrubs.

growing these great plants with shrubs. They do better so and look better. The fault, if it be one, of these enormous plants is that they shrivel away after flowering, leaving blanks which one cannot always easily fill. Therefore the association with them of hardy shrubs is right in every way, and the soil that suits the one suits the other.

VEGETABLES.

A NEGLECTED GARDEN.

I HAVE taken a house which has been unoccupied for some time, and the garden has, consequently, been very much neglected. The soil is light on a gravelly subsoil, and for some years has had little, if any, manure put into it. There are a few winter Greens planted on part of it, but they are very small and stunted, and I understand the crop of Potatoes which was grown this year on most of the ground was but a poor one. I should be much obliged if you would advise me as to the best method of getting it back into good condition. (1) As farmyard manure is difficult to get, what would be the most suitable artificial to use, and in what quantities should I apply them? I have by me a small quantity of superphosphate, kainit, and sulphate of ammonia. (2) What vegetables suitable for my own household would do best on a soil of this description? (3) One part has been allowed to go out of cultivation altogether, and is covered with rough Grass, Thistles, etc. What should I do with this? Any advice you can give me will be much valued.—FARMER.

(1) As you cannot conveniently obtain farmyard manure, which is really what is required to restore the garden to a fertile condition, we think you cannot do better than give it a good dressing of basic slag and kainit. What we should recommend you to do is to bastard trench or double dig the whole of the ground, keeping the gravelly subsoil at the bottom and working in with it such material as garden refuse, tree leaves (which can now be had in quantity), or long stable litter. The artificials can then be utilised for the top spit, applying about 8 oz. of basic slag and 4 oz. kainit to the square yard, mixing them as intimately with the soil as possible. To be really effective, the slag, in particular, must be applied without further delay. If unable to obtain any of the materials mentioned to mix with the bottom spit, give that also a similar dressing of basic slag.

(2) On soil prepared in the manner described all kinds of vegetables should succeed, whether they be what are termed "stem" or "root" crops. Seeing the soil would, if the advice tendered is adopted, be stirred to a good depth, all kinds of root crops should do exceptionally well. For the same reason the roots of all other kinds of vegetables would quickly penetrate the top spit and descend to the lower one in search of food placed there for their benefit. It may be stated that vegetables grown under such conditions are not nearly so much affected by drought, as deep working of the soil prevents it from drying out so quickly as is the case when it is merely dug one spit deep.

(3) With regard to this portion of the ground, we advise that the top be pared off some 4 inches in depth and charred—not burnt—sufficiently to destroy all kinds of vegetation that it may contain, using the residue for mixing with the lower spit. If the charring is properly done, there should be a considerable quantity of material at disposal for the purpose named. The upper spit can then be treated to a dressing of kainit and basic slag, as advised for the other part of the garden. In February apply 2 oz. of superphosphate per square yard, and lightly fork it in, both in this and the previous case. Then after the various crops are above ground and growing freely, apply nitrate of soda or sulphate of ammonia to the surface at the rate of $\frac{1}{2}$ oz. per square yard, and hoe it in when possible to do so. This may be used every few weeks while the various crops are making growth, but the quantity used on each occasion should not exceed that named.]

Food production and the garden. — I was interested in a "Scottish Gardener's"

letter in your issue of October 21st, in which he points out that increasing the supply of foodstuffs in the garden often results in increasing also the waste—which, he says, exists more or less at all times—quoting, for example, the case of Peas, Cauliflowers, and Cabbages, which at times often turn in more rapidly than they can be consumed. May I suggest a remedy for this wastage which he may have overlooked, that is, to feed the superfluous vegetables to Belgian hare rabbits, and thus really increase the food of the country and keep the money now spent abroad on this article of food at home? Not only will the hares eat up greedily any garden produce going to waste, but when the outside leaves of Cabbages, etc., run short they are equally accommodating about finishing up the garden weeds, so that absolutely nothing is wasted. I think this should appeal to "Scottish Gardener."—L. BLACKBURN.

Earthing up Celery with ashes.—Few things cause more annoyance than to find that after all the trouble taken, from the seedling to the earthing stage, the greater part of what promised to be exceptionally good Celery is absolutely worthless, either owing to disfigurement by slugs, or the wholesale destruction of the hearts, caused by excessive moisture having enveloped these over a long period. The fact is well known among gardeners that slugs have a great aversion to finely-sifted coal-ashes, such as those from an ordinary kitchen grate, and when we remember that the addition of these, although adding but little to the manurial properties of the garden, render even water-logged soils workable, what possible excuse can there be against adding a goodly proportion to the soil it is intended to use for blanching? In case any timid reader may doubt the wisdom of using these, knowing the reputation coal-ashes have of imparting their somewhat objectionable nature to whatever is brought into contact with them, I may add that I have sometimes used these alone when blanching some of the finest Celery I ever grew.—F. R. CASTLE in *The Garden*.

Peas—a selection for a small garden.—Peas are amongst the most acceptable and profitable of vegetables, and in a small garden an endeavour should be made to have them for as long as possible. Here is a selection which has given every satisfaction during the current year and which I intend to repeat. For dwarf Peas I would advise sticks being used, to be put in either at the time of sowing or immediately they show above ground, as their use is twofold—they afford some protection in case of cold weather and the crop will be heavier, as, when once Peas are battered down by wind and rain, and lie on the ground, the yield is never so good as when support is given:—First Early: Dobie's Early Bird (1 foot); Thomas Laxton (3 feet). Second Early: The Daisy ($\frac{1}{2}$ feet); Duke of Albany (5 feet). Maincrop: The Gladstone ($\frac{3}{4}$ feet); Daniel's Matchless Marrow (5 feet). Late: Veitch's Perfection (3 feet); Sharpe's Queen (3 feet).—WOODBASTWICK.

Growing Peas and Beans in trenches.—The past season has again showed the great advantage of growing Peas and Runner Beans in well-manured trenches. Where this has been done the crops have been much heavier than where not so treated. The plan of growing in trenches, speaking from my own experience, is worthy of recommendation, especially where room is limited, and consists in digging out trenches in the late autumn 2 feet 6 inches deep and 3 feet wide, into which some good, rotted dung is placed

to the depth of 6 inches or 9 inches, covering this over with soil and allowing it to settle for several months, subsequently filling in with soil to within a few inches of the top of the trench. Before sowing, the surface should be well dressed with superphosphate, and it is well to remember that nothing whatever is gained by sowing thickly. When finished, the trench will be several inches below the ground-level, this enabling one to mulch with manure, Grass clippings, etc., in very dry weather. Beans, in particular, go far down for food, and, coupled with copious waterings, the yield is much heavier and of longer duration. The same remarks apply, to a great extent, to Peas, and no better time for getting on with the preliminary work can be selected than now. A good feeding-ground at the base, into which the roots can penetrate, is half the battle and goes a long way to guarantee a good and successional crop.—WOODBASTWICK.

Tomatoes from cuttings.—It sometimes happens at the fag end of the Tomato season that growers are tempted to use the plentiful supply of shoots as cuttings, thinking thereby, if they can but winter these, they will get an earlier crop the following year. This plan usually suggests itself in November when plants are being cleared out of the house to make way for other things, but experience shows how futile it is for the small grower to expect anything like satisfactory results. In the first place, although propagation may be effected quickly enough, it is the after-treatment the young plants have to undergo which militates against them. The heat and moisture required by other plants are prejudicial to young Tomatoes, which frequently become drawn and weakly, and are handicapped in the early months of the year through lack of vitality. By far the better plan is to sow seed in heat in February and secure a fresh stock, which invariably gives the best results with considerably less trouble.—LEAHURST.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM NOVEMBER 22ND.—*Solanum jasminoides*, *Clematis*, *Choisya ternata*, *Escallonia montevicensis*, *Veronica* (in variety), *Genista hirsuta*, *Parochetus communis*, *Aubrietia*, *Lithospermum prostratum* *Heavenly Blue*, *Iris stylosa*, *Sternbergia lutea*, *Violets*. The above are all in sheltered positions. *Jasminum nudiflorum*, *Laurustinus*, *Pampas Grasses*, *Ericas*, *Menziesias*.

THE WEEK'S WORK.—During the past week, there have been a fall of snow and much rain, which have made the ground sodden. Any planting of trees and shrubs not completed will be better deferred until February. Most herbaceous plants have been cut down to the ground level, the surface-soil pricked over with a fork, after which hills of ashes are placed around tender species as a protection against frost. The whole of the border will afterwards be afforded a mulch of leaf-mould. Kniphofias being somewhat tender, the tops of each plant are gathered together, twisted spirally, and tied in such a way that the growth centres are protected by the leaves. As a further precaution, a mound of ashes is formed round each plant. Tea Roses need some kind of protection in severe weather or they will be found very much weakened and sometimes killed outright. It is easy to avoid this by drawing around the base of the plants a mound of soil from the borders or beds, thus preserving from injury the lower buds, which will then produce strong flowering-shoots. Tea Roses start into growth on the slightest spell of mild weather, so that it is well to put off protection until severe frosts are feared. Wall climbers have again been looked over and made secure for the winter. Pruning for the most part is left until spring, merely thinning out crowded growths for the present. Anything of doubtful hardiness is protected by working in thinly among the shoots a few Spruce branches. These give all the protection necessary, and admit a fair amount of light and air, mois-

ture being dispelled more quickly than when closer protecting materials are employed. Excessive moisture during winter is disastrous to many plants. The plants of the Algerian Iris (*I. stylosa*) have been cleaned and the surface-soil stirred. A few blooms have appeared, and if the weather becomes milder they will soon be pushing up in great numbers.

Now that the leaves have all fallen a general clearing-up (as far as labour permits) will be made, the necessary quantity required for hot-beds and leaf-soil being carted to their respective places. It is a mistake to rake out shrub-beries, even though it be done for the sake of neatness. The fronts may be raked clear, but the leaves at the back and where they are not likely to be blown about should be allowed to remain. The rock garden is now being finally cleaned and put in order for the winter. It is necessary to remove all leaves, or as they decay there is danger of their rotting the smaller-growing plants. A good mulch of leaf-soil has been afforded tender subjects.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Libonias.—Plants in 48-sized pots are, when well grown, useful either for rooms or the greenhouse. They do best when accorded a trifle more warmth than an ordinary greenhouse affords. Too low a temperature leads to loss of foliage. The plants being abundant rooters, assistance in the shape of mild doses of liquid-manure to tide them over the flowering period is essential.

Poinsettias.—These must also have assistance in the same way, otherwise loss of the lower leaves is likely to ensue. Stimulants are also necessary to enable the plants to develop their bracts to perfection. In spite of the abundance of *Chrysanthemum* and other flowers at this time of year, *Poinsettias* are indispensable where much furnishing has to be done, as well as for the decoration of the stove or intermediate house. When required for cutting, the bracts, with a sufficient length of stem, should be cut and steeped in water overnight.

Propagating stove plants.—Where fine-foliaged plants in a small state are in frequent request for the decoration of the dinner-table and sundry other purposes, it is necessary to propagate fresh stock every few months because the plants in time become too large for what they are required. In a well-heated propagating-case cuttings of such things as *Crotons*, *Dracenas*, *Pandanus*, etc., root quickly, and if grown on freely afterwards soon become of a serviceable size. A good batch of cuttings of subjects found to be most useful may now be inserted, each one singly, in small 60-sized pots and plunged to the rims in the case. Little or no shading is required at this time of year; but the case should be opened each morning to freshen the internal atmosphere and for the purpose of wiping off the condensed moisture on the under-surface of the glass.

Grease-bands.—Where the placing of grease-bands round the stems of fruit-trees is found effective in the trapping of the females of the winter moth when ascending the trees for the purpose of egg-laying, the same should be fixed in position without further delay. Grease-proof paper only should be employed. This must be bound so tightly round the stems that it is impossible for any insect to pass between the bark and bands. For these traps to remain effective it is necessary to frequently renew the grease.

Chicory, when in request for salad-making, may now be taken in in relays to the Mushroom-house or any place where the temperature is suitable and from which light can be totally excluded. A mild warmth is sufficient, anything beyond this only leading to the growth becoming drawn and attenuated.

Globe Artichokes.—Although not as yet necessary to afford the stools protection, preparation for doing so in the way of driving in from four to six stakes round them to hold the litter in position when necessary to apply it should now be done. Fine cinder-ashes should also be placed round them to a height of 9 inches. This done, the litter can be quickly placed round them at short notice.

Broccoli.—A good deal of frost has been experienced of late, which has meant that where needful precautions were not taken to well cover developing heads with several layers of the outside leaves they have been rendered useless. Where ample shed accommodation exists, the difficulty can be surmounted by lifting with some soil attached to the roots all not required for present use, standing them close together in an open shed. Here they are quite safe without further protection, unless very severe weather should set in, when the whole may for the time being be covered with dry litter or Bracken. In this way the supply can be maintained with little trouble.

Turnips.—Fully-grown roots should now be pulled and stored, or, rather, clamped, as they keep much better so treated than if put into the root store. Several small-sized clamps are better than one or two larger ones, as there is then no danger of heating taking place. A sufficiency of soil must be placed over the covering material of long litter to prevent frost penetrating and damaging the roots.

Cropping.—A well considered scheme for the future cropping of the kitchen garden should now be drawn up and the various plots prepared accordingly. If the details are entered in a note-book and kept handy for referring to as occasion arises it saves much time and trouble later on. Manuring should be done in accordance with the scheme, using planks for expediting the wheeling in of the manure as well as to avoid the cutting up of paths and converting the surface of the soil into a hard, compact mass, when waiting for hard weather is out of the question. Whenever practicable, digging should be pushed on with, throwing the soil up as roughly as possible for wind and frost to exert their sweetening influence on the same. If possible, any plot in need of more than ordinary digging should be double-dug, or, as it is termed, bastard-trenched. This will afford an opportunity for getting rid of any rough kinds of manure or old hotbed material in a partly decomposed condition, as such can be worked in with the lower spit, thus saving that which is of a richer nature for mixing with the top spit.

Flower garden.—Before frost renders such work impracticable the hoe should be run through the surface of the flower beds, such stirring having become necessary as a result of the very heavy recent rains. While doing so, special attention should be paid to Wall-flowers, which are apt to become loosened by high winds, and require being trodden round to make them firm again. So long as the weather remains open the lifting and planting of trees and shrubs should be persevered with. A. W.

MIDLAND COUNTIES.

Early Peach-houses.—The trees having been pruned, cleaned, and trained as advised in previous notes, the house will now be closed for starting. Only sufficient fire heat will be necessary at present to prevent the temperature falling below 45 degs. The trees will be syringed freely with tepid water on fine days at about one p.m., closing the house at the same time. Should severe weather render the regular use of fire heat necessary, care must be taken to maintain a moist atmosphere by occasionally sprinkling the walls and paths with a rose-can. The house must be ventilated freely whenever the weather conditions are favourable, and endeavour to change the atmosphere every day. When the

Cleaning of Vines is completed remove the surface-soil of the border down to the roots and apply a fresh dressing of good fibrous loam, adding a 6-inch potful of Vine-border compound (fine grade) to each barrowload of soil. Test the border with a soil-tester, and if the soil is found to be dry give a thorough watering, which will last throughout the winter. Apply a good mulch of manure from a spent Mushroom bed or similar material, and the house will then be ready for starting. As opportunity affords the interiors of all fruit-houses should be thoroughly cleansed.

Broad Beans.—A small sowing of these has been made on ground that was previously trenched and manured. A site was chosen in

a sheltered part of the garden and where the soil is not too heavy, for, although the Broad Bean succeeds best in a somewhat heavy soil in summer, it is not advisable to sow in such a medium now. The seed is sown in rows 3 feet apart, and covered with 3 inches of soil, afterwards giving a light mulching of manure to protect the roots from frost. Some seeds were sown in a box at the same time and placed in a cold frame for providing plants for filling any gaps in the rows.

Autumn-sown Spinach is looking remarkably well. The soil between the rows is stirred with a Dutch hoe when the ground is sufficiently dry to enable the work being done. The plants of the latest sowing should not be thinned too severely, but overcrowding should be avoided.

Chicory.—The crowns may be lifted now and placed in the Mushroom-house, where it is perfectly dark. A temperature of 55 degs. is sufficient to force Chicory. A damp, stagnant atmosphere should be avoided or the young growths will soon decay. If a small quantity only is required, Chicory may be grown in pots, in the same manner as Seakale. Six good crowns will be sufficient for each 8-inch pot. Make the soil moderately firm, leaving about 1 inch of the crown uncovered. When growth commences an inverted pot of the same size should be placed over the crowns. If the soil is in a moist condition at the time of potting, little or no water will be necessary, but if the soil is dry, a good watering should be given as soon as the potting is finished.

Rhubarb.—If it is intended to make a new plantation of Rhubarb the ground should be heavily manured and trenched at the first opportunity. The site should be an open one, except that it needs protection on the north and north-west. When the trenching has been done, a good dressing of fresh soot and lime should be applied to the surface, and the ground left in this condition until February or March, when the Rhubarb should be planted. The best method of propagating Rhubarb is by dividing the stools as often as it becomes necessary. Owing to the scarcity of Apples, forced Rhubarb will be in more demand this season. In order to keep up a continuous supply, fresh batches of roots will be introduced to the Mushroom-house every three or four weeks.

Green crops.—The mild, damp weather during the early part of November has suited the late-planted green vegetables. We have obtained up to the present excellent salads from plants in skeleton frames, merely protected at night with mats, but there is a danger now from frost, and plenty of material, such as mats, straw litter, or Bracken should be at hand to protect the frames. Whenever the weather is favourable admit air freely to all crops in frames, and keep the plants clear of decaying leaves and rubbish, also stir the soil on the surface. F. W. GALLOP.

SCOTLAND.

Auriculas.—Where these fine flowers are extensively grown there is almost certain in such a season as this to be a proportion of losses during the winter from damp. Especially is this the case when the soil in which they are grown is naturally heavy and retentive. To a great extent this danger may be minimised by lifting the finer varieties and planting them temporarily in lighter and warmer soil, preferably at the foot of a south wall. In such a place they will winter in a very satisfactory way, and can be returned to their permanent places in spring. It is remarkable nowadays to notice how seldom the fine old yellow *Dusty Miller* is seen in collections of *Auriculas*. If a batch of plants be potted up now and placed in a cold-frame their period of blooming will be accelerated and the flowers will be clean and pure.

Cold-frames.—No one, I suppose, has ever too many cold-frames. These structures are useful in many ways, but at this period of the year they do not always receive the attention which the inmates require. Many of these frames stand on beds of ash, which are very retentive of moisture. Consequently, there is a danger that the plants in such may suffer from damp. At this time, therefore, let the sashes be removed on all favourable occasions;

and if heavy rains should occur, when, necessarily, the sashes must be replaced, let the tilts be kept at their utmost stretch. Protecting materials, too, must be in readiness against sudden spells of frost. Good Archangel mats are, perhaps, more reliable than anything else, but mats made of reeds have considerable value as well, although these are not so durable.

Fruit-trees under glass.—Now that the foliage has in most cases dropped, a beginning can be made with cleaning the trees. Even although these may have been free from pests during the season this work ought not to be omitted, for it is just by these annual cleanings that vermin is prevented from obtaining a lodgment. Where the trees are known with certainty to be free from pests, a wash over with fairly strong soapy water in a tepid state will suffice. Either soft-soap or Sunlight soap is recommended. The heavier wood may be treated with a fairly stiff scrubber; but the shoots must be washed with a soft brush. Where pests may be present an addition to the soap and water may be made in the shape of Gishurst compound—a reliable article if now of some antiquity. In the case of Figs, let any small fruits be removed. These will not now mature, and are much better dispensed with. Any necessary top-dressings or the substitution of fresh for exhausted material will, of course, be attended to at the same time.

Hardy fruit-trees.—In spite of the advanced season, the foliage is not yet disposed to ripen. Especially is this the case among stone fruit—Plums, Peaches, and Nectarines. There is yet, unfortunately, in the case of the two latter varieties some appearance of growth in the current season's shoots, and in the absence of frost this growth may yet be maintained for a time. Pear-trees and Apple-trees, too, are more or less green in leaf, although some of the Pears are assuming autumn tints.

Raspberry plantations.—Owing to pressure of work, combined with incessant rains, it has not hitherto been found possible to cut out the exhausted canes. During the week, however, a good beginning has been made with this work. The exhausted canes are at once taken to the fire-heap, and at the same time a tentative thinning is done among the current season's growths in the stools. The final thinning will not be done until training takes place; and, as the foliage yet hangs, this will be delayed for a time. It may be said that in thinning Raspberry canes those to be removed are pulled up by the roots. This is a much more satisfactory way of dealing with these canes than cutting them over with knife or hoe, for the roots left will push forth other, if weaker, suckers from dormant eyes, which, in turn, will require to be removed. After training, a very light forking will be given, and a good mulch of well-rotted manure will be spread over the quarter. This is a good time at which to make new plantations. Bearing in mind that the canes will occupy the quarter for some years, let the break be liberally dealt with, and the planting carefully done. It is almost superfluous to say that no crop need be expected from a new plantation the first season. The canes, in order to lay the foundation of future success, must be cut down to four eyes from the bottom.

Planting.—If it is proposed to undertake any planting at the present time, let the stations be prepared in advance. It is a sound rule never to delay planting after trees or shrubs are received—provided always that the weather is suitable. In the event of heavy rains, or of frosts, do not unpack, but put the bale as it is into a cool and airy place. Nursery packers are so expert that the delay of a few days will do no appreciable harm.

Bulbs.—Those who are so fortunate as to have a batch or two of Roman Hyacinths will find that these will now bloom without anything very special in the way of heat; and, indeed, I always think that the earliest lot is the best, and lasts in an effective state over a longer period than those which are subjected to a higher temperature. Similar observations apply in the case of Paper-white Narcissi or of the yellow variety of that family. Too much heat draws the flower-stem and makes the bloom weak and spindly. For blooming at

Christmas, a batch of Duc van Thol Tulip is valuable. These can be safely given a pretty high temperature, but from the time of their introduction to the stove or forcing-house they must be liberally supplied with moisture. If the pots or bowls in which Tulips are grown can be placed upon a shelf near the glass it will be of advantage. An eye must be kept from time to time on further batches in the plunging bed. W. McGUIFFOG.

Balmæ Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 21ST, 1916.

If not of great extent, the fortnightly meeting held on this date was not without interest, the excellent groups of Chrysanthemums being chiefly responsible for the display. What is undoubtedly apparent at these late-autumn meetings is the growing interest in Nerines, their brightness at this dull season of the year, added to simple cultural needs, making them popular. The modern-raised hybrids, too, embrace a wider colour-range with many pleasing shades. Carnations and winter-flowering Begonias were on view, though the fine exhibits of the latter which for years from Messrs. Veitch were a brilliant feature of these autumn meetings now no longer find place. Choice Orchids were freely shown. An exhibit of Savoys, the pick of a recent trial representing this useful vegetable, was sent from Wisley. Several novelties received recognition.

HARDY PLANTS.

The best of these at this meeting were the hardy evergreen Ferns, Polypodiums, Polystichums, and Scolopendriums from Messrs. H. B. May and Sons, and if valued in summer for their cool-looking, refreshing greenery, are equally welcome in their maturer garb to-day, whether in cold-house or fernery in sequestered nook in the open. The finer Hart's-tongues are those of the crispum set, that known as maximum being one of the best shown. *S. crispum Robinsoni* is another good and distinct sort, while multiceps and grandiceps of the crested group are indispensable. Of the Polypodies, *P. trichomanoides* (most elegant), *P. cornubiense*, *P. Barrowi*, and *P. Prestonii* (all forms of *P. vulgare*, the last two varieties of *P. v. cambricum*) were the best. *Lastrea pseudo-mas crispa cristata angustata* is a distinct and pretty evergreen form heavily burdened with names and of especial value in the smaller fernery. Many Polystichums were shown, and, among other things, the rare *Ceterach aureum*, which is seldom seen. Charming pots of autumn-flowering Crocuses were among the best things from Mr. G. Reuthe, the pure and handsome *C. marathonisius*, *C. longiflorus*, and *C. Tournefortii* being in good form. Flowering sprays of *Lapageria rubra* cut from Keston woodland, the oncoming buds bleached by the recent snow resting on them, showing this fine climber to be hardier than many suppose.

SHRUBS.

Sprays of cut Conifers in about a hundred sorts were staged by Messrs. J. Cheal and Sons, and while far less educational as to habit and other things than growing plants—an almost impossible thing in these days on any large scale—were useful by way of comparison, and seasonable to boot. Among the more interesting were the Macedonia Pine (*Pinus Penke*), the Serbian Spruce (*Picea omorica*), *Tsuga diversifolia* (very neat-habited), *Juniperus arizonica*, *Cupressus arizonica*, and *Abies balsamica Hudsonica* (the last a slow, dwarf-growing plant of considerable beauty and of value in the rock garden). *Abies excelsa Remonti*, also noted, has a like value.

NERINES.

These are of growing importance, the three collections of modern hybrids staged demonstrating a wider interest than we remember. Messrs. Barr and Sons had many of exceeding beauty in the cut state, Coral Queen, Vivid, Nigel (rich carmine and crimson), Sylvia (white and rose), Leonora (of a pleasing deep salmon shade), and flexnosa major (pink and white). In the group from Messrs. Herbert Chapman, Limited, were several choice things, the majority being under number. The most brilliant was "I C." (*Planti x Lady Dorington*), of intense rich rose. *N. flexnosa alba* and a hybrid apparently identical with Messrs. Barr's *N. flexnosa major* were others of note. The largest collection was that from Mr. G. Renthe, who, in addition to a fine group of *N. coruscans major* and *N. flexnosa alba* (scarlet and white respectively), had a fine series of hybrids in pots. Those of rose and salmon shades were particularly attractive, and of these, *Kestonia* (salmon and rose), Quakeress (pale salmon), Dream (rosy-salmon), and Mrs. Reuthe (clear salmon) were remarked. The hardy *N. Bowdeni* and the pretty, free-flowering, white and pink *N. pudica* were among others.

GREENHOUSE PLANTS.

Prominent here were the well-grown winter-flowering Begonias from Lord Brownlow, Ashridge Park, Berkhamstead (gardener, Mr. D. Robertson). *F. H. Cook* (clear salmon), *Apricot* (a pale, yet beautiful, shade), *Scarlet Beauty*, and *Sunrise* (brilliant scarlet) were among the showiest. Some good *Gloire de Lorraine* were in the same group. Very refreshing, too, was it to see again well-flowered examples of the Mexican *Sericographis Ghiesbreghtiana*, now included under *Jacobinia*, whose abundance of crimson-scarlet flowers and elegant habit rendered it an indispensable winter-flowering subject many years ago. Messrs. R. F. Felton and Sons had a most attractive exhibit of *Hakea laurina*, the plant referred to previously as *H. eucalyptoides*. On this last occasion the ball-like inflorescences of crimson and sulphur were larger and more strikingly brilliant than before. *Eucalypti*, in flower, of different kinds were also on view. *Begonia Emita* and a variety of Carnations were shown by Messrs. Stuart Low and Co. Of Carnations, Messrs. Allwood Brothers had an excellent exhibit. *Wivelsfield White* and *Benora* (fancy) have rarely been finer, while *Enchantress Supreme*, *Mary Allwood*, *Nora West* (a charming salmon-pink), and *May Day* were notably good. The new variety *Nancy* has decidedly improved since being housed, and now presents a refined beauty not earlier remarked. It is one of the prettiest of soft-pink shades. *Rose Sensation* (a sport from *Pink Sensation*) gained an Award of Merit. It came from Messrs. W. Wells, Limited.

CHRYSANTHEMUMS.

Two superb tables of these helped the show considerably, their variety as much as their excellent quality constituting a great attraction. In that from Messrs. W. Wells, Limited, two novelties appeared, both gaining awards. They are *J. Bryant* (exhibition Japanese), of giant form and purest white (it will doubtless please the exhibitor), and *Lady Stanley* (decorative), crisp of petal and of a delightful silvery pink. This in our opinion is far more likely to fascinate the millions, who prefer medium-sized flowers of refined beauty for the decoration of the home. A third variety, also gaining an award, was the single-flowered yellow *Mrs. Moss*.

It is of rich butter-yellow tone, Mr. Phillip Ladds being the exhibitor, though it found place in Messrs. Wells' group. Messrs. H. J. Jones, Limited, had many handsome stands of flowers, the back row being entirely of big exhibition sorts. Mrs. C. Edwards (very handsome white), Mrs. H. Kemp (golden-bronze), and Mrs. R. C. Pulling (rich yellow) were the finest of these. Audrey (brunzy yellow), Gerlie Ladds (crimson), Excelsior (bronze), and Jessica (reddish-crimson) were the pick of the single-flowered sorts.

ORCHIDS.

Two of the three novelties receiving awards were from Messrs. Armstrong and Brown. They were *Cattleya Cläsiana* alba Orchidhurst variety (*C. intermedia* alba x *C. Harrisoni* alba) (by far the best white *Cläsiana* yet seen) and *C. Monastir* (*C. Freya* variety Mrs. Fred Sassoon x *C. aurea*) (a brilliant form having overlapping wine-red sepals and ruby-crimson lip with golden lines. In the group, this firm had many fine blotched *Odontoglossums* bearing only a solitary flower, while *O. Harryanum crispum* carried a superb raceme. A central group consisted of *Cattleya labiata* alba and *C. Cläsiana* alba (both very chaste and beautiful). Messrs. J. Cypher and Sons had an exhibit wholly of *Cypripediums*, a group in which they have specialised for many years. *Lecanum magnificum*, *Gaston Bulteel*, and *Sir Redvers Buller* were of conspicuous merit. The handsome new *Cypripedium* *Mme. Albert Fevrier* (*Germaine Opoix* x *Harefield Hall*), from Mr. G. F. Moore, *Bourton-on-the-Water*, was also in charge of Messrs. Cypher. The roundly-formed dorsal sepal is copiously spotted crimson and chocolate. Messrs. Sander and Sons contributed *Cattleyas* in variety, *Brasso-Cattleya Thornton* and *B. C. Thompsoni* being the best things from Messrs. Charlesworth, and *Cattleya Brenda* (pure white) and *Brasso-Cattleya Apollo*, two choice items in a group from Messrs. J. and A. McBean.

VEGETABLES.

Seven varieties of Savoy—those receiving recognition in the recent trial at Wisley—were on view. Perfection, a compact grower, of medium size, well hearted, from Messrs. Sutton and Sons (Award of Merit); Sugar Loaf, of conical build, also from Messrs. Sutton; and Norwegian, recommended for hardiness, from Messrs. Barr and Sons, each received three marks (x x x). Tom Thumb (re-selected), Messrs. Carter and Co.; Drumhead Covent Garden Late, Watkins and Simpson; Selected Drumhead, Messrs. Sutton; and Perfection, Hurst and Son, were given two marks (x x) each. Seeds of forty-seven different stocks were received and subjected to trial, the above-named being adjudged the most worthy.

A complete list of the certificated plants and medals awarded will be found in our advertisement columns.

Horticulture after the war.—The president and council of the Royal Horticultural Society have summoned a meeting at the Royal Horticultural Hall, Vincent-square, Westminster, at 4 p.m., on December 5th, at which it is hoped that all those interested in commercial horticulture will be present. The object of the meeting is "to consider the interests of the horticultural trade and the best means of safeguarding its interests after the war," and to pass a resolution. The chair will be taken by Lieut.-Col. the Rt. Hon. Mark Lockwood, M.P., C.V.O. In view of the urgent importance of the subject it is hoped that the meeting will be as representative as possible of all branches of the horticultural trade.—W. WILKS, *Secretary*.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of course the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Rust on Chrysanthemums (Rez).—Your *Chrysanthemums* have been attacked by rust. The following has been recommended as a remedy: Dissolve 1 lb. of bluestone (copper sulphate) in 10 gallons of water; boil 1 lb. of lime and 1 lb. of treacle in 1 quart of water for half an hour. When this is cold pour it into the 10 gallons containing the bluestone. Then syringe the plants with this. Should the rust have spread in the meantime—and it does so very rapidly—a remedy has yet to be found that will do good in bad cases. The best way will be to destroy all the affected plants and start with a clean stock next year. Do not on any account attempt to increase your stock from the affected plants.

Heaths after flowering (M. T.).—After flowering, cut the plants into shape, shortening back the long, vigorous shoots to one-third their length, then place them in the greenhouse to encourage fresh growth. When the young shoots have made about half an inch of growth, repot, using sandy peat, and see that the drainage is free. Pot firmly, stand the plants in a frame kept close till they have recovered from the check, then stand them in the open, plunging in ashes to save watering. Water very carefully, taking care this is not overdone, as if this happens the soil gets soured and water-logged, which will be fatal. Guard against dryness at the roots as well. When the cold nights come, remove to the greenhouse, ventilating freely on every favourable occasion.

TREES AND SHRUBS.

Climbers for north wall (Grace Guinness).—Any of the hybrids or species of *Clematis* will grow and flower, but less well than in a westerly position. *Vitis inconstans* will also succeed, also *Clematis montana*, *C. Vitiella* in its many forms, *Crataegus Pyracantha*, *Jasminum nudiflorum*, *Lupinus arboreus*, *Euonymus radicans variegatus*, and the many forms of *Ivy* we now have. The position is not at all suited for flowering climbers and flowering shrubs, as the wood never gets properly ripened. Of *Roses* to give a succession of bloom, there are none better than a selection of the many Hybrid *Teas* now to be had, choosing for the wall those climbing varieties that have *Tea* blood in them. Any *Rose-grower* should be able to supply the *Rose* you want.

FRUIT.

Making a Peach border (H.).—A border for *Peaches* under glass should be made of good, sound, turfy loam, with plenty of old mortar rubbish, and some ½-inch bones, say about

2 feet deep of soil, resting on good artificial drainage, if in a wet locality; if in a dry one, then but little or no artificial drainage is required. The border may be made about 6 feet wide at first, and be afterwards added to as required. Now is a good time to get in the materials and make it, and the trees can be planted at the earliest opportunity.

VEGETABLES.

Saving Tomato seeds (George Duthie).—The simple method to adopt in saving seed of *Tomatoes* is to select one or more of the handsomest fruits when quite ripe, and to cut them in half, not from the stem downwards, but crosswise. Then with the blade of a pen-knife draw the seeds out from the pockets into a small basin. The flesh of the fruits can then be used cooked or otherwise. Wash the seeds well, strain them, and lay them out to dry on paper. Keep them moved a little to prevent sticking to the paper till quite dry. Then put into a small box or paper packet and keep dry till you want to sow. We know of no book that deals with the growing of plants for seed. The chief point in growing plants for seed is to see that there are no rogues among them—i.e., plants which are not true to the type. If you find any one plant which seems an improvement on the type, then such an one should be marked, and the seed saved from same, and grown on to find out whether the plant selected retains its distinctness.

SHORT REPLIES.

Applicant.—You will find an article dealing fully with basic slag and its uses in our issue of August 8th, 1914. A copy of this can be had from the publisher, post free, for 1d.—**R. F. Godfre.**—The native country of all the *Irises* you inquire about is given in the "Kew Hand List of Herbaceous Plants," second edition.—**A Regular Reader.**—The gas-lime you send is of very little, if any, value for the destruction of pests in your vegetable garden. This, to be of any value, should be used fresh and forked into the ground, which should not be cropped for, at the very least, three months after it has been applied.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**F. S.**—The *Spindle-tree* (*Euonymus europæus*); 2, *Escallonia macrantha*.—**C.**—1, *Schizostylis coccinea*; 2, The *White Beam* (*Pyrus Aria*); 3, *Cotoneaster microphylla*; 4, *Berberis Aquifolium*.—**Miss K. Kenilworth.**—Judging from the poor specimens you send, we should say that the specimens represent *Rosa Wichuriana*, the type.—**K. M.**—Self-heal (*Prunella vulgaris*).

Names of fruits.—**Murray T. Foster.**—Apples: 1, *Isle of Wight Pippin*; 2, *Seigende Reinette*; 3, *Schoolmaster*; 4, *King of the Pippins*.—**J. S. Crossfield.**—A *Greave's Pippin*, cooking variety, should not be gathered till end of October, in use January to March; **B. Dr. Harvey**, cooking, gather early in October, in use from November till end of year; **C. Lewis's Incomparable**, useful either for dessert or cooking, its season of use is from January to March, gather end of October; **D. Bringewood Pippin**, dessert, gather end of October, in use from January to March.—**M. S.**—Apples: 1, *Winter Hawthornden*, 2, *French Crab*; 3, *Norfolk Beanfin*. *Pear*: *Belle Julie*.—**R. W. M.**—Apples: 1, *Lady Henniker*; 2, *Lord Burghley*. *Pears*: 3, *Glou Morcean*; 4, *Nonvelle Fulvie*.—**A. White.**—*Baumann's Red Winter Reinette*.

CATALOGUES RECEIVED.

W. SMITH AND SON, Westburn-road, Aberdeen.—*Forest Trees, Shrubs, Conifers, Fruit-trees, Roses, etc.*

G. R. PHIPPS, Barnham, Bognor, Sussex.—*List of Rock Garden Plants, Where and in What Soils to Plant Them.*

Weldenia candida.—Can any of your readers inform me what is the correct soil and position for *Weldenia candida* in the rock garden? Also, whether it can be easily propagated, and, if so, how and when?—**W. D. WORTHINGTON.**

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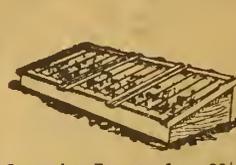
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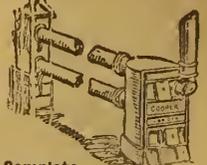
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FLOWER SHOW FIXTURES.
 1916.

DECEMBER.
 December 4.—N.C.S. Floral Committee R.H.S. Hall.
 " 5.—Royal Horticultural Society Meeting and Lecture.
 " 6.—Perpetual-Flowering Carnation Society's Show.
 " 18.—National Chrysanthemum Society's Executive Committee.

1917.
JANUARY.
 January 15.—National Chrysanthemum Society's Executive Committee.
 " 16.—Royal Horticultural Society's Committees.
 " 30.—Royal Horticultural Society's Committees.

FEBRUARY.
 February 13.—Annual Meeting and Committees.
 " 27.—Royal Horticultural Society's Committees.

MARCH.
 March 6.—Royal Horticultural Society's Bulb Show (2 days).
 " 13.—Royal Horticultural Society's Committees.
 " 27.—Royal Horticultural Society's Committees.

APRIL.
 April 11.—Royal Horticultural Society's Committees.
 " 17.—Royal Horticultural Society's Daffodil Show (2 days).
 " 24.—Royal Horticultural Society's Committees.

MAY.
 May 8.—Royal Horticultural Society's Committees.
 " 22.—Royal Horticultural Society, Chelsea (3 days).

JUNE.
 June 5.—Royal Horticultural Society's Committees.
 " 19.—Royal Horticultural Society's Committees.

JULY.
 July 3.—Royal Horticultural Society's Summer Show (3 days).
 " 17.—Royal Horticultural Society's Committees.
 " 31.—Royal Horticultural Society (dry bulb show).

AUGUST.
 August 14.—Royal Horticultural Society's Committees.
 " 23.—Royal Horticultural Society's Committees.

SEPTEMBER.
 September 11.—Royal Horticultural Society's Dahlia Show.
 " 25.—Royal Horticultural Society's Vegetable Show.

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We shall be glad if Secretaries of Horticultural Societies will kindly send the dates of their various shows to Editor, GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

GARDENING ILLUSTRATED.

No. 1970.—VOL. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

DECEMBER 9, 1916.

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NOTES OF THE WEEK.

Erigeron strigosus.—This charming and Daisy-like flower, from N. America, keeps on after all the Michaelmas Daisies are past. It is now pretty, with its pale lavender flowers and silvery buds, and comes in well as a cut flower for the house, where I have it on November 24th.—M. G.

Escallonia organensis.—Messrs. Pennick and Co. send us from their nursery at Delgany, Co. Wicklow, some sprays of this very interesting species. It is not hardy except in Cornwall, but deserves the shelter of a wall on account of its beautiful rosy-red flowers. It is a very old plant, having been discovered in the Organ Mountains in 1841 and introduced to England some years later by W. Lobb.

The new forms of the alpine Forest Heath (Erica carnea).—Will any of your readers who have had success with these kindly tell us? My lot is not very happy-looking, not having got into the right soil, but two or three kinds in flower the last week in November promise well when effectively grouped. In the case of these new forms, too many kinds were sent out. Three of the best would have been a better start.—W.

Saponaria ocyroides.—There is still quite a number of flowers on a patch of this growing in a retaining wall, though it is the middle of November. They are only scattered over the plant, and are in nothing like the profusion which is displayed in the spring when the whole patch is literally covered with the pretty little rose-pink flowers. I know of no more profuse-blooming alpine than this, nor any more charming, and it is one of the easiest to grow.—W. O.

Erica carnea.—My plants are as full of buds as they can be this year. This species does very well in my London garden, and thrives in a compost of sandy leaf-mould. The chief drawback to it is that, flowering in the winter, the blossoms very quickly get dirty from the smoke and fog, and lose their beauty. The white variety grows well, but, so far, has not flowered so freely with me as the type. This species is said not to mind a little lime in the soil, but I think it does best without.—N. L.

Gentiana verna.—I have been much interested in the correspondence on *Gentiana verna* in your columns. With me the plant thrives and blooms freely, and always has a second flowering season. It is growing on a sunny, raised part of the bog garden in a mixture of peat, sand, loam, leaf-mould, and lime,

with its roots in rotted Grass turves. I attribute my success largely to the heavy top-dressing given to it, the crowns being kept always just above the soil, instead of at the end of long straggling growths. I also give it the protection of glass during the winter.—E. D. P., *Strawberry Hill, Middlesex.*

Cheiranthus linifolius (p. 575).—Mr. Buxton will flower this *Cheiranthus* freely if he will treat it as a biennial and not as an annual. In 1915 I filled two beds with this Wallflower exactly as described by Mr. Buxton and with identical results. In the autumn, as an experiment, I lifted the best plants and heeled them in against a west fence. Last spring these plants were removed to vacant places in the rock garden, where they have flowered splendidly, quite a fair sprinkling of blossoms still being visible in the middle of November. I shall let these plants remain another season, for some of them look sound enough to prove perennial.—C. TURNER, *Highgate, N.*

Lilium regale.—"E. H. Jenkins," in writing of this Lily, on page 596, states it gained "an Award of Merit in 1912, though probably no Lily has more richly merited first-class honours." The fact has apparently slipped his memory that it was given a first-class certificate at the Holland Park Show of 1915. When the Award of Merit was bestowed at the International Horticultural Exhibition of 1912 it bore the specific name of *myriophyllum*, but at Holland Park in 1915, when a first-class certificate was awarded it, this Lily was shown by Miss Willmott as *Lilium regale*. It is certainly a Lily for which a great future may be anticipated in British gardens.—K. R. W.

Trees damaged by horses.—Trees are often damaged by horses and other farm stock gnawing the bark and wood, this resulting in decay if not promptly attended to. Painting with tar or creosote is generally resorted to, but in many cases without success. By mixing a teaspoonful of tincture of *asafoetida* in half a bucketful of liquid clay and applying thickly to the damaged parts the gnawing will usually cease. The cheapest and most satisfactory way is to surround the stem with a guard of wood or iron. A neat and efficient tree guard is made as follows:—Procure a number of Larch or Chestnut poles up to, say, 7 feet in length and about 2 inches in diameter at top end. Thread these on stout fencing wire by boring holes of a suitable size in the poles at about 2 feet from top and bottom, keeping each couple separate by 3-inch lengths of the same poles

threaded lengthwise on the wire. This can best be arranged on the ground, and when a sufficient number to surround the stem has been wired together, the whole may be lifted up and placed in position around the trunk. Another method is to bind the poles together with two strands of fencing wire, at a short distance from top and bottom, giving the wires a double or treble twist between each pair, so that the poles may be kept at stated distances apart.—A. D. W.

Trees in Bunhill Fields Cemetery.—The treatment of the Poplar and other trees in this cemetery leaves much to be desired, especially as the place is associated with such names as John Bunyan, Daniel Defoe, and Isaac Watts. On entering from Bunhill Row one is faced on the left by two dead or dying stumps of Poplar, and on the right by broken-topped specimens of the same tree. Further along, several of the decrepit Planes and Poplars should either be removed altogether, or the overhanging branches of the adjoining trees carefully pruned back. In other cases removal of the dead wood would greatly improve matters. Altogether the place has a neglected appearance, which might be greatly improved by attention to existing trees and the planting of a few other suitable species.—A. D. W.

[This is true also of some of the London West End parks, where broken-backed Elms are too common.—Ed.]

Box edgings in kitchen gardens.—I am surprised to see that anyone calling himself a gardener should write as "K. P." does in GARDENING ILLUSTRATED.

Box forms a very suitable edging to kitchen garden paths, and nothing has a nicer appearance when it is kept dwarf and regularly clipped.

A waste of labour in hard times, and at all times, for mice, vermin, and other enemies it forms a fine cover, and they know it. The right edging for kitchen gardens is one that gives no shelter or shade to mouse, rat, or slug, and one that does not rob the ground as Box does. I can see some pretence of reason in the Box edging being used in a flower garden to carry out some silly idea of an old-time garden, but in a kitchen garden it is ridiculous. I would rather have no edging at all, as in the Paris market garden.—W.

Berberis Darwini.—Beautiful though this evergreen is as a bush in the shrubbery or on Grass, it is more so when grown as a hedge. In some years severe frost may cripple the top portion of the plants, but they quickly recover. Thirty years ago I planted a hedge of it on each side of a

Grass path, with a narrow flower border on each side, and it has been a great success. Some twenty-five years ago severe frost crippled some of the plants, but they recovered. I planted, as a protection, one common Holly to two Berberis, which grew together nicely, making a neat and thick hedge, now 6 feet high. The annual cutting is done in June, after flowering is past. A strong after-growth is then made which blossoms freely the following spring.—S. P.

Rose Zephirin (page 499).—I quite agree with "R. H. S." as to the merits of this Rose. It is a charming variety and has many good points. I find it a consistent bloomer and still in flower at the time of writing (November 21st), in spite of the extremely bad weather of the last week, when most of the others, Caroline Testout excepted, were completely shrivelled up. My soil is a fairly stiff loam, and Roses generally do well with me. I cannot agree with the remarks of "R. H. S." about the name of this Rose; one might as well call Prince de Bulgarie simply "Prince," which would convey nothing to the reader; further, it would be impossible to call all Roses, or, for the matter of that, any other plants, by names of a single word.—G. H. S. R., *The Bury Manor, Wick, Nr. Bristol.*

[We hate *rigmarole*, and disagree as to this. Long and compound names to Roses are too common and very ugly. We are not going to use any but the single name for this.—ED.]

Cotoneaster frigida.—This comparatively little-known species will presently prove one of the most popular—and deservedly so—of its tribe. A vigorous grower, summer-leaving in character, developing when grown as a standard into a low-spreading tree, its ornamental aspect can hardly be over-estimated. In bush form its more lax habit of growth does not, so far as my experience goes, display it to equal advantage. I have seen it thus without being greatly impressed. Standard-grown, as I saw it in October in a garden on the east coast, it was very beautiful, the nearly horizontally-disposed branches laden with big clusters of scarlet fruits. No member of the genus known to me is similarly endowed either in habit or fruit effect, and those who would get an idea of its value should so group it on the lawn or elsewhere, or even plant it by itself, in order that its better side may be revealed. For the season named few things can compare with it, and, so far as I know, none surpass it.—E. H. JENKINS.

Berberis Sargentiana.—This is a Chinese species, and one of two Berberis each of which received a first-class certificate from the Royal Horticultural Society on November 7th last, a rather unusual circumstance. *B. Sargentiana* was given an Award of Merit in August, 1915, its higher merit being recognised in the new award. An evergreen kind, and, without doubt, the most ornamental of its class, having a leaf character approximating to *B. Wallichiana*, it is of striking beauty in autumn, when the handsome leafage assumes a mingling of green, bronze, and scarlet, which remains effective for a long season. Bush-habited, its good attributes will be seen to best advantage probably when the plant is grown as an isolated example in open positions. Apart from leaf-beauty and other characteristics marking it as a plant of distinction and merit, the long, rigid, ivory-white spines with which the younger branches are armed are also a feature. The fruits are small, dark in colour, and of no great ornament. This species was exhibited by Mr. E. Beckett, gardener to Hon. Vicary Gibbs, Elstree, Herts.—E. H. J.

FRUIT.

GROWING PEARS.

To secure Pears free from scars and with a full, luscious flavour when ripe, not only must the roots be in a healthy and satisfactory state, but the soil also must be in a high state of fertility. Very often after a time the soil, as it were, becomes exhausted—that is, if means have not been taken to keep it in a high state of fertility. No other fruit varies so much on diverse soils as the Pear, but the best qualities of any varieties are more developed on a warm and well-drained soil. It therefore rests with the cultivator to follow the methods of culture to secure the best results which the soil and district will allow. What are termed root-feeders or fibres must be present in sufficient numbers and be also within fair reach of the surface, so as to be able to supply in a quick and direct manner the requisite food. Very often the root-action is most defective, the result of their either being too deep down, having been brought to this stage by too much surface digging, or from want of nourishment.

Pears grown as cordons are often supposed to be short-lived, but they are not if surface feeding is systematically carried out. A few years back I had charge of a lot of cordon Pears, and the practice I carried out with these was to lightly prick over the surface in the autumn, and then with a rake to carefully pull back the loose surface-soil. In its place was given a surface-dressing of loam, rotten farm-yard-manure, and burnt garden refuse. The regular crops of fully-developed fruit annually produced testified to the value of these dressings. In the case of trees growing on light or gravelly soils, also whether growing in the open or against walls, the best course would be to prick over the surface, removing the soil down to the roots, and in its place to give a good dressing of the material mentioned above, but with this difference, that fully one-half should be rotten manure with a good addition of burnt refuse.

Trees on the Pear stock growing against walls are often seen in a barren state. To bring these into a state of fertility nothing short of root-lifting will suffice. In the case of large trees it would be highly dangerous to re-lift them wholly at one time; consequently, this operation should take place at two different times, viz., one-half of the tree one season and the other half the following. This, however, must be done carefully, or much mischief will ensue. A.

MANURING HARDY FRUITS.

This does not always receive the attention it should. A timely application of manure in the way of a surface mulch or otherwise to just bury the manure beneath the surface goes a long way towards maintaining fruit-trees in good bearing condition, especially varieties which crop regularly. These remarks apply equally as much to wall-trained trees as to those grown in the open garden or orchard, only in the case of Peaches, Nectarines, Apricots, and dessert Cherries the manuring may be deferred until after the pruning and training are finished. For Plums, Pears, Morello and Kentish Red Cherries it cannot be applied too early in the winter, and, if possible, should be lightly forked in. In these instances it is only the alleys which can be so treated, but in the open garden and orchard the manure can be spread to as far as the branches of each tree extend. As a rule, the soil beneath garden trees can be removed more quickly with a hoe than a spade, as it is more or less loose

for a few inches in depth. It is always best to bury the manure, if only just beneath the surface, as birds are then prevented from scratching it about and creating an untidy condition of the borders. All kinds of bush fruits need an annual dressing of manure, which, in regard to Raspberries, should be spread and left for winter rains to do the rest, for it is ruinous to the roots to dig the ground between the rows. A. W.

PRUNING APPLES AND PEARS.

No hard-and-fast rules can be laid down as to how the pruning of the different varieties should be done, for the work requires extensive knowledge. Young trees require rather severe pruning for the first few years to form well-shaped specimens, but it must always be remembered that certain varieties of Apples and Pears form their flower-buds at the ends of the shoots. Amongst Apples of this type may be mentioned Irish Peach, Mr. Gladstone, Jacob's Seedling, and Bismarck, and in the case of Pears, Beurré Superfin, Jargonelle, and Marie Louise. These must be treated accordingly. Shoots that fruited last year may be removed. If pinching the shoots in summer has been practised, young trees will require little pruning beyond shortening the leading shoots to 12 inches or 18 inches, according to the variety, and cutting back the side shoots to two or three buds. The young shoots of old trees that have filled their allotted space should be cut back to from two to four buds, according to the variety. It is generally safe to prune strong-growing varieties to four buds, and weakly or medium growing varieties to two buds. Old trees are often crowded with branches and fruit spurs, and, in consequence, sun-light and air are excluded from the inside branches, so that fruit is produced only on the outside of the trees. Some of the spurs and a few of the useless branches should be removed annually. Standard trees require very little pruning, but this should be most carefully done until the tree is five or six years old. The leading shoots should be shortened to about half their length and any branches which cross each other must be cut back. When pruning is finished gather up the prunings and other rubbish and burn them, and lightly prick up the surface of the soil with a fork. G.

NOTES AND REPLIES.

American blight.—Please tell me how to deal with fruit-trees coming in, which may be, I fear, infested with American blight?—S.

[You should get some methylated spirit, also a camel-hair brush. Dip the brush into a small bottle of the spirit and carefully soak each colony of the American blight with it. This, if persevered with, will clear off every one. In the old Chiswick days we adopted this plan with the mealy bug on the Vines, and found it was also efficacious in the destruction of American blight, which was prevalent on some of the cordon Apple-trees. It would also be well to syringe the trees with the caustic alkali solution after they have been planted. An eye should be kept during the coming spring on the trees that come to hand, and if any signs of the pest are visible apply the methylated spirit.]

Pruning standard and bush Apple-trees.—Would you kindly tell me the best way to prune standard Apple-trees which now have been planted two years? They were put in in December, 1914, not pruned in the spring, but in the autumn (December) of 1915. The long shoots—strong and 4 feet long—were cut down from 12 inches to 15 inches. They have now shoots 4 feet long, and I thought, as they have eight to nine shoots on each tree, I would only take 4 inches to 6 inches off the top

of these shoots. I had to summer-prune them as they made a lot of shoots inside. Is this the best treatment? Bush trees have made the same long shoots (4 feet). They were planted same time (December, 1914) and pruned December, 1915. I have got them into a nice shape, and now there are only the leading shoots (4 feet) to prune and a few summer-pruned inner shoots to cut back (some had good fruits on this year). How far should I cut these long shoots back? I understand a little of pruning, as I have done these from the beginning, but would like the best advice as to how to continue. Should I leave a third on—that is, cut two thirds off, leaving about 18 inches on? They are thick, strong shoots?—FRUIT.

[You had better shorten the long shoots mentioned, more or less to about half their length and in such a way that symmetrical-shaped heads result. Cut to buds looking outwards, and if any of the shoots are inclined to cross one another or are likely to encroach on each other do not hesitate to thin them. Each shoot should stand quite clear and some distance apart from its neighbour. You did quite right in summer-pruning the young side or lateral shoots. Cut these back now to three or four buds to form the bases of spurs for future fruiting. The bush trees should be dealt with in precisely the same manner, and if any of the shoots or future branches are at all likely to become crowded after the lapse of a few seasons train them in an outward direction now that they are young and supple. This is easily accomplished if the requisite number of short stakes is first driven in where required round the trees. Then, by attaching suitable lengths of tar-twine to the shoots needing attention, they can be drawn outwards to the desired positions and made secure by fastening the twine to the stakes. In the course of two or three seasons the branches become set, when the stakes may be dispensed with.]

The fruit-room. — In the fruit-room it will be necessary to overhaul the fruit, frequently removing all that show the slightest signs of decay. It is during the first weeks after storing that such fruits are found, for, in spite of every care, some blemished fruits are sure to find their way to the benches. As early sorts of Apples are cleared off, the later ones may be given more room. It is advisable to do this as soon as possible while the fruits are still hard and green, then there is little chance of bruising them. A mixed fruit-room is an evil, and a very common one, for the conditions which suit Apples best are bad for ripening Pears, and it ought to be the rule to have at least a small portion of the store-room divided off and kept warmer and drier for the benefit of ripening Pears, as these are much better when ripened in a temperature that would be too warm for Apples to be kept in. Pears should be tested day by day, as many sorts are liable to go sleepy almost as soon as they ripen, and in the early stages of this defect it is almost impossible to detect it from outside appearance.

Melons grown in cold frames. — The Melon is commonly considered delicate, needing a good deal of warmth and careful treatment. The summer and autumn of 1916 cannot be claimed to have been good for Melons in cool frames, yet in a neighbouring garden in a frame standing only on the natural soil of the garden some Melon plants of the British Queen type matured some uncommonly fine fruits, some even up to 7 lb. in weight, and what is so remarkable and unusual was the high flavour that was developed in this sunless, cool, and wet autumn. The frame accommodated Lettuces and other spring crops prior to the planting of these

Melons, the only addition being a little stimulating chemical manure. The grower had no confidence in the possible issue. The plants had been raised for other structures, and, the frame at the time being unoccupied, the Melons were planted on the remote chance of being at some time useful. There was quite a normal crop on each of the several plants, and their vigour was exceptional. This is a record that might inspire others to emulate, but the successful growth of Melons under cool conditions is such that one does not entertain the most hopeful results



Aloe ferox in bloom at Mount Henry, Dalkey, Co. Dublin.

by those even expert in Melon cultivation. On page 556 Cantaloup Melons are referred to by "W." as being similarly successful grown in cold frames without skilled attendance, a coincidence that seems to imply something in the peculiarity of the season favouring Melons thus treated. I have grown Cantaloup Melons in more favourable summers, but the flavour was poor, and for this reason have given them up. The shortness of labour has put a ban on Melon culture in many gardens this year, and the prospects of the future do not hold out any hope of their getting any better treatment. Economy is the rule, and I fear the Melon in many households will remain only a memory.—W. S.

PLANTS AND FLOWERS.

OUTDOOR PLANTS.

ALOE FEROX.

THIS, shown in accompanying engraving, is growing out-of-doors in Dalkey, Co. Dublin, Ireland, in a desert garden. It blooms regularly every summer. The plant when the photograph was taken was about 15 inches high and the flower-stem another foot. It is sheltered in the wet weather each winter by an overhead frame at night, but always open during the day. It is never protected in any way in spring, summer, or autumn. Being near the sea, south aspect, frost never troubles it in any way.

R. C. McM. SMYTH.

FRASER'S CRIMEAN SNOWDROP.

(*GALANTHUS PLICATUS FRASERI*).

THE Crimean Snowdrop is one of the most distinct of all the race, although in some respects less valuable in many places than the best forms of our common Snowdrop (*Galanthus nivalis*). Yet it is one which is of much value, its bold stature and fine leafage rendering it one which has appealed for long to lovers of the Snowdrop. It is of bolder habit than *Galanthus nivalis*, while the flowers of the best varieties are large and of great beauty, the pure white of the ground colour of the flower being intensified by the bold, saddle-shaped apical blotch, which is to be met with in almost all its varieties. The most characteristic feature of *G. plicatus*, however, is the leaf, which is broad and plicate, or folded back at the margin. It is a fine and distinct Snowdrop, which has been much employed by hybridisers and seedling-raisers. From various parents employed in hybridising, the late Mr. James Allen, of Shepton Mallet, the late Mr. William Thomson, of High Blantyre, N.B., and others have succeeded in raising some excellent Snowdrops.

Galanthus plicatus Fraseri is probably only a selected variety, its history being that Mr. W. B. Boyd, of Faldonside, Melrose, observed it growing among some Crimean Snowdrops in the garden of the late Mr. P. Neill Fraser, Edinburgh. It was taken care of, and distributed under the name of *G. plicatus Fraseri*, and has proved one of the finest of the Snowdrops.

As the popular name of Crimean Snowdrop would suggest, *G. plicatus* is a native of the Crimea, but it is also found in the Caucasus and adjacent regions. It appears to be one of the parents of *G. byzantinus*, although some consider that Snowdrop a species, but the latter is, on the whole, inferior to either of its parents, which are *plicatus* and *Elwesi*. The Crimean Snowdrop apparently thrives best in a good soil, but it seems peculiarly liable in some gardens to the attacks of the disease. It should be deeply planted, and I have at various times planted it at from 6 inches to 12 inches deep with advantage.

S. ARNOTT.

Yucca Whipplei.—The note by "J. Harry Johnson," on page 575, gives interesting information regarding different forms of *Yucca Whipplei* in South California. It would be a favour if your correspondent would deal with the question of the duration of life of this *Yucca*. The following passage occurs in a book on "The Wild Flowers of California."—"This (*Yucca Whipplei*) surpasses all known species in the height and beauty of its flower-panicles, but, once the season of flowering and fruiting has been consummated, its

life mission has been fulfilled, and the plant dies. The dead stalks remain standing sometimes for years upon the mountain side." Some interesting information is given in the same work about the uses to which the Indians put the plant. We are informed that the seeds are made into flour, that a soft white fibre used for making the linings of the coarse saddle blankets is made from another species, and the undeveloped flowering shoots (considered a great delicacy, either raw or cooked) are gathered and the leaves stripped off, leaving a round mass. This they "prepare after the fashion of a clam-bake." When the pile is taken to pieces and the cooked flowering stalks taken out they have much the same consistency as baked Apple and bear a slight resemblance to it.—S. ARNOTT.

PLANT VAGARIES.

It seems impossible to account for the vagaries of some hardy plants. How many of your readers, for instance, would dream of planting *Daphne Cneorum* in clay, with a dressing of dung and lime? It is the very last mixture I should have thought of using for this plant. A specimen 7 feet by 4 feet in rude health is exceptional and something to be proud of, and, according to "North Yorks" (p. 553), this development is the result of planting in clay enriched with manure, whereas a plant put into sandy peat and loam died. About a century ago the Lord of the Manor gave permission to the inhabitants of Woking to enclose an acre of ground each on Woking Heath. Many did so, and built cottages, which have nearly disappeared as the result of the builder's operations. Some forty years ago they still existed, and a feature of many of the gardens was this *Daphne*, which grew there like weeds. One of those cottagers said: "All I do is to tread down the shoots and put a spadeful of soil on them, and they make roots." Where the Railway Hotel now stands was a *Daphne* nursery, in which thousands of plants were raised and sent to all parts of the country. Could there be a greater contrast, then, between "North Yorks" clay and dung and the sandy peat of that district, and is it not strange that in his case, apparently, the addition of peat to the loam should have caused a plant to "promptly die"? This is quite contrary to my experience, as some years ago, finding that this *Daphne* would not thrive in my black soil, I made up a bed of loam, with lumps of peat and some leaf-mould. A fair-sized plant in the course of two years developed into a fine specimen, and I obtained between fifty and a hundred nice young plants. The propagating was simple. I bent the stronger shoots down, put a piece of peat on, and a stone on that. In the course of the season the peat was a mass of roots, so that, when severed, these young plants experienced no perceptible check.

One can understand that soil will influence the welfare of a plant, but it is puzzling when the same kind of soil appears to act in a quite opposite way in different localities. When I began the culture of *Gentiana aculalis* the plants refused to thrive, and gradually pined away. I tried another lot, with the same result. It happens that I have a piece of land which, although only separated by a hedge from where I live, is of a light, loamy nature, and it occurred to me to try it for this *Gentiana*. In less than a month the leaves took on a green tinge, and eventually I raised a nice lot of healthy plants from them. In this case it was simply a matter of soil. On one side of the hedge the plants died, on the other they were quite

happy. The common Parsley is very eccentric in its behaviour. There are places where it absolutely refuses to grow. With me it is luxuriant, but in a garden some 500 yards from me it will not prosper. The seedlings come up very well, but when the young plants get about 2 inches high the leaves turn yellow and no more growth is made. In one of the most famous gardens in England the same thing occurs. No expense has been spared, but no matter how well the soil may be prepared, every sprig of Parsley has to be bought. It is just the same with the Black Currant, which will not thrive there, in spite of careful soil preparation. Can anyone say why *Scabiosa caucasica* absolutely refuses to start with me? I have procured roots like moderate-sized Carrots, but they never showed the least sign of growth. One would think that by inherent energy they would have made some growth, even if the soil was not suitable for a vigorous life, but the same thing occurred even when I tried a complete change of soil. In the same way the *Doronicum* is practically biennial with me. In the third year after planting, it is not worth keeping. In the case of *Cyclamen Atkinsi* and *C. Coum* the seedlings come up and take on perennial vigour wherever placed.

Surrey.

BYFLEET.

MAY-FLOWERING TULIPS.

Now that the season is again with us for planting nearly all kinds of bulbs, a word may be said in favour of the tall-growing Tulips, which are not met with so frequently in gardens as their beauty and usefulness deserve. There are many who are always ready to add something of interest to their bulb garden or herbaceous borders, and it is in these positions the Tulips referred to find the best home, simply because they are or should not be lifted each spring the same as the dwarf-growing varieties generally used for spring bedding and window-boxes. It is certainly a mistake to plant what are known as the *Gesneriana* and breeder Tulips in ordinary flower-beds, where they have to be lifted directly they have passed out of flower to provide room for the summer occupants. They are not only not seen under the best conditions when used in this way, but, what is worse, the bulbs generally are of little value the following year, owing to having been disturbed before growth was properly completed and the bulbs matured. A permanent position should always be selected for them, and when massed in fairly large clumps they are unsurpassed during May for brilliancy of colour or for cutting. In

planting a collection of these it is best to prepare the ground thoroughly, as it is not desirable to disturb the bulbs afterwards. In selecting the different sites it should be remembered that many of the varieties send up flower-stems nearly a yard high; therefore, when planting in the mixed borders they should not be placed too near the front. It is always advisable to have the different varieties distinctly labelled; and to properly mark the exact spot where the bulbs are situated it is a good plan to drive in a strong stake that will stand out of the ground a few inches and which is stout enough to last for several years. Having marked the position in this way, from a dozen to thirty bulbs may be dibbled in round each stake, allowing, say, 4 inches space between each. Clumps formed in this way are easily supported to one neat stick before the tall flower-stems are fully developed to prevent them being twisted about by wind, which is not convenient to accomplish when each plant is separated some distance away from

its neighbour, while being massed they present a more pleasing feature.

Another important point in connection with these Tulips is that they flower in May and June, when it is yet too soon to expect much variety from the open borders, and, moreover, as they last for some time when cut, a good collection should be a boon to those requiring cut flowers.

NOTES AND REPLIES.

Increasing Anchasus.—I should be glad if you would tell me the best time to take root-cuttings of *Anchusa italica*. Dropmore var. and Opal that would make good plants to flower the following year.—MRS. GAGE HODGE.

[This work may be done at any time between November and February. Lift the plant, cut away as many roots as can be well spared, laying all in one direction, so as to keep the upper ends always uppermost. Any roots from the size of a Cedar-wood pencil to the largest available may be used, the roots to be subsequently cut into lengths of 1½ inches or thereabouts, keeping the ends that would naturally be nearest the crown of the plants always as the upper end. When the whole of the roots are cut into the above-named lengths, take some well-drained pots, seed-pans, or boxes of a sufficient depth, and having placed very sandy soil or Cocoa-nut-fibre therein, so arrange the pieces of roots that the top is just exposed to view. Well-drained flower-pots of 6 inches diameter will do quite well, each pot of this size being capable of holding a score of the root-cuttings by placing them at intervals around the inside of the pot. With the roots in position fill the central portion with sandy soil, and water to settle the whole. If you have a frame in a greenhouse where a temperature of 45 degs. or 50 degs. is maintained, the pots should be placed therein. Very little water will be required for the first few weeks, and growth from the apical portion of the root will appear in a month or six weeks. With more abundant growth give plenty of air, and subsequently transplant as you would seedlings prior to planting them out in the border in spring.]

The wild Clematis.—Having seen all my service in the East, I know nothing of English gardening. Last year I sowed a quantity of seed of *Clematis Flammula* in hedgerows in Essex, but none of it germinated. In spring I wish to plant from pots various kinds of hardy *Clematis* in hedges. I wonder if you would be so kind as to give me the names of one or two kinds that when established will look after themselves and possibly increase. *C. montana* grows wild in the Himalayas, and might become naturalised. I have tried various kinds of *Clematis* in my London garden here, but none has flowered satisfactorily. Even *C. montana* has produced no bloom.—MAIDA VALE.

[There should be no difficulty in getting on their own roots several of the wild *Clematis*—*montana*, *Viticella*, *flammula*, *orientalis*. They should be got from any good nurseryman, or may be raised from good seed, which, however, takes some time to grow. The graceful *C. Viticella* is easily naturalised, and *C. montana* may be seen on trees 40 feet high.—ED.]

The Peacock Iris (*Moræa Pavonia*).—What treatment should *Iris Pavonia* receive in the matter of soil and position? Is it necessary after flowering to cover the bulbs with glass, as in the case of the Cushion Iris?—ALPHA.

[Strictly, this is not an Iris; its correct name is *Moræa Pavonia*. Unless you are particularly favoured by warmth of situation or locality and have experience contrary to that we are about to recommend, this beautiful plant is calculated to give the best results when lifted each year soon after maturing and rested in dry sand for a month or two, replanting in September—

October or thereabouts, covering its station during severe weather with a mixture of Cocoanut-fibre and ashes. Better even than this would be to give it a hand-light to itself, where, with perfect drainage below, a rich sandy loam to root into, and an overhead covering to shield it from continuous wet, you would, with the lifting and resting already recommended, be doing your best to make it a success. A lover of warmth and sunlight, it should be catered for in these respects as well.]

Carnations.—There are, as is well known, some districts in which Carnations are more or less a failure, owing, perhaps, to some obscure condition of soil or of climate or of both combined. In such cases some measure of success may be attained by using seedling plants. If seeds be sown in August, the seedlings pricked off, and when large enough transferred to and wintered in 3-inch pots, they can be put out in early spring, will flower during the following summer and autumn, and can be discarded after flowering. This saves the worry connected with unhealthy layers in such gardens; and seedlings are equally as valuable for

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

IRIS GRACILIPES.

If, among the dwarfiest of rhizomatous Irises, we accept *Iris cristata* and its white form as the embodiment of grace and charm and the lovely and distinct *I. tectorum* and its white variety as having a beauty of their own—albeit all too rarely seen at their best—there still remains room for the above miniature-growing Japanese alpine kind, whose elegant grace must appeal to all. Briefly, it may be likened to a miniature *I. tectorum*, a likeness suggested chiefly by the prettily fimbriated flowers, which are pale blue in colour with orange crest. It is too dwarf and choice for ordinary border cultivation, and should be given a place in the rock garden, where in a cool root-run of sandy loam it will usually give a good account of itself. The habit of growth and flowering are well shown in



Iris gracilipes.

decoration or for cutting as are named varieties.—Krr.

Primula nessensis.—This Chinese Primula, introduced in 1911 by Messrs. Bees, from seeds sent home by Mr. George Forrest, is appreciated by those who have grown it. It is one of the denticulata section, the flowers of a pretty pink colour and on stems of good length. It makes a good pot plant for the greenhouse, and it can also be grown out-of-doors in a rather moist position.—S. A.

Squirrels in the garden.—Never, I think, have I seen so many squirrels in the garden and its neighbourhood as during the past month. I cannot say that these animals are a source of danger to plants generally, although they are accused by foresters of spoiling certain kinds of young and newly-planted trees. At any rate, I have kept them under close observation for years, and the utmost with which I can tax them is a partiality in some seasons for Morello Cherries. This, I fancy, is more for the sake of the kernel than for the fruit of such. Of course, they are very partial to the haws of the Thorns, but as birds also are fond of these, the squirrel need not be grudged a share.—W. McG., *Balmac.*

the accompanying illustration, to which may be added that the plant grows 6 inches to 9 inches high and flowers in late spring. Not very robust, and still far from common, it is worth the best endeavours of the hardy plant gardener to make it a success. E. H. J.

TRAILING PLANTS FOR THE ROCK GARDEN.

FROM the abundance of trailing plants which can be employed in the rock garden we may select a few for notice, as useful, pretty, and of easy culture. These do not by any means exhaust the suitable subjects, but they will be found to suit most gardens and to thrive in almost all parts of the kingdom. They will, with few exceptions, do well in a mixture of light loam, or loam, leaf-soil, and sand. Plenty of stones about their roots will suit most of them, and firm planting is always desirable.

The most of the *Acænas*, or New Zealand

Burs, are pleasing. Among the best are *A. Buchanani* and *A. Nova-Zealandia*, which are prized more for their foliage than for their flowers. They will thrive in sun or shade, but prefer a little shade. The *Æthionemas*, or Lebanon Candytufts, are good for low stones; they like sun, and should have some lime in the soil. *Æ. grandiflorum*, with rosy flowers, is one of the best for our purpose. *Alyssum serpyllifolium* (yellow) looks well as a low trailer, while *A. spinosum* (white) has also silvery leaves, and a big plant will cover a stone 2 feet or 3 feet high in due course. *Androsaces* are gems for the rock garden, but the best for the object we have in view is *A. lanuginosa*, which blooms a long time and likes a little lime in the soil. In moist districts it should be protected from wet in winter. *Aubrietias* are invaluable. *Arenaria balearica* will cover a moist stone very rapidly, and should be planted at the foot to clamber up. *A. montana* is a grand, white-flowered trailer and a beauty in spring and early summer.

In several of the *Campanulas* we have capital plants. Among the best are *C. portenschlagiana*, *C. garganica*, and *C. g. hirsuta*. These are blue, but there are white varieties of *C. garganica*. *Cerastiums* are indispensable for larger rockwork, but they must be kept in bounds. *Coronilla iberica* is a nice, yellow-flowered trailer, liking full sun and a rather dry, stony soil. Nice little trailing shrubs are *Cotoneaster congesta* and *C. humifusa*, their deep green foliage and small flowers, followed by pleasing berries, making these *Rocksprays* attractive. Then such dwarf *Brooms* as *Cytisus Ardoini*, *C. decumbens*, and *C. kewensis* (creamy) are all gems for our purpose, and we may add *Genista prostrata* and *G. sagittalis*. For the rock garden the *Pinks* are very fine. *Dryas octopetala* (white) is good, and prefers a little lime in the soil. Give it sun. The winter-flowering *Erica carnea* is excellent. *Gypsophila prostrata* and *G. repens* are excellent with their white or rose flowers, and any of the *Sun Roses* will be found delightful for sunny rock gardens, and give many-hued blooms in profusion. *Hypericum fragile* (yellow) is a good *St. John's Wort* for a sunny or shady rock. In practically all the perennial *Candytufts* we have useful white-flowered subjects for our purpose. *Lithospermum prostratum*, which, however, does not do well everywhere, is a gem with blue flowers, and for a shady, moist spot the common *Creeping Jenny*, *Lysimachia nummularia*, or its golden-leaved variety may be employed to advantage. *Phloxes* of the *setacea* or *subulata* class, with *P. Stellaria*, are invaluable for spring. Keep them pretty well up on the rockwork, where they will get some sun. *Polygonum Brunonis* (rose) is good for autumn, and *Saponaria ocyroides* is capital for a dry, poor soil in sun. The flowers vary from rose to almost crimson, according to the variety. All the *Mossy Saxifrages* are excellent. *Silene Schafta* (purple-rose) is capital in sun or shade. We may also plant in sunny places any of the *Thymes*, the varieties of *T. Serpyllum* being as pleasing as any. *Tunica Saxifraga* (pale rose) is a gem for a place where only a thin veiling is required. Dry, stony soil in sun suits it well. *Veronica prostrata* and *V. pectinata rosea* (the former blue and the latter rose) are excellent, and the *Vincas*, or *Periwinkles*, will soon cover a large space with their pretty leaves and flowers. In *Waldsteinia fragarioides*, which does best in a moist, shaded position, we have a beautiful yellow-flowered plant with glossy leaves and pleasing flowers.

S. ARNOTT.

FERNS.

HARDY FERNS IN WINTER.

OUR native hardy Ferns belonging to two categories, viz., those which are deciduous and die right down to the ground in the late autumn, and those which are evergreen and retain their fronds until the succeeding season, it is evident that, under glass at any rate, the latter may be arranged to preserve to a considerable extent the attractiveness of a collection through the dead season of the year.

With regard to the former, the fact that the fronds fade and shrivel in the autumn is not infrequently regarded as a sign of actual death through some mysterious cause, the persistent greenness of the other species helping this conclusion. It is, however, a purely natural feature, and we see precisely the same phenomena in our deciduous and evergreen trees. Even to those, however, who recognise this fact, there is a great danger that the seemingly empty pots, so far as visible life is concerned, may be neglected during the long winter months as regards the all-essential point of watering. If we study such Ferns in their native habitats we shall find that during the winter they exist under the moistest possible conditions, being more or less buried in the wet débris of their own fronds and dead leaves from other sources and with the soil thoroughly saturated. Hence we may learn that even in their dormant condition the roots should never get dry, and thus that occasional watering is essential. If the room occupied by the pots be needed for other purposes they can, owing to the thorough hardness of the Ferns, be buried in soil outside or packed in cold frames until the early spring when new growth commences. These remarks apply to the Lady Ferns, *Lastrea filix-mas*, *L. montana*, *L. propinqua*, and *L. Thelypteris*, the Royal Fern, the Bladder Ferns, the Oak and Beech and Limestone Polypodies, and the Bracken, the fronds of all of which disappear by November.

The evergreen species are far more numerous, and consist of the Shield Ferns, all the Spleenworts, the Harts-tongue, *Blechnum*, *Lastrea semula*, the common Polypody and the filmy Ferns, to which may be added, under glass, the hard Male Fern (*L. pseudo-mas*), and with a little coaxing by way of support, the Broad Buckler Fern, which, with its sub-species *L. spinulosa* and *cristata* forms a sort of intermediate link, since though the fronds drop down as a rule, they retain their verdancy until the spring. The varieties of all these species retain their specific habits in this respect. Hence we see that, provided the plants have been healthy and free from vermin, there remains a large group of evergreen ones for the decoration of the fernery during the otherwise dead season. As under Nature all these species occupy moist habitats in the winter, occasional watering, as we have said, is essential, but it is not advisable to keep the frondage wet under glass by overhead watering.

In the open, under the stress of frost, wind, and heavy rains and snow all the Ferns, whether evergreen or otherwise, are apt to get beaten down and rendered unsightly, but it is not wise for mere neatness' sake to remove the fronds, even the dead ones, as they constitute the natural protection of the crowns from the weather, and it is better to give them generally a liberal mulching of dead leaves such as they usually get in their native habitats. This protection should be left until the end of March, when the risk of drying winds and sharp frosts is reduced, and even then it is well to leave the mulching

close around the crowns, and for this special reason, each budding frond commences operation by emitting a fascicle of roots on its own account from its base, and until these have well penetrated the soil under such protection, they may be injured by its removal and seriously check the growth for the season.

The principle, indeed, to be borne in mind throughout is that the roots are alive and it may be actively active, though the visible growth is at a standstill, and the maintenance of this vitality by avoidance of drought is a *sine quâ non* of successful culture.—C. T. DRURY in *British Fern Gazette*.

GARDEN FOOD.

NOTES AND REPLIES.

A self-blanching Celery.—My crop of this is not quite good to look at, poor in colour, and the report from the kitchen is that it is good for soups and stews. Even for that purpose it is useful and helps to save the great labour of Celery-growing. Have any of your readers success with it?—W.

Arran Chief Potato.—I neglected to plant this in the garden, and, hearing a good report of it, I had some from the farm, and like it well for the one essential need, good flavour. It is a large, round Potato, and said to be disease-resisting and first-rate baked or boiled. My favourite hitherto has been Langworthy, but it will have to give place to Arran Chief.—W.

Home-grown Celeriac.—My roots are not so large as those seen in markets from abroad, but distinctly better in flavour, no matter how cooked. The coarse market roots were not so easily cleaned. In vegetable stews, in casserole among other things, around game, or as a separate dish with brown sauce (as in France), it is the best winter vegetable of the season.—W.

Prunes as food.—Among the best foods for winter use is the Prune, often ill-grown from European sources, very good, as a rule, from California. There is no good reason why Prunes of best quality may not be grown in the warmer parts of our islands, always where the soil suits. When we have a good stock of fruit ready for the cook an essential point is to soak the fruit so as to remove the manufactured sugar, mould, etc. The full advantage of the fruit is not to be had other than from the natural sugar and aids of the Prune.

Potato British Queen cooking badly.—Once one of the most reliable of croppers and best of cookers, this well-tried variety appears to have fallen on evil days. That it should not crop quite so heavily as once it did may be explained, but where has its dry, mealy property gone to? For two or three years I have grown British Queen in various soils and it has invariably been disappointing, boiling into a sloppy mess before the tuber is cooked to the centre. Up-to-Date offended very grievously in this respect for several seasons, and it is not quite satisfactory yet, especially in autumn.—A. T. J.

Garden Swedes and macaroni.—Swedes are very useful to the cook these days, better than most Turnips. The name is given to a compact form of the common Swede. Small roots from the field do as well, but it is often handy to have a little plot in the garden. Combined with other good things, macaroni to wit, they are very welcome cooked as follows:—Into a saucepan of boiling water put a pinch of salt, and break six ozs. of macaroni and cook for forty minutes; then allow it to drain in a colander. Meanwhile cook two small

Swedes. When done, drain off the water and pass through a sieve. If the pulp is too thick add a little cream; return to the pan with macaroni, a small piece of butter, season lightly to taste, and serve hot.

COOKING FIGS.

FIG DUMPLINGS.—Mix two cupfuls of flour with half a teaspoonful of salt, one teaspoonful of baking powder, and two tablespoonfuls of sugar and sift into a basin. Add three-quarters of a cupful of chopped Figs, and sufficient milk to make a stiffish dough. Divide the mixture into six equal parts, shape them into dumplings, drop them into a saucepan of boiling water, cover, and cook for one and a half hours. Drain and serve hot with any preferred sweet sauce.

STEAMED FIG PUDDING.—Chop half a pound of Figs rather fine and put them into a saucepan with one cupful of milk, to cook for fifteen minutes. Put into a basin one cupful of breadcrumbs or cracker crumbs, half a cupful of flour, a quarter of a pound of finely chopped suet, half a cupful of sugar, and a quarter of a teaspoonful of grated Nutmeg, mixing well together. Add the Figs and the milk, then beat up two eggs and add them with one teaspoonful of baking powder, mixing all together. Pour into a buttered mould, cover with a buttered paper, and steam steadily for two hours. Turn out and serve with any preferred sweet sauce or hot milk.

COMFOTE OF FIGS.—Wash and dry one pound of good Figs and arrange them in a glass dish. Boil two cupfuls of water with half a cupful of sugar for fifteen minutes, then add the strained juice of one Lemon. When cool, pour over the Figs; allow to get cold. Garnish with whipped and sweetened cream flavoured with half a teaspoonful of Lemon extract, pressed through a forcing bag with fancy tube. Serve with cream.

FIG ROLY POLY PUDDING.—Rub into four cupfuls of sifted flour a quarter of a pound of finely chopped suet, add a pinch of salt, two teaspoonfuls of sugar, one teaspoonful of baking powder, and make into a stiff paste with a little cold water; roll out and fit into a well-buttered pudding basin, letting the edges hang over. Put into the basin a layer of Fig jam, cover with a layer of paste, and so on until the dish is full; cover the last layer of jam with the overhanging paste, cover with buttered paper, and steam steadily for three hours. Serve with hot milk.

FIG MOULD.—Take half a pound of good Figs and wash them well, add the grated rind of one Lemon, four tablespoonfuls of sugar, and one cupful of water. Put all into a jar, cover with a piece of white paper. Place in enough boiling water to go half up the jar. Stew very gently until the liquid is dried up and the Figs very soft. Press into a wet mould, turn out, and just before serving pour custard sauce round. To make the custard sauce: Put into a saucepan the yolks of four eggs, four tablespoonfuls of sugar, and one and a half cupfuls of milk. Stir until it thickens and then add half a teaspoonful of Lemon extract; strain and use.

FIG DELIGHT.—Beat up the whites of three eggs to a stiff froth, then beat into them half a cupful of sugar; add half a cupful of sugar to the yolks and beat for five minutes. Mix the two together and stir in one cupful of flour sifted with one teaspoonful of baking powder. Bake in a well-buttered shallow pan. Beat up the white of one egg, add enough powdered sugar to make a soft frosting, then add eight large Figs chopped fine, twelve Raisins seeded and chopped, and twelve blanched and chopped Almonds. Spread over the cake and roll up. Serve cold in slices.

TIMBALE OF FIGS.—Put one pound of dried Figs into a saucepan, add half a cupful of Orange juice, one cupful of water, four tablespoonfuls of sugar, and the grated rind of one Lemon. Simmer gently until the Figs are tender and the moisture nearly absorbed, then rub the mixture through a sieve. Dissolve one and a half tablespoonfuls of gelatine in half a cupful of boiling water and stir it into the Fig mixture. Add four tablespoonfuls of whipped cream and pour into a wet mould. Turn out at serving time and decorate with roses of whipped cream.—Country Gentleman.

TREES AND SHRUBS.

PECULIAR TREE-GROWTHS.

THE accompanying illustration shows a peculiarity of growth that is more common in the case of the Beech than in other

perhaps, the most pronounced case of in-arching that has come under my notice will be found in the second volume of "Woods and Forests," at page 69, where the present writer, in some tree notes from the Conway Vale, illustrated a peculiar tree-growth. As will be seen from the

quently in the Beech than other trees is not readily accounted for.

A. D. WEBSTER.

SOME ATTRACTIVE DAPHNES.

THE Daphnes are composed of evergreen and summer-leaving shrubs, the majority



Curious tree growth near Broadway, one branch of each tree having grown into the trunk of the other. From a photograph sent by Miss M. Leventon, Bangor.

trees. An almost parallel instance to this occurs in the famous "Derby" Beech at Holwood, in Kent, in which at 40 feet from the ground two branches have become in-arched or connected with the main stem. By the Regent's Canal, near the North Bridge, another example of this kind is well known to observant visitors. But,

sketch, the branch forms quite an elbow or loop with the main stem, and is so uniform in size throughout as to puzzle one to say whether the branch sprang from above or below. It is the result of in-arching, but whether naturally or artificially brought about is impossible to say. Why cases of inarching should occur more fre-

of which are interesting by reason of their fragrant and often-times showy flowers. A few species are natives of Asia, and one, *D. cannabina*, is of economic importance, for in Northern India its bark is utilised for the manufacture of paper in the same way as the bark of the closely-allied plant, *Edgeworthia papyrifera*, is used. The

most important species, from a garden standpoint, are natives of Europe, where they are usually found in alpine regions, although some affect low elevations, and one or two are wild in the British Isles. They are peculiar plants under cultivation, for in some gardens they grow like weeds and give little or no trouble, whilst in other gardens a good deal of difficulty is experienced in their culture. Soil is not always the deciding factor, for the same species may be found doing well in peaty soil in one place and in heavy loam in another, while an attempt to introduce either condition into a third locality may result in failure. Constant moisture at the roots without a water-logged condition of the soil is essential, and many of the species require lime. It is always wise to raise plants from seed whenever possible, for such plants give better results than those raised in other ways, but in some instances seeds are difficult to obtain. Then the branches of some kinds may be layered, others may be increased by division; in only a few cases is propagation by cuttings a satisfactory method, whilst grafting is often practised. Grafting, however, is not always a very successful method; although the scions take well, the plants often die off suddenly. The reason for this may be the unsuitable character of the stock, a deciduous stock being used for an evergreen species or an evergreen stock for a summer-leaving kind. The more vigorous Daphnes are useful for planting in beds or borders in the ordinary way, but the dwarfier kinds are usually seen at their best when planted in the rock garden, where, once they become well established, they will remain in good condition for many years, their roots being less liable to disturbance than would be the case were they planted in borders with other plants. In the following notes attention is directed to only the more important species:—

D. ALTAICA is a very dwarf shrub from the Altai Mountains. It is summer-leaving and bears small heads of fragrant white flowers during May and June. It is allied to *D. caucasica*, and is sometimes associated with that species as a variety. The two are now, however, kept separate, *D. caucasica* being a larger-growing shrub, attaining a height of 3 feet or 4 feet. It also bears fragrant white flowers during late spring and early summer.

D. BLAGAYANA has for many years been one of the most famous alpine plants in the Glasnevin Botanic Garden, where it does well growing amongst rocks. A native of the European Alps, it has been in cultivation since 1875, but is not a common plant. Ranging between 6 inches and 12 inches in height, it spreads by means of underground stems. The leaves are evergreen. The cream-coloured flowers, borne in fairly large terminal heads during spring, are very sweet-scented. The secret of success with this plant is said to lie largely in keeping the shoots close to the soil by means of stones. Loamy soil appears to suit it best.

D. CNEORUM.—This species, known by the common name of Garland Flower, is one of the most beautiful of all and one of the most capricious. In some gardens it gives no trouble, while in other places it seems impossible to get it to grow. In *GARDENING ILLUSTRATED* for November 4th "North Yorks" describes how he grows this plant remarkably well in newly-dug clay with a very little top soil. He had it planted also in sandy peat and loam, but it then died. A few years ago one of the most successful growers of this plant, Mr. Knowles, at that time a nurseryman near Woking, grew very large quantities in the

ordinary soil of the district, sandy peat, and grew them well, hence the difference. People who have tried to imitate the Woking conditions have failed. Therefore it appears that the only way to find out whether the plant will grow in a certain garden is to experiment with it. Rarely rising more than 9 inches above the soil, it forms a spreading mass, increasing by underground stems. The evergreen leaves are small and narrow, and the pretty rose, fragrant flowers are borne in round heads from the points of the shoots during May and June. The variety *Verloti* is more vigorous than the type. Both plants are excellent for the rock garden or for beds on the lawn.

D. GENKWA is too tender for outdoor culture in the British Isles, except in a few favoured localities. A native of China and Japan, it forms an erect, deciduous shrub 3 feet or so high. The lilac flowers are borne in clusters from side buds in advance of the leaves during early May, the inflorescences reminding one strongly of miniature heads of flowers of the Lilac. At its best it is a very effective plant, but it is rarely found as a well-developed specimen.

D. HOUTTEANA.—This is said to be of hybrid origin, its parents being given as *D. Mezereum* and *D. Laureola*, the one summer-leaving and the other evergreen. It is semi-evergreen, grows 2 feet or so in height, and bears lilac flowers. As a rule, it grows well and gives better results than some of the others, although less beautiful than some of the species. It is sometimes called *D. Laureola purpurea*. The leaves are deeply shaded with purple.

D. LAUREOLA (the Spurge Laurel) is one of the British species, being found wild in a few localities. It is evergreen, with rather attractive leaves, from the axils of which yellowish-green flowers appear during late winter. Mature plants may be 2 feet or 3 feet high. The variety *Philippi*, from the Pyrenees, is of dwarfier and more compact habit, with smaller leaves.

D. MEZEREUM.—This, the *Mezereum* of the British Isles, Europe, and Siberia, is one of the most useful and attractive of all the Daphnes. Usually growing about 3 feet high, it forms a shapely bush with erect branches clothed with lance-shaped leaves. The flowers are borne in February and March from almost every bud on the previous year's growth. The colour is red and the flowers are very fragrant. There are two distinct varieties—*grandiflora*, which blooms during winter and bears larger flowers than the type, and *alba*, with white flowers. In addition to the flower beauty of these plants they are also very attractive when the fruit is ripe, that of the type being bright red and that of the variety *alba* yellow.

D. NEAPOLITANA thrives fairly well in many gardens. It is said to be a hybrid and is distinguished by its bushy habit, slender shoots, and small leaves. The purplish flowers are fragrant and are borne from near the points of the shoots in May. Fully-grown bushes may be as much as 3 feet high, though it is often much dwarfier.

D. ODORA is a well-known evergreen shrub which in many parts of the country is grown in a cool greenhouse, though in the warmer parts it grows quite well out of doors. A native of China and Japan, it was introduced as long ago as 1771. In gardens it is often called *D. indica*, and is frequently grafted upon stocks of *D. Mezereum*. This, however, is not really necessary, as it can be rooted from cuttings, which, as a rule, form the most satisfactory plants. The flowers are very fragrant, whitish within and reddish-

purple without, and appear over a long period, being often at their best during winter. There is a variety with white flowers. *D. Dauphini* is a hybrid between *D. odora* and *D. collina*. It is a free-flowering plant and rather hardier than *D. odora*.

D. PETRÆA.—Attention has been directed to this species on several occasions during the last few years. It is a very dwarf shrub with short, contorted branches, rarely growing 6 inches high. The leaves are small and evergreen, the flowers fragrant and an attractive shade of pink in colour. The flowering time is June, and the most suitable position for this shrub is the rock garden. It is also known as *D. rupestris*.

D. PONTICA is another hardy evergreen bush 3 feet or so high. The leaves are up to 3 inches in length and rather light, glossy green. The fragrant greenish-yellow flowers are produced in April. It is of more value as an evergreen than as a flowering shrub.

D. RETUSA is a Chinese shrub with evergreen leaves. It grows a foot or more high and branches freely. The white, purple-shaded flowers are borne in May and are very fragrant. It is a good plant for the rock garden, and is well worth special attention. D.

NOTES AND REPLIES.

The Constantinople Nut or Turkish Hazel (*Corylus Colurna*).—This is the best known of the Tree Hazels, and good examples of it are occasionally found in old gardens in the South of England. It is a native of S.E. Europe and Asia Minor, where it grows 50 feet to 80 feet high, with a trunk sometimes exceeding 1½ feet in diameter, the wood being rather heavy, close-grained, and of good quality. Even in this country there are trees 50 feet or so high, with large trunks. The male catkins are yellow and 3 inches to 4 inches long, and the small red female flowers are very like those of other Hazels. The Nuts are rather smaller than those of the ordinary Hazel, being wider, but shorter; moreover, the shells are very thick, and the kernel small. The husk, however, is the conspicuous part of the fruit, for it is large and covered with soft, gland-tipped spines. It is a good tree for a lawn or in a conspicuous position in a park, and it thrives in well-drained, loamy soil. Layered branches can be used for propagation, whilst it can also be raised from seeds.—D.

The Himalayan Lilac (*Syringa Emodi*).—Where a strong-growing shrub of the largest size is desired, this might well be tried, for it grows 15 feet to 18 feet high, with a number of strong main branches bearing numerous secondary branchlets, which carry ample and attractive leafage. The flowers, borne in panicles up to 6 inches long in June, are white or white tinged with pink, but they are not fragrant as in the common Lilac. It can be grown in most parts of the country, especially as it is not fastidious regarding soil. It is easily increased by seeds, which ripen freely here.—D.

Escallonia pterocladon.—This is probably the most generally hardy species, and as such worth the attention of all who delight in choice shrubs or evergreens suited to walls or other places in gardens in favoured localities. Of more lax habit than some, it is distinct in its neat growth, and long spikes of small white flowers, which are not unlike those of the *Colletia* in form, and furnishing the stems with some freedom, are pretty against the small shining leaves.—J. S.

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INDOOR PLANTS.

CARNATION NORA WEST.

SEEING that this variety gained an Award of Merit from the Perpetual-flowering Carnation Society when exhibited by the raiser in December, 1915, and when inspected in March, 1915, at the raiser's nurseries by a sub-committee of expert growers was granted a First-class Certificate, should go a long way to stamp it with the hall-mark of excellence. The dates of the awards, December, 1914, and March, 1915, are significant and of some moment. With a specially grown stock and numbers to select from, it were easy enough to pick a dozen or two well-flowered examples, and so gain the award in the earlier year named. It was quite another matter to be able to secure the higher award after inspection of the stock at home in March, 1915. March flowers are unmistakably the product of growth made during the worst months of the year, and,

of amateurs who specialise in the Carnation, it also bids fair to take a prominent place among the leading commercial varieties of the present time. It was raised by Mr. George West. E. H. JENKINS.

HARDY PLANTS FOR SPRING BLOOMING.

We have become so accustomed to rely on bulbs for a spring display that, if the truth be admitted, we have almost forgotten that many of our hardy plants will respond to gentle warmth and may be lured into bloom some time in advance of those out of doors. I use the term "gentle warmth" advisedly, as forcing as we regard it in these days of intensive culture is neither advisable nor essential. In these times, when, through shortage of the bulb supply from the Continent, or may be for financial reasons, it is not possible to place our usual order, it would be well to take an inventory of one's own garden in order to see whether we cannot provide for a dis-

and the deeper tints of Anthony Waterer. Of white-flowered plants one thinks of *Deutzia gracilis*; of the quaint ivory appendages underneath the arching leaves of Solomon's Seal. Quick of growth is *DieLytra spectabilis*. We admire the single and double *Pyrethrums* in the borders in June, but few think of what these old-fashioned things are capable as indoor plants. LEANURST.

THE CAPE PELARGONIUMS.

CONSIDERING the various ways in which sweet-scented Pelargoniums can be used, the wonder is that they are not more grown. Whether for mixing, when cut, with cut blooms in glasses, associating with such flowering plants as Carnations or bulbs grown for winter decoration, during the summer months as bedding plants for toning down some of the gaudy colours so prevalent in flower gardens, or for wreaths or button-holes, what so useful or appropriate? There is also such a variety of shades and diversity of form in their foliage that the most critical will find among them something to please. The scent of the foliage, too, with the exception, perhaps, of some of the *quercifolium* forms, is very agreeable, and in the case of many of them enjoyable and refreshing. True, they have not such gaudy flowers as the regal and Zonal Pelargoniums, but considering that they are of the most use as fine-foliaged plants, this is rather an advantage than otherwise, as the colour of the flowers is not sufficiently prominent to clash with that of those they may be mixed with. Each variety has a beauty of its own, and a good collection in flower is most interesting. Regarding their

CULTIVATION, no great amount of skill is needed. Some of the varieties are rather difficult to increase, but the generality of them are easily struck from cuttings. For the variegated varieties and some of the finer sorts a little extra trouble is needed. The cuttings should be inserted in small pots filled with a mixture of loam, leaf-mould, and sand. Any corner in a cool, airy, but not draughty pit will suit the cuttings until they have rooted. Shade from bright sunshine at first and give an occasional sprinkling overhead, but on no account allow the pots to become soddened with water. After the cuttings are rooted the usual shifting on is necessary, using the same kind of compost as that in which the cuttings were inserted, only coarser. If the plants are required for winter work they can be grown out-of-doors during the summer. Take care that the plants are not allowed to suffer from want of water or that they become root-bound. Pinch them or allow them to grow according as tall or bushy plants are required. By the end of September or early in October they should be shifted into their flowering pots, which should vary according to the growth of the varieties. Some of the dwarfier sorts, such as *denticulatum*, *Wardie Seedling*, *Lady Plymouth*, *quercifolium*, *coccineum*, *radula*, *Little Gem*, etc., are of most use for front rows, and should, therefore, be kept in smaller pots, while *P. viscosissimum* and other taller-growing sorts can be put into 8-inch or smaller pots, according to the size of the plants. After the plants have filled the pots with roots, weak manure-water will assist them. They should be housed by the middle of October and placed where they can have a good circulation of air, also as near the glass as possible. Under such conditions and with ordinary attention to watering they will make a sturdy growth throughout the winter, and will come into flower early in spring. A cool, airy atmosphere (say between 45 degs. and 50 degs.) is indispensable if a healthy growth is to be main-



Carnation Nora West.

seeing that such growth made in the Thames Valley (Datchet) met the approval of the examining committee speaks volumes for what I regard as one of the best of modern British-raised Carnations. Those who know from long experience the behaviour of the Perpetual-flowering Carnation in low-lying valley districts adjacent to a river will be able to appreciate the good attribute of winter flowering in the new comer. As a seedling from Winsor, one of the best of the true pinks which came early from America, it will also appeal. It is, however, superior to the old variety named in colour, and in refinement—not a strong point in Winsor—vastly improved. The clear, deep salmon-pink of the flowers appeals to one, and generally in flower freedom and continuity, petal quality, and other ways it is of outstanding merit. The habit, too, is excellent, and, what will appeal strongly to the amateur, the plant is healthy and the variety an easy doer. In fine, while it is calculated to please a large proportion

of welcome flowers in the spring time. Necessity often throws us back, as it were, on substitutes, and these sometimes surprise us. He who will give hardy plants a trial by potting them up, keeping them cool until spring, and afterwards inuring them to a slightly warmer atmosphere will appreciate what many of our familiar border plants are capable of doing under glass. It is when they are subjected to a high temperature that they fail, and, in consequence, are thought to be unsuitable for indoor culture. It is not the fault of the plant, but of the treatment. In our gardens we shall find abundant material for our purpose, and though the time of flowering may be a little later than in the case of the bulbs we have been in the habit of potting, their diversity of beauty is pleasing in the early year, and provides a galaxy of colour before the garden flowers appear. Such are the white and blue *Bell-flowers*, and the *Canterbury Bells*, *Spiræas* in variety, from the old form of *japonica* to the pink spikes of *S. Douglasi rosea*

tained. After the plants have served their purpose during the winter in the greenhouse they can be planted out in May in a mixed border, and the foliage cut for mixing with other flowers through the summer.

ABUTILONS.

ABUTILONS are met with much less in gardens than was formerly the case. This is a pity, as, given greenhouse treatment, they will flower more or less continuously throughout the year. As bearing out that they are now much neglected, I was recently assured that there is little or no demand for them now. The different kinds are very useful in many ways. In the first place, they are very suitable for training to the roof of the greenhouse, as in this way the pendulous nature of the bell-shaped blossoms enables them to be seen at a very great advantage. Next, for clothing the pillars in the same structure they are well suited, and if planted out so as to get a fair amount of root room some of them will soon mount up to a considerable height. Good examples, too, may also be grown in pots. Now that standard plants are very much in vogue Abutilons are well suited for this mode of culture. In this way their drooping blossoms may be brought much on a level with the eye. Stopped once or twice when young, many of the garden varieties will make neat bushes, and when laden with flowers they are very pleasing. Some of the species, such as *A. igneum*, *A. striatum*, and *A. venosum*, are of a free-climbing habit, while the small-leaved *A. vexillarium* or megapoticum must not be omitted from the climbing section. Other good kinds to grow as bushes, roof plants, or standards are Anna Crozy (purple), Boule de Neige (white), Eureka (pink), Future Fame (crimson), Golden Fleece (yellow), Gold Kafir (orange), Royal Scarlet (bright red), and Sanglant (deep red). The pink variety, *Triomphe*, which was given an Award of Merit in 1915, has very large flowers.

W. T.

THE OLDER GREENHOUSE PLANTS.

FASHIONS change in plants as well as in other things, and what is appreciated by one generation does not find favour with another. Especially is this the case with greenhouse plants, as those of us who can look back upon the experiences of three decades among them will not, without regret, admit. In these days it is a desideratum of a greenhouse plant that it be showy, quickly grown, easily managed, and, above all, easily replaced in the event of accident. All these qualities are certainly valuable, and it must be admitted that since the revival of the interest now shown in the outside garden the greenhouse has taken but a secondary position, except, perhaps, for a month or two in the depth of winter.

Nevertheless, one may still have a warm side for some of the older greenhouse plants which, at one time, were highly valued, and of which the culture presented more difficulties to the grower than the ephemeral plants of to-day. In some places specimens of some of these old favourites, *Diosma* or *Aloysia*, for example, may be retained for sentimental reasons, but, generally speaking, the newer school of greenhouse gardeners has little knowledge of them except by name, and sometimes they have not even that knowledge. How often now does one come across the two plants just named, or the Oleanders, which used to be found in every greenhouse or conservatory of any pretensions, grown generally in tubs, and very attractive in their season? Few grow the old *Fuchsia fulgens* now, or *Hoya carnosa*.

Diplacus glutinosus is by no means common, nor is *Libonia floribunda*. The old double *Primulas* and *Cinerarias* are rarely met with, bush examples of the *Habrothamum* (*Cestrum*) still more infrequently. *Begonia Weltoniensis* still lingers; so, too, does *B. fuchsoides*, but in decreasing numbers. The old balloon-trained specimens of *Rhynchospermum jasminoides* and of the *Lapagerias* have disappeared; the cherished plants of Myrtle are found no longer. The *Metrosideros*, *Banksias*, and *Bossias* are unknown in present-day greenhouses. Aloes and Agaves have gone, although their disappearance is not entirely a matter of regret, and the *Dryandras*, grown more particularly for their foliage, are but a memory. The berried *Solanum* yet lingers in some places, although it is now chiefly grown by market men, who find a ready sale for it at Christmas. *Humeas* may yet be found, but rarely, and the greenhouse *Statice*s are not often met with in modern collections. How many young gardeners can say that they could identify *Lisianthus princeps*, one of the most beautiful of the almost forgotten plants, with its long, tubular flowers, each almost 5 inches in length, bright crimson, and tipped with orange? The *Chrysanthemum* has undoubtedly been responsible for the disappearance of these old-time favourites, but, perhaps, it is not too much to hope that, sooner or later, the older greenhouse plants may again be restored to favour.

A SCOTTISH GARDENER.

NOTES AND REPLIES.

Winter-flowering Begonias.—In the article on this subject in *GARDENING ILLUSTRATED* for November 18th it is stated that Messrs. Veitch, of Chelsea, were the first to take these Begonias in hand, and they raised many fine varieties. No mention is made of some very fine forms raised during the last few years of their carrying on the business, except to claim one of them, *Optima* (clear salmon), as having been raised by Messrs. Clibran. The variety *Elatior* (rosy-carmine) is also one of Messrs. Veitch's, though of an older date. The desirable forms above alluded to first made their appearance in the autumn of 1911, when four of them gained awards of merit. These varieties, all of which are single-flowered, show closer traces of the tuberous-rooted section than those that had gone before. The flowers, too, are larger, while the growth is sturdy and the foliage bold. The first four of this section are *Acquisition* (pink, suffused salmon), *Exquisite* (salmon-pink), *Fascination* (orange-salmon with a suspicion of pink), and *Her Majesty* (rich coppery-orange). In 1912 similar honours were gained by *Emita* (brilliant orange-scarlet) and *Optima* (clear salmon). The only semi-double variety mentioned above is *Elatior*, the remainder being quite single. On the other hand, nearly all the varieties raised by Messrs. Clibran have double or semi-double flowers; indeed, in the production of flowers of this class they stand as high in recent years as did Messrs. Veitch for giving us these delightful single ones. The double-flowered *Clibran's Pink* is, in the report of the Royal Horticultural Society's meeting on November 7th, alluded to as one of the best winter-flowering Begonias ever raised, the colour good, the blossoms shapely and refined.—K. R. W.

Winter-flowering Carnations at Springburn Park, Glasgow.—Among the things specially well done at Springburn Park, Glasgow, are the Perpetual-flowering Carnations, which are always an object of admiration by visitors. The leading varieties—old and new—are excellently grown.—SCOTSMAN.

VEGETABLES.

SPROUTING SEED POTATOES.

(REPLY TO "A. M. M." AND ALPHA.)

The sprouting of seed Potatoes is seasonable, inasmuch as the preliminary process of storing the tubers in boxes made for the purpose may best be attended to about this time. Good results may be obtained from Potatoes that have not been put into the boxes until February or March—that is, four or six weeks before the planting operation was due. But, while spring boxing may be successfully resorted to in cases of emergency, it is generally conceded that the better plan is to store the Potatoes in the boxes throughout the winter. Let alone the relative effects of winter or spring boxing upon the subsequent crop, there are other sufficient reasons for giving preference to autumn or winter boxing. In the first place, there is usually more time for the performance of work of this description in the fall than in the spring of the year, while, in the second, there is no way in which the seed Potatoes can be kept more safely, or stored in smaller compass, than in the boxes utilised for the preliminary sprouting of the tubers. A third, and very important, advantage is that the Potatoes can be examined and overhauled at convenience, should that be found necessary, and, moreover, the process of sprouting can be regulated to a nicety by placing the boxes in a high temperature or a low, and exposing the Potatoes to light and air, or shielding them from the latter, as circumstances may require.

The size of box recommended by the Board of Agriculture for general use is, length 24 inches, width 12 inches, and depth 3 inches. The corner pieces are 7 inches in height, and sufficiently strong for the boxes to rest one on the top of the other when piled for winter storage. The handle-bar is made strong and tenoned into the end pieces, the whole forming a light, handy, yet durable utensil, which, with ordinary care, will last for years. The boxes are not expensive, the cost varying from 30s. to 35s. per hundred, and each box holds about 20 lb. of Potatoes, or six boxes will hold about 100 lb. The filling of the boxes involves no particular care or trouble. The boxes are filled until level with the sides, and neither earth nor water is added, and it matters not whether the eyes are upwards or not. If the Potatoes are large they may be only one deep in the boxes, but the ordinary seed size may be two or three deep, but this is no obstacle, as the sprouts find their way through the inter-spaces. When once filled, the boxes may be piled up one on the other to any height that may be found convenient. The sprouts should be about 2 inches long at the time of planting, and the management of the boxes should be directed with a view to this length of sprout being developed as uniformly as possible. There is no real objection to longer sprouts, except that they are apt to get broken off in the planting, unless very tenderly handled. As a rule, the sprouts are apt to exceed rather than fall short of the desired length, and the best way to check growth is to expose the boxes to light and air. If, however, it is found necessary that the sprouting process should be stimulated, the best plan is to exclude all light.

Apart from the effect upon the length of the sprout, exposure to light and air for some time before planting is necessary, in order to toughen the sprout and enable it to be hauled. A few days' exposure will suffice to make the sprouts quite tough and less liable to break, and this is an important consideration in averting accident

in the process of planting. In storing the boxes it is necessary that they should be placed where they are not liable to damage from frost. On the other hand, if they are stored in too warm a temperature, sprouting will be too rapid and vigorous. It is not unusual to pile the boxes on the rafters of stables and cow-sheds, where they are perfectly safe against frost, but may possibly suffer from excessive growth. As a rule, they will do very well in barns or sheds, provided they are protected from cold winds and covered over with straw or sacks when frost is severe and protracted.

It is impossible to say what quantity of seed is required to plant an acre, as the space required between the drills varies from 15 inches to 20 inches for early varieties and 24 inches to 30 inches for the strong-growing varieties. The sets may be planted from 8 inches to 12 inches apart for the early sorts, while for the late and vigorous-growing sorts a distance of from 12 inches to 18 inches must be allowed.

If any further information is required we shall be pleased to help you.

NOTES AND REPLIES.

Potatoes: Seed for 1917.—There has never been a time, perhaps, when more interest has been shown in Potato-growing than during the season which is just closing. The war has been responsible for many things, and one has seen throughout the country land that, to a large extent, has been lying idle for years now turned to good account. Some of this waste land was not procurable until late in the spring, and possibly has not yielded so profitably as it might have done had possession been taken last autumn. All this may now be rectified during the winter by digging the ground up roughly. I have before me a letter from a Potato grower in which he advises his customers who can do so to purchase their seed this autumn, and suggests it being kept in trays or boxes in some cool, dry place. A good many whom I know propose to act upon this advice, inasmuch as it is quite likely that all seed will be dearer next spring, through shortage of crops, and, further, one is more likely to have the best by giving the order this side of Christmas. It is well known that comparatively few orders reach the dealers until the New Year has set in, consequently, the first orders receive the best attention, finer seed is the result, and better crops are gathered. Some who read this note may be tempted to plant home-saved seed. At the outset it may seem economy to do so, but in practice it is not always so. A change of seed from one's own district is most desirable, and I am convinced it pays in the long-run. May I, therefore, suggest to all who intend to grow this indispensable vegetable another year to send orders for seed early, to grow sorts that they have proved are best for their locality, and to give plenty of room between the rows unhampered by winter greens, where late sorts are grown. There is nothing whatever gained by planting "greenstuff" between late Potatoes; on the contrary, it robs the ground and reduces the output.—LEAHURST.

Improving heavy soils.—The war is answerable for much. It is due to this that people, who before scarcely ever handled a spade, have, owing to the high prices charged for vegetables, set out to grow their own, and much land hitherto undeveloped has been turned to good account. In some cases it was not possible for ground to be rented until very late in spring, consequently its preparation was not so thorough as might have been. This can now be put right. Heavy land may be turned up and with it road-sweepings incorporated, and clods of clay can be reduced to a more workable condition by adding lime this winter.—W. F. D.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM NOVEMBER 29TH.—*Veronicas* (in variety), *Escallonia montevidensis*, *Jasminum nudiflorum*, *Laurustinus*, *Arbutus*, *Pampas Grasses*, *Rosmarinus prostrata*, *Polygala Chamæbuxus lutea*, *P. C. purpurea*, *Lithospermum prostratum*, *Parochetus communis*, *Aubrietias*, *Double Arabis*, *Tufted Pansies*, *Lobelia cardinalis*, *Petasites fragrans* (Winter Heliotrope), *Iris stylosa*, *Erica carnea*, *E. mediterranea hybrida*, *Sternbergia lutea*, *Violets*, *Roses*, *Clematis*.

THE WEEK'S WORK.—Choice trees and shrubs are being top-dressed with suitable compost, as far as circumstances will allow. I prefer to thoroughly dress a few trees each year rather than distribute the available material in small quantities over the roots of many trees. If the trees to be top-dressed are on turf, the turf is rolled back, the surface-soil lightly loosened with a fork, and the dressing applied. The turf is then replaced, but not beaten down, only levelled, thus the trees get the full benefit of all the rain that falls. Garden hedges usually receive plenty of attention in pruning, but are often neglected at the roots. It should be borne in mind that hedges (especially of Holly and Yew) exhaust the soil, and when this happens the plants become weak, and branches die, leaving unsightly gaps. Surface dressings are essential to preserve old hedges in health and should be given as circumstances allow. When the weather is unfavourable for ordinary garden work, attention is paid to the shrubberies. Where these are thick and becoming overgrown, some of the common things are grubbed up to make room for choicer subjects. Here and there a complete clearance will be made on the margins. Such cleared spaces will be manured, dug deeply, and planted with Michaelmas Daisies, Delphiniums, and Pæonies in bold groups. Summer-leaving shrubs which from any cause were left unpruned just after flowering will be attended to at the same time. The majority of these bloom on wood of the previous year's growth, hence the pruning consists chiefly in thinning out tangled, weakly, and unripe wood, and shortening back soft and sappy growth, retaining only firm and well-ripened shoots, which will flower satisfactorily in their season. This thinning even thus late will be beneficial by admitting the maximum of light and air among the branches, this conducing to free flowering later. Those flowering on the current year's growth—for instance, *Buddleias*—should be hard pruned, using a sharp knife in preference to scateurs for this work. Any division and moving of herbaceous plants not yet completed should be carried out without delay. Grouping, whereby the varieties of a given species are kept together rather than mixed one with another, is much in favour, and if the scheme of arrangement is well defined beforehand, the ultimate effect is very pleasing. Christmas Roses are very useful for cutting in December and January, and in order to have the blooms as clean as possible frames are placed over the plants as soon as the flower-buds appear. These plants succeed best in a sheltered and semi-shady position in a rich, deep loam with which a fair quantity of leaf-mould is mixed. If frequent applications of liquid-manure are given the length of the flower-stems is considerably increased. F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Cucumbers.—To have good strong plants for setting out early in the New Year they should be raised at the present time. In a sharp heat the young plants grow quickly and by the time the house is made ready for them they will be of good size and eventually come into bearing long before those raised from a sowing made at the orthodox period—i.e., the first week in the New Year. There is no better method of sowing than to use small 60-sized pots, sowing one seed in each, the pots being filled with light, rich loamy compost. The raising can be carried out in a propagating-case or under a handlight or cloches. It

matters not which, so long as there is good top and bottom heat. Great care is required after the plants are up, as they must be kept from becoming drawn. A light position near the glass is essential, and in the absence of such a position a temporary shelf fixed over the hot-water pipes at the front of the house will answer the purpose for the time being. When ready for a shift, the balls should be placed low down in the pots to encourage the emission of roots from the stems. The compost should contain a good percentage of fibrous loam well pulled to pieces. More plants than are actually required should be raised so that none but vigorous examples need be used for setting out.

Late Grapes.—Particular care is needed in a season like the present, both to prevent the berries decaying on the one hand and the skins shrivelling on the other. To avoid the former calamity anything approaching a damp atmosphere must be guarded against—not only must the paths and border surfaces be kept dry, but a gentle heat maintained in the pipes also which will ensure a free circulation of air and prevent stagnation of the atmosphere. The admittance of air by the ventilators while outside conditions are so humid must be done with great care and only when the weather is fine and light. Shrivelling of the skins of the berries is generally thought not always due to the employment of too much fire heat. In such cases the remedy is obvious. The exception to this rule is when the borders are allowed to become unduly dry. Once this happens no amount of water will restore them to their normal condition, but matters can be prevented from going from bad to worse by affording just as much water as will stave off the evil until the time arrives for bottling the Grapes. The border in such a contingency should afterwards be covered with a good thickness of dry litter and an extra amount of fireheat employed for a few days to counteract the moisture, a certain amount of which, in spite of all precautions, will be given off from the border. When there are but a few bunches hanging in a vinery, it is then far more economical in every way to remove and bottle them. The vinery can then be freely aired and the Vines, if the leaves are down, pruned and afterwards cleaned as opportunity offers.

Grape-room.—Some time between now and the end of the year this should be got ready for the late-keeping Grapes. The removal of the bunches and the insertion of the pieces of laterals to which they are attached in the bottles can then, when the time arrives for doing so, be done expeditiously.

Fig-trees.—Both trees in pots and those planted out required for starting early should, after the structure has been cleaned down, be overhauled and cleansed. As far as the old wood is concerned, a good deal of pressure may be executed in the scrubbing and brushing of the bark, but, in regard to the younger or this season's wood the cleaning must be confined to the use of a soft brush only or the embryo fruits may be seriously injured. An approved insecticide mixed or diluted according to instructions should be used for cleansing, especially where scale has in previous seasons been troublesome. The forcing may be considerably expedited with regard to pot-trees if they can be given bottom-heat obtained either from hot-water pipes or by the more economical method of employing a bed made up of tree leaves of which an abundance is now to be had in all woodland districts. In this case something of a permanent nature is required to stand the pots upon, so that they do not move out of position as the fermenting bed subsides. The wood in permanently-planted trees should be pruned or thinned as far as is necessary, and then be refastened to the trellis. Fine, soft, tarred twine is better for this purpose than raffia, as the latter, seeing so much syringing is requisite throughout the growing season, soon rots away.

Outdoor Vines.—These should be pruned now and not left, as they often are, in an untidy condition through the winter, and then dealt with when the sap is on the rise, with the risk of much bleeding ensuing. If attended to at this time of year, bleeding will not follow. The spur wood should be cut back

to one or two buds on all established specimens. The young canes on more recently planted examples should be shortened to where the wood is firm and well ripened.

Outdoor Figs.—If not already done, the liberating of the branches from the wall, afterwards tying them in bundles so that they may be more conveniently have Bracken or straw worked between them and finally covered with mats, should be no longer delayed. In most parts of the country some amount of protection is required for Figs, as the embryo fruits are very susceptible to injury should severe and prolonged frost occur.

Tender shrubs.—Myrtles, scented Verbenas, and anything of a tender nature should be covered up for the winter in localities where it is not prudent to leave them unprotected. Straw or Bracken, with mats to hold it in place, are the best protective materials to employ for this purpose. A. W.

MIDLAND COUNTIES.

The early vinery will now be started. A temperature of 45 degs. to 50 degs. will be maintained till the Vines show signs of breaking, when it will be raised 5 degs. As mealy-bug was detected on the Vines in this house in the autumn, the rods will not be tied up permanently until they have had another good washing. This will be done just when the buds are breaking, taking care not to damage the young growths. As growth proceeds the temperature will be gradually increased. All outside vinery borders have been given a mulch of rough stable manure 4 inches to 6 inches thick. This will protect the roots from severe frost. Where Vines have been showing a tendency towards weakness of growth a rich mulch should be applied to outside borders, which will benefit the Vines through the carrying down of the ammonia and nitrogenous food materials by the rains.

Fruit-tree pests.—Fruit-trees and shrubs are subject to the attacks of many pests during the spring and summer months. The present is the best time in the whole year to do battle with these pests, as more drastic measures can be employed while the trees are leafless and dormant. Scale insects are often found on Peach, Apple, and Pear trees. The ordinary brown scale attacking the Peach-trees can easily be dislodged with a small label, but the Mussel-scale, that clings so tenaciously to Apple and Pear-trees, requires more drastic treatment. Trees, especially Pear-trees, growing against walls are generally most affected. In bad cases the bark should be scraped with a flat piece of wood or a piece of hoop-iron, and afterwards brushed with a hard scrubbing-brush, eventually thoroughly spraying with caustic soda wash, which should be applied this month to all Apple, Pear, and Plum trees subject to the attack of insect pests. These winter sprays are best applied by a knapsack sprayer, but in the case of a small garden a hand syringe with a suitable spraying nozzle attached does equally well. Care should be taken that every part of the tree is wetted. Badly-infested trees may in some cases need a second application at the beginning of the year before the buds begin to swell.

Gooseberry and Currant bushes that have been badly attacked by caterpillars should, after the pruning is completed, have all the surface-soil about them removed to a depth of 3 inches or 4 inches, replacing with fresh compost. When this is done, apply a good dressing of freshly-slaked lime, also dust the trees with a mixture of soot and lime to prevent the birds destroying the buds. Lime is an excellent material for destroying pests of all kinds that attack fruit-trees.

Violets in frames are flowering well. Any attempt to coddle these plants will be sure to result in weakly crowns and a poor supply of flowers. The lights may be shut down on cold and stormy nights, but do not cover the frames unless more than 5 degs. of frost are anticipated. On all other occasions ample ventilation should be afforded, remembering that a close atmosphere causes the foliage to damp off. Unless the plants are growing in

heated frames, water will be rarely necessary until the New Year. Should the roots need moisture, let it be applied on a mild morning, so that the plants may be left fully exposed for the remainder of the day. By this means the excessive surface moisture will evaporate before night. All decaying leaves should be picked off, and the surface-soil lightly pricked up occasionally.

Rosette Coleworts are most useful at this time, and the plants are well hearted. Unfortunately, they are not perfectly hardy, so that the crop should be used as quickly as possible, meanwhile saving the Brussels Sprouts, which they somewhat resemble in flavour.

Scotch Kale is also a delicious vegetable now that the cold has rendered it tender. The plants will furnish a very large amount of green food if gathered very carefully. As in the case of Brussels Sprouts, the heads should not be cut, but only single leaves gathered, a few off each plant at a time. In spring the heads may be cut, and the plants will then develop a large crop of side shoots. Winter varieties of

Broccoli are now turning in. At no season does this crop need more attention than now, and all plants that are hearting need to be examined at short intervals, and the heads cut when sufficiently large. The curds are usually small, but of first-rate quality. There is a danger of them being damaged and rendered useless by wet or frost if left to gain in size.

Potatoes.—The sets intended for early forcing will now be selected and laid out thinly on suitable trays, on which has been placed a little finely-sifted manure from a spent Mushroom-bed. Moderate-sized tubers of such varieties as May Queen, Sharpe's Victor, and Sharpe's Express are chosen. These make little haulm, and are quick to mature. The tubers will be placed in a light position in a temperature of about 50 degs. to sprout. The earliest crops may be grown in pots and boxes in vineries and Peach-houses, but, as tree leaves and stable litter are to be had in abundance, we rely entirely on hotbeds for their production.

Roots in the store, especially such as Potatoes, Onions, Shallots, Garlic, Beetroot, and Carrots, need to be frequently and carefully examined.

Mint roots placed in heat a month ago are furnishing young, green shoots. A continuous supply may be had by placing the roots closely together on a bed of leaves. Tarragon and Chives may be forced in the same way, lightly covering the roots with sifted leaf-mould. Up to the present

Preparing of the ground for next year's crops has made satisfactory progress, but the weather during the past week has not been favourable for trenching and digging. Full advantage is taken of frosty mornings to wheel manure, etc., on to vacant plots. By this means sufficient can sometimes be wheeled on to last for several days' digging or trenching, and the walks are not so much cut up. A fire is kept going to burn all garden refuse, and the accumulation of ashes will be valuable for putting on the ground.

F. W. GALLOP.

SCOTLAND.

Dahlias.—Even at this late date Dahlias have not been frosted over; but, as they were untidy, they were in the course of the week cut over and lifted. After being partly dried at the foot of a wall for a day or two, the roots were stored. A cool, dry, frost-proof place, such a place, in fact, as suits Potatoes, will be found satisfactory for storing the Dahlias. Care, of course, in labelling the different varieties securely is necessary, for nothing is more irritating than to find when propagating time comes round that the labels have been carelessly attached to the stems and have fallen off in the course of the winter.

Salvia patens.—At the same time, the roots of this were lifted and stored in a similar way. This Salvia is deservedly a favourite, and a good number of roots was stored. This will not, however, prevent a batch of seedlings being raised in the spring, for I always think that seedlings ultimately make better plants

than those from cuttings, although they are later in coming into bloom.

Gladioli, too, have been attended to. These are largely grown. In the meantime the corms are lifted with the foliage attached and tied up in bundles according to variety. Later on, when the leaves are quite dry the corms will be cleaned, graded, and laid out on shelves in the store-room.

Hardy Chrysanthemums.—Even in the comparatively mild winters experienced in this district it is not safe to rely upon hardy Chrysanthemums coming through without loss. Damp, I think, is more dangerous than frost; while young growths fall a ready prey to slugs. Therefore, a two-sash cold-frame is packed with stools of the required varieties. These, being put out in a prepared bed of rather light, sandy soil, winter exceptionally well, and provide large quantities of sturdy cuttings.

Hardy flower borders.—A beginning was made during the week with the cutting over and cleaning of the hardy flower borders. First of all, the stakes are taken out, sized, and tied in bundles, those which are of no further use being put apart. During the present season, instead of, as formerly, wheeling the refuse to the rot-heap, it is being taken to a convenient brake upon which it will—along with other rubbish—be burned during frosty weather. There is a small percentage of potash in these stems, which, even if trifling, will be of benefit to the soil upon which the rubbish is burned. After cutting over is completed, a light touch-up with steel rakes is given to the borders, which keeps them tidy until forking time.

Pruning in the case of wall trees will, as was previously indicated, be delayed yet awhile. The foliage is hanging much later than usual—later, in fact, than has been the case since 1903, when the Peach-trees remained green until after the New Year. In the open, however, more especially in the case of young Apple-trees, the leaves are now rapidly falling, and pruning will, therefore, be undertaken shortly. During the week a finish was made with the pruning of Red Currants, and a good beginning made in the case of Gooseberries. It always pays to keep the centres of the bushes open, and to remove unprofitable wood. If large berries are wanted, it ought to be remembered that young wood gives the finest fruit; but if the crop be chiefly required for using in a green state, for bottling, or for preserving, fairly close spurring can be resorted to, with, of course, sufficient extension of the terminals in the case of young bushes. Gooseberries are gross feeders, and will assimilate cruder manure than other things; but I think it is better given as a mulch. No matter how carefully manure may be dug in, there is always the risk of danger to the roots, and where these are injured there is sure to be a plague of suckers. Where caterpillar is known, or suspected, to exist, the customary precautions ought not at this time to be omitted.

Stove.—With the lessening attractions of the garden, glass-houses come in for more notice, and an effort must be made to keep them as bright as possible. At the present time there is no difficulty in that respect so far as the stove is concerned. Hymenocallis spikes yet remain in good order, Pentas rosea and Libonia floribunda, if not the most showy, are yet useful. The winter-flowering Begonias are, of course, always a stand-by, and Gesneras are useful in various ways. Cypripediums are useful, the blooms lasting very well when used as cut flowers. It is seldom, indeed, that Thunbergia laurifolia is without bloom, and the use of brightly-coloured foliage is effective during winter. Small pieces in 4-inch pots of Acalyphas, Pandanus, and Dracenas are easily raised, and are useful in a variety of ways. Now that the nights are colder the fire ought not to be driven. A morning temperature in the neighbourhood of 60 degs. is ample. Syringing may, if preferred, be dispensed with meantime, the necessary moisture being obtained by damping the paths.

Cool-house.—Such things as Schizanthus, Primula malacoides, Coleus thrysoidens for spring flowering, Begonia Weltoniensis, B.

fuchsioïdes, Calceolarias, and similar things should not at this season be over-watered. At the same time regular inspection is necessary, plants in the neighbourhood of hot-water pipes naturally drying up more quickly than others. On all suitable occasions let the ventilation be free, but avoid admitting cutting winds.

Greenhouses.—Chrysanthemums are yet, and will be for some time, the leading feature of greenhouses and conservatories. To prolong the display give only sufficient water to keep the plants in good order, and dispense with all unnecessary washing down of floors or of paths. *Salvia splendens*, *S. lactiflora*, *S. Pride of Zurich*, and *S. rutilans* are showy. So, too, are *Eupatoriums*, while the earlier batches of *Primula sinensis* and *P. obconica* are coming into bloom. The first batch of *Cineraria stellata* is showing colour, and, altogether, the display is bright during the short days.

Ferns under glass.—Let these have all the light possible, and if any shading yet remains on the glass, let it be at once washed off. A moderate amount of heat and of atmospheric moisture, with occasional allowances of weak stimulants, will go far toward keeping Ferns in good condition during the short, dull days.

W. MCGUFFOG.

Balmæ Gardens, Kirkcudbright.

CORRESPONDENCE.

Questions.—Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.

Naming plants.—All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.

Naming fruit.—Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.

PLANTS AND FLOWERS.

Romneya Coulteri (R.)—Instead of cutting your plant right down it would have been far better to have removed some of the old shoots and protected the younger wood, putting a mulch over the roots. By cutting it down now there is the danger of the plant starting into growth, which will be injured should the winter be very severe. The best way to secure strong growth is to cut the plant down every spring, and in this way encourage the formation of shoots from the base.

Potting Calceolarias (Anon.)—Sizes of pots for plants must be governed by the dimensions of the plants. Thus seedling *Cinerarias* and *Calceolarias*, if now in small or 3-inch pots, may be shifted into 5-inch pots and remain in them for two months, by which time they should be well rooted; then they may be shifted into 7-inch pots, which will be, as a rule, quite large enough to enable them to bloom well in. It is so much the rule with these plants to overpot, and thus cause them to produce excessive leaf-growth rather than good heads of bloom. Over-potting also usually causes the soil to be too wet, and become

sour, to the injury of the roots. Both descriptions of plants like a gentle syringing occasionally, but in damp weather there is no need for it. Very weak manure-water may be used once a week, after the pots are filled with roots.

FRUIT.

Fruit-trees for south wall (Ignoramus).—On the wall facing south you can grow either Peaches, Nectarines, Apricots, Cherries, or Plums. You do not give the length of the wall, so we give you the names of three varieties of each from which you can make your own selection. Peaches: Duke of York, Crimson Galande, Stirling Castle. Nectarines: Early Rivers, Lord Napier, Elruge. Apricots: Moorpark, Kaisha, Hems Kirk. Cherries: Early Rivers, Elton, Bigarreau Napoleon. Plums: Denniston's Superb, Jefferson, Coe's Golden Drop.

Mildew on Grapes (A. S.)—We have seldom seen Grapes so badly attacked by mildew, plainly showing that the cultivation is at fault. We should advise you to at once cut off all the bunches and burn them, and dust flowers of sulphur all over the Vines, washing this off after a few days with clear rain-water. In the winter all the inside wood-work should be thoroughly cleaned and repainted, and if there is a back wall have this lime-washed. Then dissolve $\frac{1}{2}$ oz. of sulphide of potassium in a quart of water, mix it with clay and sulphur to a thin paste, and brush this into the bark and every crevice about the spurs on the Vinerods, applying this dressing immediately you see any further signs of mildew.

Limewash on fruit-trees (J. F.)—When limewash or wash is put on to tree-stems in a hot state it adheres for a long time. It looks much less objectionable if some clay be mixed with it to render it less conspicuous. We prefer that it should not so long adhere, but if put on in the winter to kill Moss and insect pests, which is the primary object in view, it should peel off in the spring, so that the bark might be more free to effect its ordinary functions. A good mixture for thus coating trees is 10 lb. of fresh lime, gradually dissolved in a tub, 6 lb. of soft soap, dissolved in boiling water in a large pail, and added to the lime-water, and some soot or clay, or both, added, and enough water to make into a pasty wash.

Pot Strawberries (H. F.)—It would have been better for your Strawberry plants, now in small pots, had they been shifted into 6-inch pots not later than the middle of August. When layered into small pots, Strawberry runners soon fill the pots with roots, and if not shifted into others speedily, soon become stunted or starved, so that time is lost. Had they been so potted then, the larger pots would now have been full of roots and the plants and crowns much stronger. However, if you shift your plants at once into 6-inch pots, use good turfy loam with which are mixed a little soot, bone-dust, if you have it, and at the rate of about one-sixth of old-decayed manure. Pot very firmly, as hard soil is best. Stand the plants in a cold-frame near the glass for the winter, giving plenty of air, and do not attempt to force them, and then gently, until April next, by which time they should have rooted.

Treatment of old Apple-tree (Ignoramus).—To restore the tree in question to a fertile condition you should have whatever pruning it may require performed at once by a practical man, whom, doubtless, you can obtain the aid of in your neighbourhood, and then give the roots a good dressing of well-rotted manure. This should be evenly spread beneath the tree to as far as the branches extend in all directions, after having removed the soil some 5 inches to 6 inches in depth. The soil should be afterwards spread over the manure and lightly trodden down. If a number of roots are met with at a less depth than that stated when taking out the soil, you must then desist, but if roots are not found at a depth of 6 inches you may safely bury the manure another 3 inches deeper than this. Before spreading the manure, lightly prick up the soil between the roots with a fork. The coating of manure may be 4 inches to 5 inches deep. When sending again, please observe our rule as to writing queries on one side of the paper only.

VEGETABLES.

Seed Potatoes (G. J.)—If your seed Potatoes in a clamp are kept cool and dormant they are just as safe there as anywhere else. But the winter is so far mild, and for that reason we should prefer to keep them on dry shelves, where they would be exposed to light and air, and thus kept dormant. Shallow boxes are capital things to store Potatoes in, and if not large to carry them in to plant.

Lifting roots (Scraper).—If you scan recent numbers you will find that instructions were given as to lifting the root crops you refer to. Beet-root, Parsnips, and Onions ought to have all been stored several weeks ago, and instructions as to doing this appeared in the "Week's Work." Harvest the Onions and Shallots at once, have them carefully dried and put into store. The Chinese Artichokes you may leave in the soil, throwing some litter over them so that you can dig any up when wanted, or you may lift the whole crop and select good tubers for planting in the spring, and store the remainder as you do Potatoes.

SHORT REPLIES.

Arch. Alison.—The selection you give is a very good one, and we should advise that you procure trees on the Paradise and treat them as you suggest. The soil is very suitable. At the same time it would be well to find out what varieties are a success in your district, as the behaviour of Apples varies so in different parts of the country.

NAMES OF PLANTS AND FRUITS.

Names of fruits.—*J. G.*—Apples: 1, Stone's Apple; 2, King of the Pippins; 3, Sturmer; 4, Leathercoat Russett.—*E. C.*—Apples: 1, London or Five Crowned Pippin; 2, King of the Pippins; 3, Small Blenheim; 4, Golden Noble.—*D. W. W.*—Apples: 1, Lane's Prince Albert; 2, Warner's King; 3, Norfolk Beaufin; 4, Lord Burghley.—*J. Ross.*—Pears: 1, Doyenné du Comice; 2, Glou Morceau; 3, Thompson's.—*W. W.*—Apples: 1, French Crab; 2, Ribston. Pears: 3, Nouvelle Fulvie; 4, Verulam, a stewing variety.—*A. R. S.*—Apples: 1, Blenheim; 2, Wellington.—*T. C.*—Apples: 1, Wellington; 2, Yorkshire Greening; 3, Ribston Pippin.—*J. T.*—Apples: 1, Cellini; 2, Crimson Queening; 3, Ecklinville; 4, Norfolk Beaufin.—*M. S.*—Apples: 1, Winter Hawthornden; 2, Golden Noble; 3, Cox's Orange. Pear: 4, Brown Beurré.—*L. M. S.*—Apples: 1, Blenheim; 2, Annie Elizabeth; 3, Alfriston; 4, Lane's Prince Albert.—*H. G. B. H.*—Apples: 1, Brabant Bellefleur; 2, Probably Rymer; 3, King of the Pippins; 4, Evidently a local variety. When sending fruit for name, at least three specimens should always be sent, as the fruits vary so.

CATALOGUES RECEIVED.

GEO. F. LETTS, Hadleigh, Suffolk.—*Special Offer of Plants, Roses, and Fruit-trees.*

W. WELLS and Co., Merstham, Surrey.—*Descriptive Catalogue of Chrysanthemums and Perpetual-flowering Carnations.*

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Royal Horticultural Society's meetings.

—The future fortnightly meetings of the Royal Horticultural Society will close at 4.30 p.m. instead of 5, as announced in the "Book of Arrangements" and Fellows' tickets, to enable compliance with the lighting regulations.—W. WILKS, Secretary.

The Royal Horticultural Society's Daffodil Show.

—The schedule of the Royal Horticultural Society's Daffodil Show to be held on April 17th, 1917, is now ready and can be obtained by a letter of application, accompanied by an addressed foolscap envelope stamped with a penny stamp, to the Secretary, R.H.S., Vincent Square, Westminster, London, S.W.—W. WILKS, Secretary.

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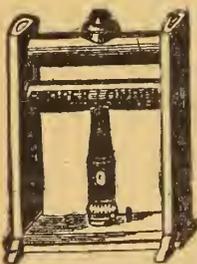
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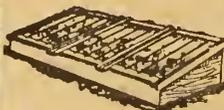
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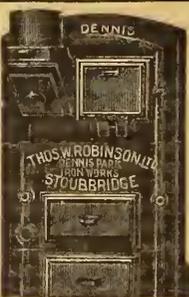
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CLEMATIS—A NEW HYBRID.

SUPERLATIVELY interesting it would be to find a savant given to the pathological study of plants who would undertake the study of the Clematis disease. But the Clematises, producing neither bread nor wine, do not interest a sufficiently large part of humanity, so that the savants would lose their time in occupying themselves with their diseases. However, man does not live by bread alone, and the sight of a fine Clematis in flower gives as much, if not more, pleasure than a good meal. I have just seen in flower—and, more, I have enjoyed for the first time the fragrance of—a pretty Clematis obtained by crossing *C. tubulosa* and *C. heracleifolia*. You are aware that *C. heracleifolia*, blooming in September and October, has small gray-blue flowers insignificant enough to look at, but which exhale the delicious fragrance of Orange Flower. At the same time *C. tubulosa* (*C. Davidiana* according to some authors) shows its fine flowers arranged on axillary verticils along its leaf-stems. By hybridising these two kinds I have obtained a hardy plant with beautiful blue flowers standing out in clusters against the background of foliage and exhaling the fragrance of *C. heracleifolia*. I imagine that strong tufts of this new Clematis would win the lively appreciation of lovers of hardy plants by reason of the beauty of the flowers, and especially their fragrance, at a time of the year so devoid of flowers as is the month of October. As an example of magnificent flowering at this season I have just witnessed that of *C. paniculata*, a giant form of *C. Flammula*, of the south of France and Europe. I have had it photographed.

Lyons. F. M.

NOTES OF THE WEEK.

Convolvulus Cneorum.—This is flowering in General Gough's garden near Conway, and any quantity of buds is ready to open. Flowers were open at the end of November. Wild Primroses are in flower here.—E. CHARLES BUXTON, *Coed Derw, Bettws-y-Coed.*

Carnation Nancy.—This is one of the pink-flowered set, the colour of an exquisite shade of soft salmon, that degree of it which was so largely responsible for the popularity of the old Miss Jolliffe. In this respect the newcomer is very much alone, even amid the wealth of pink-flowered Carnations as we know them to-day. The flower is flattish in form as opposed to the

rosette character of some, and in this is rather suggestive of America, one of the earliest of the American perpetual-flowering set to gain recognition in this country. Nancy pleases by reason of delicate beauty and refinement. Messrs. Allwood Brothers have been showing it well.—E. H. JENKINS.

Ceratostigma plumbaginoides.—The dull, wet season must be responsible for the poor flowering of this usually lovely subject, I think, as though there was a good show of buds, I hardly had any bloom worth speaking of on several patches growing on a wall. Nor did the leaves take on anything like their usual brilliant autumn hues.—N. L.

Erica hybrida.—As in a number of other years, this is not going to be appreciably earlier than the varieties of *E. carnea*. In some seasons it blooms well in November, but in others it lingers until the beginning of the New Year. It is full of flower-buds this winter, but the blooms will not open before January, or will not, at least, show their proper colouring. Probably the wet autumn and early winter we have experienced are the reasons for this delay.—S. ARNOTT.

Late Meadow Saffrons.—The wet and stormy weather we have had in this district has spoiled the Meadow Saffrons. Today (December 4th) I see some flowers still on *Colchicum autumnale roseum plenum*, the latest of the double Meadow Saffrons with me, and also on a clump of *Colchicum autumnale*. The bit of colour is very acceptable at this time. Up to November 30th the rainfall recorded at one station in the district was about 8 inches above that of the corresponding eleven months of 1915.—S. ARNOTT.

The wild Clematis.—I do not understand "A. T. J.," p. 602. Does he mean to say that I have glorified the wild Clematis as a stock or in any other way? The reverse is the case, as he or any other reader may see by referring to my previous notes. I did not say that this Clematis is never found growing on loam. I distinctly said that in this district it is only to be found on the chalk, that in spite of the multitude of seeds ripened it never seemed to extend, and over an area of many square miles where the subsoil is gravel or clay I had never seen one single plant. The wild Clematis is not a plant for the garden. It is far too aggressive.

Notes from Ashbourne.—*Clerodendron Fargesii* is a remarkable shrub. The flowers are somewhat insignificant, but the fruit is both singular and striking—a persistent calyx of dull purple in the centre of which is placed a turquoise-blue circular

fruit. Whorls of these fruits cover the shrub, even after the leaves have fallen, and the effect, especially in sunlight, is beautiful. It is a sun-loving plant and prefers light, poor soil. It has been good weather for moving the various trees and shrubs. All my colour shrubs are being gradually re-established upon hot, poor banks, and will probably turn all the better in the autumn. It is a mistake to plant them in rich soil, because they are rare or uncommon, and yet we often make this mistake, with consequent loss of natural colour.—RICH. H. BEAMISH.

Crocus longiflorus Mr. Bowles' Pale Seedling.—This is in bloom to-day (December 4th) and has been open for a week or two. It is pleasant to have such a Crocus in flower in the open—and that without any protection—so late in the year. This variety was raised by Mr. E. A. Bowles, and the title gives an adequate description of its colouring, which is paler than that of the ordinary *C. longiflorus*, one of our best autumnal and early winter-flowering species.—S. ARNOTT.

The Fraxinella (Dictamnus Fraxinella).—I well remember having seen some plants of this in full bloom in St. John's College Garden, Oxford, last June. The white *Dictamnus* was also grown, but I did not care for it quite so much as the other. The plants bore some really grand spikes, and would remain in bloom, I was told, for some time. This plant, which does best in a light soil, is increased by seeds sown as soon as they are ripe, or by its fleshy roots, which, if cut into pieces, will in spring form good plants much more quickly than seedlings.—E. T. ELLIS, *Sheffield.*

The Lemon Grass perfume.—I was interested in the note concerning the Lemon Grass in the issue of December 2nd (p. 604). I have previously referred to this delicately-perfumed plant in these columns, and although it is by no means showy, it is useful in the stove. The plant grows almost 3 feet in height, with minutely-serrated dark green foliage almost a yard in length. It is readily increased by division, and may be planted out during the summer months. It needs, however, stove heat during winter. Occasionally it blooms, the inflorescences resembling, to some extent, those of *Humea elegans*, while the perfume is almost identical with that of *Aloysia citriodora*.—W. MCGUFFOG, *Balmoe.*

Sericographis Chiesbreghtiana.—Several well-flowered examples of this old-time winter-flowering greenhouse plant in an exhibit of Begonias from Earl Browlow

FRUIT.

APPLE ALLINGTON PIPPIN.

recently reminded one of many others contemporary with it now rarely seen. Hoveas and Rogieras are among those which occur to one, though an old catalogue would recall many more. That above named, which is now included under Jacobinia, was at one time indispensable among greenhouse flowering subjects, and, because of the profusion of its crimson-scarlet flowers, was grown in some quantity. Easy to grow and propagate, it was, nevertheless, impatient of an excess of moisture at the root, thrips and red spider being a common plague. Those exhibited were very clean and well grown, and we were pleased to know that the plant still finds favour because of an elegant habit and freedom of flowering. It is, of course, entirely outclassed by the modern race of winter-flowering Begonias so well shown from the same gardens, albeit the plant associates uncommonly well with the best of these, while adding diversity both of form and colouring.—E. H. JENKINS.

Eccremocarpos scaber.—This sub-shrubby climber is very suitable for a sunny position against a trellis or wall in the midland and southern counties. Belonging to the Bignonia family, it produces slender stems 12 feet or more long. The tubular flowers are each an inch long and borne in racemes up to 6 inches in length, the colour orange and red. Seeds are produced in quantity, which soon vegetate and form good plants. As a rule, only the lower portion remains alive. A little mound of cinders placed about the base of the stem in winter helps to protect it.—D.

The soil at Kew.—A reader having raised the question as to the nature of the soil at Kew, led us to ask the question:—

"The soil at Kew varies. By far the greater part is a shallow, sandy soil overlying pure sand or gravel. In many parts this top layer of soil is only about 6 inches deep, but stretching from the Thames to the pond near the Palm-house is a belt of good loam averaging 100 yards in width. In some parts this is clayey.

"At the north end of the gardens are the sites of several old kitchen gardens. This is a light but dark soil, and is, I suppose, the ordinary sandy soil to which humus was added. That is about seventy or eighty years ago. We should say at least three parts is the poor, hot, sandy soil.—W. J. B."

Saxifraga Fortunei.—One of the surprises of the autumn of the present year was the early and complete manner in which this pretty Japanese kind succumbed to frost before it had fully reached the height of its beauty. Of the little set to which it belongs *S. cuscuteformis* is, perhaps, the least hardy, and not for several years past do I recall that above named so irretrievably ruined. This, of course, may be due to many things—the drier conditions of the moment, frost of less severity, and suchlike. To some extent, also, it may be due to a more vigorous, succulent growth, the direct result of a rather generous system of cultivation, which is also responsible for that more attractive flowering desired by the gardener. All the same, seeing that it comes late in the year, and in leaf and stem colour and elegant blossoming makes one of the prettiest of pictures in the rock garden, it would be worth while in any fresh plantings to reserve some at least for a position where the morning sun does not early reach the plants. Failing this, a little protection—the spreading sprays of Yew or like shrub—might be helpful should severe frost threaten when it is in full plumage. In northern gardens the plant is not reliably hardy out of doors.—E. H. JENKINS.

ALLINGTON PIPPIN does not succeed on "W.'s" soil, does not please his palate; therefore it is a failure! In the comparatively few years since its introduction this Apple has been planted by thousands by those who either approved of its flavour or valued its good cropping qualities. In two recent Apple elections it found its place among the first half-dozen. The main reason that Allington Pippin was introduced was that it is a better cropper than any of "W.'s" list, and cropping is, after all, a matter of some importance. To recommend D'Arcy Spice to be generally grown is to betray a lamentable ignorance of its behaviour on most soils, and will only lead to disappointment. That the trade should be more careful in their introductions is undoubtedly necessary in some cases, but even writers to horticultural journals might pause before recommending fruits which will fail in nine gardens out of ten. The withholding of certificates until the fruit is thoroughly tested is sound, and on this point there will be no two opinions. E. A. BUNYARD.

[I have known the D'Arcy Apple much longer than Mr. Bunyard, and have seen trees in Essex bearing very well. I doubt if it has been as fully tried as it deserves on various stocks to see which suits it best. As to cropping, hundreds of kinds of Apples in every country crop well, many of them far too well, and this is no proof of quality.—W.]

—On page 606 "W." refers to the unsatisfactory quality of Allington Pippin, and I agree with him, in spite of the fact that, owing to its appearance and good cropping, it is in favour with market growers. Many of the public like it, but then, they have not access to better sorts as a standard of comparison. King of the Pippins, one of its parents, does not in the least appeal to my taste, yet it is a great market Apple. The raisers of several of these new varieties think that if they take Cox's Orange as one parent and almost any Apple for the other they are likely to get a good fruit. The result, as a rule, is a good-looking Apple, but the quality very inferior. Nearly all the Apples raised by Mr. Charles Ross as the result of crossing Cox's Orange with Peasgood's Nonsuch are very disappointing in quality. Very little has really been done to cross varieties with a view to first-class quality and cropping power in the progeny. I think if one took a very sweet variety and crossed it with an Apple of fine flavour one might get better results. I have a seedling Apple that is a perfect ball of sugar, and I should say that an Apple of this type crossed with a brisker sort would be more likely to produce a good Apple for general purposes than crosses of the type generally attempted. Let it be admitted that he who grows for market must have a good cropping variety, but it surely is possible to raise an Apple for this general purpose that is not like vinegar to eat and cannot, in fact, be used without an equal weight of added sugar. Fruit sugar is, beyond question, more health-giving than manufactured sugar, and sweet Apples more truly economical than sour ones. At any rate, our modern fruit raisers have mostly disappointed us. I can recommend King's Acre Pippin, a modern Apple, as of fine flavour and a good successor in February and March to Cox's Orange Pippin. Like Cox's Orange, King's Acre has Ribston blood in it. I believe the other parent of Cox's was Margil. D'Arcy Spice is delightful, but it grows very slowly indeed, so I fear it would have to be ruled out for

market, but why not use it for crossing with a view to getting a good all-round new Apple? I do not believe in the term "A good market Apple" being synonymous with rubbish as it practically is at present; the United States growers have managed to produce good market Apples that are not rubbish in quality, surely we can do so, too! W. J. FARMER.

FRUIT-TREE PLANTING.

THIS must, when the weather will allow, be pushed on, so that when there is yet much to be done it can be completed before the end of the year. Matters can often be expedited, when climatic conditions such as are now being experienced will not allow of planting being followed up continuously, if the stakes, for instance, required for the support of standard, bush, and pyramid trees are cut, their butt-ends sharpened, and driven in some 2 feet or sufficiently deep into the subsoil that they cannot afterwards move out of position, in advance. Thus there remains nothing to be done after the trees are planted but to secure them provisionally to the stakes, deferring the final tying until February, when the soil will have settled into place. Wall-trees should also be fastened to the walls in the same temporary fashion. With regard to the planting, this on some soils can be resumed soon after heavy rain, and in other instances a few days have to elapse before doing so. In the latter case a reserve of some old potting compost or soil which has been used for various purposes in frames and so on will play an important part, as it can be employed for surrounding the roots when difficulty is experienced in obtaining a crumb or breaking the staple to pieces. Care should also be taken to trim the ends of the broken roots with a sharp knife, and if they are found, when received from the nurseryman, to have dried during transit, to immerse them in water for about a quarter of an hour. As tree-planting is not complete unless the surface is mulched some 2 feet or more round the stems with litter or old hotbed material to keep out frost, the required quantity should be placed in readiness near where each tree is to be planted. K. P.

CORDON PEARS.

THE dozen varieties of Pears recommended on page 580 for cordon planting can hardly be improved, except in the case of the latest. I should be inclined to substitute Nouvelle Fulvie and Josephine de Malines for Bergamotte d'Esperen and Easter Beurré, which are not reliable; that is, they do not ripen at all satisfactorily. I often think one has to buy his experience with cordon Pears, despite the excellent advice given and possibly, to a great extent, followed. The fact remains that no system, however perfect, can meet the requirements of the many different varieties. The grower who has to deal with a light, sandy soil and no possibility of acquiring better material is faced with the alternative of scouring the neighbourhood in the hope of finding something a trifle heavier, adding some pulverised burnt clay and the like. Given this, circumstances will demand rather deeper planting and much careful attention afterwards in the way of mulching and watering. Failing the ability to do this, it will be found that some varieties are nothing like so satisfactory as where the ground is naturally well adapted for fruit-growing. In the case of the best varieties, for instance, I could never do much with Doyenne du Comice and Beurré Superfin on a light, sandy soil, but Thompson's and Beurré Hardy were very fair, and the late sorts named above, together with Glou Morceau, could also be relied on.

In early sorts I found Clapp's Favorite and Beurré Giffard about the best.

Given the adverse conditions of soil it is, perhaps, the great difference in the habit of growth of different varieties that is most perplexing to the amateur in cordon growing, rendering it difficult in many cases to regulate a right proportion of wood and fruit, for, whereas one sort will grow somewhat rampant, necessitating a nice discretion in the preparation of fruit-spurs, another will make hardly any growth and be a mass of fruit-spurs from base to summit. In the first case, it being neither advisable nor necessary to check growth on plants on the Quince by root-pruning, it is obvious the desired end must be effected by judicious work in the summer pinching, not doing this too early and all at once, and so provoking a lot of sappy after-growth, but leaving the operation until the wood is getting a trifle firm towards the base, and then, so far as each tree is concerned, at an interval of ten days or a fortnight.

Again, so far as those varieties that make a lot of fruit-spurs at the expense of wood are concerned, some of these spurs should be cut clean out at intervals, back-

the early and second early Apples give a far greater proportion of juicy fruits than the later kinds, Crofton Scarlet, Irish Peach, and Gravenstein being some prominent examples, and others one recalls to mind of somewhat similar season are Yellow Ingestre, American Mother, and the old Sussex Nanny Apple. Of course, we have cooking kinds notable for juiciness, but I was thinking of sorts that combined that characteristic with very fair quality and that are acceptable for dessert.—E. B. S., *Hardwick*.

Protecting Figs.—In severe winters Fig-trees in the open air, if left uncovered, often suffer much from cold; sometimes the whole of the young wood which should bear the next year's crop is destroyed from want of an hour or two's care in covering. Under ordinary circumstances the Fig-tree is a certain cropper, because it is not affected, or but slightly so, by the ungenial influences of spring, and if the young wood is protected before severe frosts sets in, the embryo Figs will be quite safe. It does not signify much what the protection consists of, provided it is sufficient in quantity. I have generally untied or unnailed all the branches, tied them together into

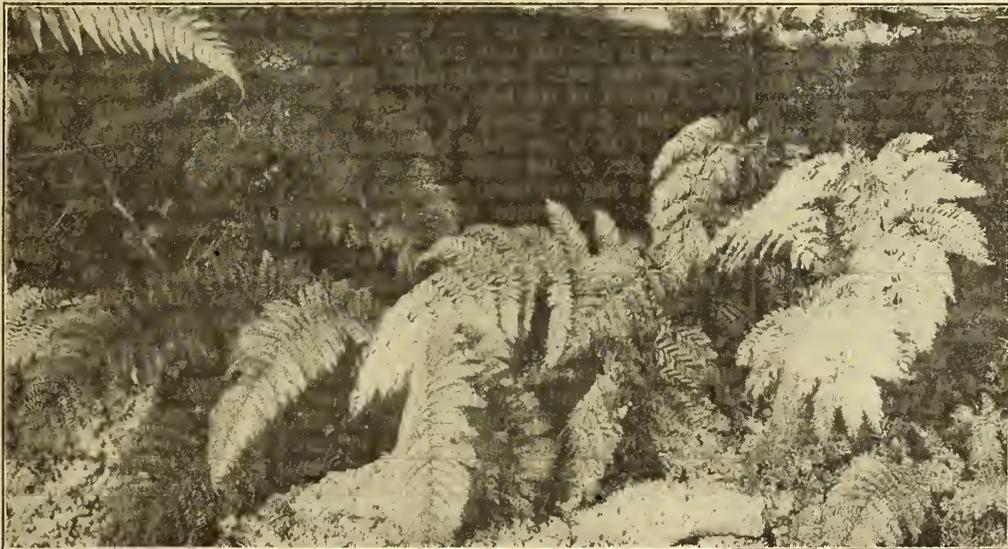
PLANTS AND FLOWERS.

FERNS.

FILMY FERNS IN CO. WICKLOW.

THE "Crape Fern" or "Prince of Wales' Feather Fern" of New Zealand (*Todea superba*) is one of the most striking, as also one of the most beautiful species of Ferns in cultivation. That it is not grown so extensively as it deserves is no doubt due to the fact that it is generally and erroneously held to be a plant of delicate constitution. This is not by any means the case, as but few Ferns are grown so easily as the Todeas. These plants do not require any artificial heat, this being clearly shown by the illustration we give to-day of *Todea pellucida* and *Todea superba* in the open air at Mount Usher, Co. Wicklow, where they have as companions many hardy perennial plants.

It is thus quite clear that the objection to growing these Ferns on account of the heat or special treatment they require is more imaginary than real. All that is necessary is a position naturally close, cool, and moist, and where the rays of the



Filmy Ferns (Todea pellucida and T. superba) at Mount Usher.

growth encouraged, and extra root-action promoted by feeding and watering. Three typical varieties that combine plenty of clean, healthy growth and excellent cropping qualities are Marie Louise d'Uccle, Beurré Hardy, and B. Alexandre Lucas. Mention above of cutting away spurs reminds one that where these begin to stand out too far from the main stem, as will happen with old trees, a portion may be cut away annually and new spurs formed with the best of the wood springing from the base. When the bearing wood is standing out too far from the wall it is difficult to protect satisfactorily in the spring from frost and in the autumn from birds.

E. B. S.

Hardwick.

NOTES AND REPLIES.

A cry for juicy Apples.—Juiciness in fruit is more pronounced from some soils, but is a special characteristic of some varieties of both Apples and Pears, and such fruit is very refreshing, although the quality may not always be first-class. In Pears, for instance, sorts like Napoleon and Passe Colmar are very juicy, but they have to take second place from a quality standpoint. Taken as a whole, I suppose,

two or three parcels, and wrapped some long straw round them, securing it with string, and afterwards fastening the bundles to the wall. This covering will save the young wood in the severest winters. For mild seasons and districts a few evergreen branches will suffice, but as when the wood is well ripened covering heavily and completely does no injury, it is as well to be prepared for whatever may happen and make all safe. The coverings may remain on till the end of March, and if the weather is unsettled at that time a part of the covering may remain a week longer.—E.

Unhealthy Peach-trees (J. H.).—The Peach shoots and leaves sent are devoured with black and green fly, and also mildewed. The fly should have been kept in check by the timely and frequent use of Tobacco water, or, better still, the points of the shoots should have been dipped in a strong solution of it, and for the mildew they should have been dusted over with flowers of sulphur, or have been syringed with sulphide of potassium and water, in the proportion of $\frac{1}{2}$ oz. of the former to a gallon of the latter. An east wall is not the best aspect for a Peach-tree, a full southern exposure being a much better one. The Roses on walls are also affected by exactly the same cause, and the remedy is the same as for the Peach-tree.

sun do not penetrate. In fine, the ideal position for Filmy Ferns is a spot where good light with absolute protection from every ray of sun can be secured. This theory is borne out by the fact that the strongest and the most numerous growths make their way towards the light.

NOTES AND REPLIES.

Lastrea Oreopteris.—Brought up from earliest childhood to love this native Fern and its delicious fragrance, it is a pleasure to find that in the Alps it seems to smell even sweeter still. Perhaps the purity of the air, free from even the faintest trace of smoke, may have something to do with the matter, but certainly in these glowing summer days the air on the mountain side is full of its sweetness where it grows abundantly. It is by no means an uncommon Fern in the North of England, but somehow it is rarely seen in the wild garden; hence this note, for the idea prevails that *Lastrea recurva* or *Foeniseii* is the Hay Fern and the only fragrant one that is worth growing. True, *Lastrea Oreopteris* is not evergreen like *L. recurva*, and it requires a trained eye to distinguish it from the common Male Fern at a little distance, so that, perhaps, is one cause

which makes it less of a favourite than it should be. Another cause may be that it is not the easiest of Ferns to transplant, unless in the young state and with a good lump of soil and roots. I have, indeed, heard some folk say they did not consider its foliage fragrant. To all such I would say, "Gather a young frond, bruise it slightly, and then apply your nose to it"; if then you do not recognise its aromatic sweetness, you and I will part company thereon!—E. H. WOODALL in *The Garden*.

TREES AND SHRUBS.

SOME DWARF JUNIPERS.

THE various dwarf Junipers are useful for planting in irregular-shaped masses on banks and in other places, whilst they may also be planted freely for cover. In many parts of the country the common Juniper does well on chalky soil, and the other dwarf kinds of exotic origin thrive on soil of a similar character. This lime-loving attribute makes the Junipers of special value for soils in which the various members of the *Erica* family refuse to grow. As a rule, they spread rapidly and soon cover a considerable area. If objection be taken to the bare ground between the plants when first planted it is easy enough to introduce some semi-wild plant until the Junipers cover the soil. Very little ground preparation is necessary for these shrubs. Remove coarse weeds and dig the ground over deeply enough to bury any Grass or other herbage. Coarse weeds will need to be kept down for a year or two, after which the Junipers ought to take care of themselves. On very dry soils they are sometimes attacked by scale, and when such is the case they should be sprayed over with a paraffin wash once every ten days during April and May. A fungus disease sometimes attacks Junipers, bright yellow, gelatinous masses of fungus growth encircling the stems. This is but one phase in the life-history of the fungus, the other stage occurring on leaves of Thorn, Mountain Ash, Bird Cherry, or some other member of Rosaceæ. The only way to stamp out this fungus is said to be by destroying every member of one host plant in the vicinity, but a good deal can be done to check its spread by removing and burning affected branches of Juniper.

The following kinds are available:—

J. COMMUNIS.—As a rule, this plant is met with as a spreading bush less than 4 feet in height, although under very satisfactory conditions it may form a shrub of the largest size, or even a small tree. It is widely distributed in Europe, N. Asia, and N. America, whilst it is wild in many parts of the British Isles, occurring above the limit of tree growth on the mountains of Scotland and also on the Surrey hills and other places. In some Continental countries, also in Ireland, there is a prostrate-growing form called *nana*. Amongst other varieties *fastigiata*, of stiff, fastigate habit, and *compressa*, a dense, stunted form, are worth growing.

J. PROCUMBENS is a dwarf bush from Japan which spreads widely and rarely exceeds a couple of feet in height. It is a good plant where a carpet-like covering is required, and can be used effectively towards the top of the rock garden. Cuttings and layered branches form means of increase.

J. SABINA, the common Savin, an attractive evergreen 2 feet to 12 feet or more in height and found wild in many parts of Europe, forms a good covering for banks and other bare places. The variety *humilis* is a dwarf form, of spreading habit, while *tamariscifolia* forms a number of rather erect branches from a fairly

close base. An American form of the common Savin sometimes called *J. S. prostrata* and sometimes included as a distinct species under the name of *J. horizontalis*, is a dwarf, spreading plant glaucous-green in summer and of a purplish hue during winter. It is sometimes alluded to as the Waukegan Juniper.

J. SQUAMATA, a native of the Himalaya and China, is another low-growing species rarely over 2 feet high, with spreading branches. It is, however, a rather scarce shrub and is less often seen than the previously mentioned kinds.

In addition to the above there are several dwarf varieties of *J. virginiana* which are useful for planting as isolated specimens in the rock garden, forms such as *compacta* and *dumosa* being specially worthy of notice. D.

HOME-GROWN TIMBER OF THE CLUSTER PINE (*PINUS PINASTER*).

By timber merchants generally the wood of the Cluster Pine is held in no great esteem, except as firewood or in the making of cheap and rough packing-cases. The tree, as is well known, is extensively planted in the reclaiming of sand dunes by the sea coast, and in France and Belgium has been turned to good account in that way. In this country the Cluster Pine attains to a large size when planted on sandy or gravelly soil, and on an estate in Kent some trees recently felled had produced timber at the rate of 1½ cubic feet per annum for a period of ninety years. Several of the trees, which contained from 80 cubic feet to 100 cubic feet of timber, were sawn into boarding and used experimentally on the estate, but with unsatisfactory results. Some of the boards were 3 feet wide, and, having been sawn to 3 inches in thickness, were considered to be well adapted for shed-cleaving and rough flooring. In one case thirty of the boards were used as flooring in a dry faggot shed, but in four years they were all so decayed that they fell to pieces when removed. When the size and age of the tree from which the planking was cut are taken into consideration, and remembering that the timber is so permeated with resin as to be heavier than that of almost any other Pine, it seems remarkable that the lasting properties are not greater. Out of doors, when used as fencing, no more satisfactory results were obtained. However, the recognised value of this Pine for reclaiming exposed sandy coasts and in the production of resin and firewood, as is the case in France, will alone make this tree valuable for economic planting.

A. D. W.

The Siberian Crab (*Pyrus baccata*).—A good deal can be said in favour of planting this tree in parks and gardens, for not only is it one of the most beautiful when in flower in May, but it is very attractive during autumn and winter also, when covered with its bright red fruits. It is found wild in N. Asia, and is perfectly hardy in the British Isles, where it grows into a specimen 30 feet or 35 feet high with a well developed, rounded head as far across. The flowers are white slightly tinged with pink, and the fruits are small, round, and Apple-like, and very firm. They ripen in October, and often hang on the trees until March. Many people prefer them to other forms of Crab Apples for making into jelly, and a good many are used for that purpose. There is a tree with very small fruits little more than ¼ inch in diameter that is sometimes given the varietal name of *microcarpa*. Some authorities, however, contend that the small-fruited tree is the type and the one with the larger fruit is only a variety.

There is still another tree that is sometimes mixed up with the Siberian Crab, that is *P. prunifolia*, which comes from much the same region, but is easily distinguished by its softer fruits, which ripen about the end of August, and by the calyx lobes being retained on the fruits until the fruits fall, whereas in *P. baccata* the calyx lobes are never retained until the fruits ripen.—D.

Timber of the Lebanon Cedar.—The wood of the Cedar of Lebanon grown in this country is much more valuable than is generally supposed. Several large trees that were uprooted during recent gales were, however, by no means readily disposed of, and in one instance the selling price was only a little above that of firewood. As showing the lasting properties of home-grown Cedar wood, a tree that was planted at Holwood, in Kent, by William Pitt just over a century ago was some years ago blown down during a storm and the timber converted into boarding 2 inches thick. Some of the planks were used in making a trough for sheep-washing, and, after having been subjected to drought and damp alternately for eighteen years, were found to be perfectly sound. The purpose for which the timber was used was one of the most trying to which wood can be applied, for, the trough being partially sunk in the soil and only containing water during the sheep-shearing, the changes from drought to damp were very considerable and well fitted to test the quality of the wood. Though somewhat brittle and short-grained the timber of the Lebanon Cedar is well adapted for indoor work, being of a reddish-white colour, light, easily worked, and taking on a nice polish. Several cabinets and room-panelling constructed of matured Cedar wood look little the worse after being in use for sixty years. Many trees in England contain at the present time upwards of 250 cubic feet of timber.—A. D. WEBSTER.

Robinia Kelseyi.—In 1903 this Robinia was originally introduced to the British Isles, and in the comparatively short time that has elapsed it has made many friends. It is a loose-habited, summer-leaving shrub with rather brittle branches. The flowers are rose coloured and very similar in shade (though smaller) to those of the Rose Acacia (*R. hispida*). They are produced very freely, several together, in short racemes from the buds of the previous year's shoots, the flowering time being June. After the flowers are over, curious pods, which are thickly covered with stiff, reddish bristles, appear. It grows well in ordinary garden soil, but should be sheltered from violent storms on account of the brittle nature of the branches. To induce the plants to increase in height it is wise to put stakes to the central shoots of young plants and keep the side shoots cut back a little until the desired height is obtained.—K.

Fendlera rupicola.—This is an attractive shrub when seen at its best, but it can only be expected to give good results when planted in a warm, sunny position, for it is a native of Texas and Arizona. It is related to the *Deutzias* and *Mock Oranges*, and in leafage is rather like the dwarf *Philadelphus microphyllus*. In a state of nature it grows about 6 feet high with a loose branch system. The flowers are white, each an inch or so across, and borne during May and June from axillary buds. The flowers differ from those of the *Mock Oranges* in the lower parts of the petals being narrowed until they are almost stalk-like in appearance. It should be planted in good loamy soil at the foot of a wall with a south or west aspect for preference.—D.

CHRYSANTHEMUMS.

GOOD OLD CHRYSANTHEMUMS.

The recent note in GARDENING ILLUSTRATED on that old variety, *Sœur Melanie*, and the appearance at the National Chrysanthemum Society's Exhibition of Mrs. G. Rundle and its sports, serves to show that some of the old varieties still hold their own. They must possess a better constitution than many of the newer kinds, which, brought forward with a flourish of trumpets and figuring prominently for a year or two, then disappear. It is not so much the fact that they are superseded by the newer kinds, as that they deteriorate to such an extent that the quality of the flowers after some half-dozen years or so is not nearly the equal of those produced in their younger days. Perhaps incessant feeding and what may be termed high pressure cultivation have a good deal to do with this, the plants being constitutionally weakened. Still, it is a pleasure to read that *Sœur Melanie*, which was sent out in 1868, is still grown and gives satisfactory results. The incurved variety Mrs. George

memory, namely, *Julie Lagravère*, sent out by Salter, of Hammersmith, in 1859. For many years it was grown as a border flower, where it held its own season after season, though the dark crimson-red flowers were occasionally cut by early frosts. One called popularly *Cottage Pink*, though I cannot find this name in catalogues, was much grown as a border flower for many years. A *Pompon*, President or Mr. Murray, with purple flowers, I have known for about forty years, and it is still to be seen in some of the gardens in this south-west suburb of London. In the case of exhibition flowers size counts for so much that many of the older kinds have dropped out, owing to their lack of inches. W. T.

NOTES AND REPLIES.

Chrysanthemums twenty-five Japanese of easy culture.—Would you kindly give me the names of twenty-five good Japanese of easy culture?—J. H. H.

[You do not say for what purpose you require the twenty-five varieties in question. We therefore assume the plants are intended for conservatory decoration or

(yellow, sport from *Money Maker*), *Yellow Triumphant* (yellow, sport from *La Triumphant*), *Miss Emma Roupe* (mauve-pink), *Phœbe* (pink), *Heston Bronze* (bronzy terra-cotta), and *Terra-cotta Soleil d'Octobre* (terra-cotta, sport from *Soleil d'Octobre*).]

Single Chrysanthemum Sylvia Slade.—Some consider this variety a little formal, but others admire it. I saw it well done in a villa garden the other day. The growth is good and the blooms, which are of moderate size, have a good deal of substance when well grown. The flowers are well described as being of a "rosy garnet colour" with a broad white ring at the base of the ray petals.—S. A.

Chrysanthemum Eden.—This is often too late for cold districts when in the open, but is valuable for flowering under glass in these places. Although generally grown without disbudding, it is excellent when this is performed. The colour is a clear rose, and judging from some plants I saw the other day, the variety flowers very freely.—S. A.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.

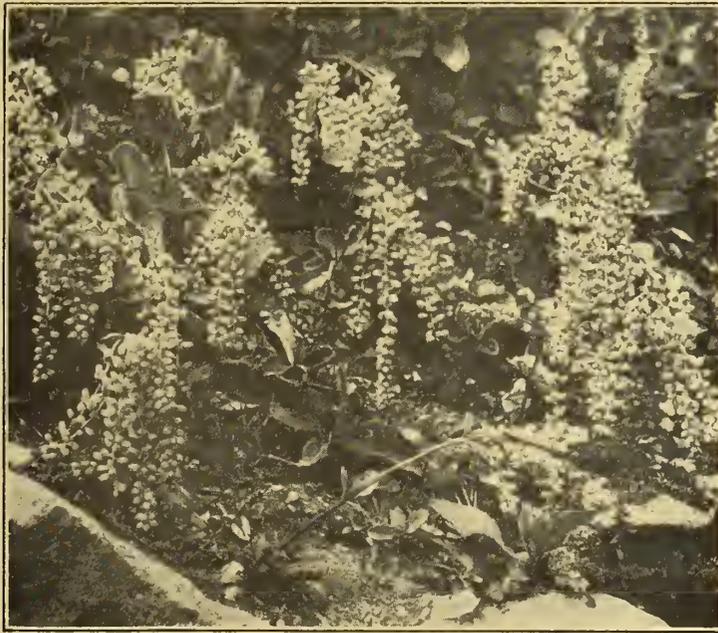
COTYLEDON SIMPLICIFOLIUS.

This distinct species has been freely exhibited during the last two seasons, and in June, 1915, when shown by Miss Willmott and Messrs. Waterer, Sons, and Crisp, gained an Award of Merit. The spatulate, slightly crenate leaves are fleshy, midway in this respect, as also size, between those of *Lewisia* *Cotyledon* and *Sedum* *spurius*. In no other respect can the comparison be pursued. Possessed of a stoloniferous root-stock, though minus the pernicious, weed-like character of the *Stoncrop* noted, perennial habit with a freedom of growth is ensured, and these, wedded to a plant of unusual distinctness, should go far towards providing for it a home in many a rock garden. It is likely to be best suited in the drier positions, in semi-vertical places, with loam and disintegrated rock in nearly equal parts as its chief food, or loam and the oft-recommended mortar-rubble so serviceable to many rock-loving subjects. A fairly sunny aspect in which the racemes of drooping yellow flowers may appear to advantage should be chosen. Comparatively poor or rocky soils appear to invest it with a sturdier habit, and, even if dwarfed thereby, it does not suffer in decorative effect. It is 6 inches high. The picture shows the flowering character, with some barren (unflowered) rosettes in the foreground. It is easily raised from seeds or increased by runners or division.

E. H. JENKINS.

NOTES AND REPLIES.

Sedum Sieboldi.—I have known and grown this for many years and seen it in greater or less perfection in a variety of gardens in many parts of the country, but never so fine as a few weeks since at Earham Hall. Possessed of a beauty all its own, and giving of its best in autumn, when beautiful-flowering alpinines are none too plentiful, it is one of those plants which, despite its merits, has not received adequate attention from the rock gardener. For this particular phase of gardening *Siebold's Stoncrop* is eminently suited. Beside it the variegated form is sickly, weak in colour, and weaker in constitution in that particular garden. Moreover, the fine contrast of glaucous leafage and crimson flower trusses, so effective in the typical kind, was wanting. Though it will grow and succeed in any light, loamy soil, I find that a stiffish loam freely mingled with old mortar and a sunny exposure are much the best for this handsome *Stoncrop*. —E. H. JENKINS.



Cotyledon simplicifolius at Friar Park.

Rundle, whose pure white blossoms, though small, are exceedingly symmetrical in shape, is one year older, for it was distributed in 1867. In time it produced a soft yellow sport, Mr. George Glenny, from which, after a while, a much deeper yellow, Mrs. Dixon, was obtained. It was quite reminiscent of olden times to see those varieties again shown, and I venture to think that they were as much admired as any.

It is, perhaps, among the Japanese sorts that the greatest changes take place, for out of the 130 or so varieties of the different sections of this race, which are mentioned as the best in the centenary edition of the National Chrysanthemum Society's catalogue, it is questionable if there is one other than *Source d'Or* that is in general cultivation. This was sent out by M. Délaux in 1882, and is still largely grown, especially for cutting. This must have a good constitution to enable it to hold its own all these years, while perhaps the most popular *Pompon* of to-day is *Mdlle. Elise Dordan*, despite its thirty years' service. A considerably older kind of *Chrysanthemum*, however, appeals to one's

for cut flowers. The sorts we have selected are those that yield a good display of blooms of medium size and make excellent decorative plants. If you desire us to give you the names of exhibition varieties kindly let us know? We recommend the following Japanese varieties for the purpose suggested:—*Money Maker* (white), *Rayonnante* (shrimp-pink), *Soleil d'Octobre* (yellow), *Bronze Soleil d'Octobre* (bronzy, sport from last-named), *Caprice du Printemps* (deep rosy-pink), *Kathleen Thompson* (crimson, sport from last-named), *Butler's Caprice* (red, sport from *Caprice du Printemps*), *Cranfordia* (yellow), *Source d'Or* (terra-cotta), *Crimson Source d'Or* (crimson, sport from last-named), *Freda Bedford* (bronzy-orange, shaded apricot), *Vivian Morel* (mauve-pink), *Chas. Davis* (rosy-bronze, sport from last-named), *Lady Hanham* (rosy-cerise, sport from *Vivian Morel*), *Lizzie Adcock* (rich yellow, sport from *Source d'Or*), *Market Red* (velvety metallic red), *Mrs. Andrew Walker* (deep coppery-red, sport from *Freda Bedford*), *La Triumphant* (rose, shaded white), *La Negresse* (bright crimson, tipped gold), *Yellow Money-maker*

GARDEN PESTS AND FRIENDS.

SOME GARDEN PESTS.

PREVENTION is better than cure is an axiom that might well be applied in dealing with the majority of garden pests, for it is far better to anticipate the attack and take measures to render it practically harmless than to wait until the foliage is half ruined or fruit half eaten before getting to work. The above reflections were due to reading the oft-repeated query to the Editor as to the condition of Violet foliage. In the case of Violets planted in the open, on which it is difficult to use the syringe effectually, I always found the best prevention was to mulch early in the season with fresh horse droppings, the aroma from which is decidedly objectionable to red spider, the great enemy of Violet foliage. All stone fruits and cordon Gooseberries should get a thorough wetting as soon after the fruit is set as possible with some form of insecticide that will render the foliage distasteful to the insect. These remarks apply to all those flowering plants liable to attack from the particular fly that is the origin of the leaf-boring maggot. It is clearly established that the trouble with the foliage of tuberous Begonias is due to thrips, which can generally be warded off or, at any rate, minimised by a slight mulching of cocco-fibre always kept moist. The dew arising from this settles on the under-surface of the leaf and there is very little trouble with the insect. The above are a few of the many cases where, as above noted, prevention is better than cure.

In the case of larger insects like the wasp and earwig one can, in a measure, deal with the former by the destruction of queens and the early taking of nests, but with earwigs it is different, their habits not being very clearly known. One thing, or rather two things, are clear, that they are partial to certain districts and are most troublesome in hot, dry summers. This being so, the attack on all stone fruits, especially Peaches, Nectarines, and Apricots should be anticipated by getting traps in position quite early in the season, starting, of course, with the earliest ripening fruit. The earwig is very quick to detect the slightest sign of ripening, and it is difficult to understand how it can manage to perforate the skin while yet the fruit will hardly yield ever so slightly to the pressure of the thumb. The grub known as the Leather-jacket seems likely to be troublesome, and it may be well to dip all the Cabbage family before planting (right up to the collar of the plant) in a thick puddle of lime and soot.

Hardwick.

E. B. S.

Combating the Celery-fly.—Many gardeners have been troubled with the Celery-fly this season, and various are the remedies which have been tried to eradicate the pest. Soot has been suggested as a cure. I have not, however, found soot answer always, and lime is about as effective, the reason being, I presume, that it is not easy to distribute either soot or lime on the undersides of the leaves. I would rather depend upon a solution of Quassia chips and soft soap, syringing the plants once or twice a week almost from the time they are planted in the trenches. This I regard as most effective.—F. W. D.

—This has been very troublesome again this autumn. In some gardens the attack has left the plants almost leafless. In my own garden I find that the plants which have been fed are suffering the worst. Plants in a somewhat starved condition have been slightly attacked. About the end of October, when looking over a large private garden, I noticed the Celery had scarcely a bad leaf. The grower told me he had given the plants several dustings of soot, applying it to the leafage early in the morning when damp.—DORSET.

GARDEN FOOD.

THE CHESTNUT SEASON.

I HAVE acres of bearing trees, but only the boys and birds and rodents benefit by them. In France and Italy poor people, during the fall and winter, often make two meals from Chestnuts. At this season it is well to make good use of the Chestnut. W.

CHESTNUT SOUP.—Slit and boil in water till nearly tender $1\frac{1}{2}$ lb. of Chestnuts. Remove the outer rind, and then peel them and drop them into cold water. Next cook the Chestnuts in a quart of rain-water, together with a peeled Onion, a stalk of Celery, and half a Bay-leaf. When the materials are tender rub all through a fine sieve, return the purée to the stew-pan, and reheat with half pint of milk, previously boiled. Reduce a little, season lightly, and lastly add a little Lemon-juice.

CHESTNUT CROQUETTES.—Slit and boil in water for half an hour 1 lb. of Chestnuts; then drain, and cook them in the oven for another half-hour. Remove both the shell and skin, and rub the Nuts through a sieve or chop them finely. Heat up in a stewpan one gill of milk or cream, add the Chestnut purée, also 1 oz. of butter. Season very lightly. Heat up thoroughly, and add the finely-grated rind of half a Lemon; then stir in the yolks of three eggs, and spread on to a dish to get cool. Make up the mixture into ball shapes of even size, egg and crumb them carefully, then fry in deep fat to a golden colour. Drain, dish up, and garnish with quarters of Lemon and Parsley.

CHESTNUT AND LENTIL CUTLETS.—Chestnuts and Lentils make an excellent combination. Mix one pint of Lentil purée with half pint of Chestnut purée cooked as above directed. Stir in a small Onion, previously minced finely, and fried to a golden colour in 1 oz. of butter. Now add a few chopped, peeled Mushrooms, and a teaspoonful of finely-chopped Parsley; season to taste and stir in two egg yolks. When the mixture is cold, shape into even-sized cutlets, egg and crumb them carefully, insert a small piece of macaroni in each cutlet, and fry to a golden colour in hot fat. Drain, dish up, and garnish with crisp Parsley.

CHESTNUT STUFFING.—Scald about a score of fine, fresh Chestnuts in very hot water for ten minutes, skin them, and put them in a little good gravy; allow them to stew gently for about half-an-hour, then add a glass of white wine, a little Pepper, salt, and a blade of Mace. When quite soft, pound lightly, and stir in 1 oz. of butter.

MARRONS GLACES.—These delicious sweets are very expensive to buy, but very easy to make. Remove both skins from some Italian Chestnuts, put them into hot water, and let them simmer until they are tender, but not soft. Simmer half a pint of water with $\frac{1}{2}$ lb. of sugar until the syrup looks clear, then put in the Chestnuts carefully, and simmer until they look quite clear. Take them out, and let them cook on a sieve, and in the meantime boil up the syrup until quite thick, then add a few drops of Lemon juice and about half a teaspoonful of vanilla. Stir well, and when the syrup whitens put in the Chestnuts one at a time. See that they are well covered with the syrup, then remove carefully and put into paper cases.

NOTES AND REPLIES.

Turnip-rooted Cabbage (Swedish Turnip).—The Turnip-rooted Cabbages differ from the Kohl Rabi in that instead of having the stem swollen above ground, they produce, partially buried in the soil, a thick root nearly as long as broad resembling a huge Turnip, of which the flesh is yellow in the Rutabagas, or Swedish Turnip, and white in the other kinds. All the varieties like a stiff soil and always do best where the climate is moist. They are not at all affected by frost, one of their chief recommendations being their extreme hardiness. They are best sown early in May, thinning out to 10 inches apart. The roots are eaten boiled, and are in the best

condition for table if lifted before they have reached their full growth. The Turnip-rooted Cabbage is an excellent vegetable, and deserves far more attention than it at present has. In many places the roots are lifted and clamped like Potatoes.

The best Blackberry for northern gardens.—The best Blackberry for northern gardens is the Parsley-leaved one, *Rubus laciniatus*. I have tried several of the American Brambles, such as Wilson Junior, and others, but none of them came up in point of real value to the older Parsley-leaved one. It is often difficult to get the American varieties to ripen well in the north, whereas the one mentioned never fails to ripen its fruits before the late autumn. Even selected plants of the common wild Bramble of our hedges are useful for covering rough fences where the fruit is appreciated for pies, in combination with Apples and Plums, or jelly, and even for jam. The Blackberry has, however, the defect as a jam fruit of being often hard, and is better when made into jelly. In too many cases in gardens the Brambles do not receive the attention they deserve. They may be trained in the same way as Raspberries, but to taller, upright stakes or to wires strained between posts, and I have seen them doing well on arches well exposed to the sun. Brambles should have good, well-manured soil, with occasional doses of liquid manure, mulching in dry weather.—S. A. M. D.

Potato Great Scot.—Though a second-early or midseason variety, this Potato this year has given splendid results and the crop has matured earlier than usual. As regards the eating qualities it is of excellent table quality, and, what makes it more valuable, it is a splendid keeper, with round tubers, shallow eyes, and admirably adapted for strong soils, as it is a robust grower, having a strong haulm. With me it is quite free from disease. It is a very heavy cropper, with no waste, as the crop is notable for its absence of small or useless tubers. A few years ago this variety was one of the few which received an Award of Merit from the Royal Horticultural Society for the quantity of its crop and its good quality, as it was cooked to test the latter—an important point that should not be overlooked in any trial of Potatoes.—*The Garden*.

The Pecan crop short.—Reports show that the Pecan crop in Texas is short this year compared with other years. This fact and there being an increased demand for Pecans have caused the price to range somewhat higher than usual. In some places the better grades have sold as high as 18 cents per pound.

[In London they are not, so far, to be had.—Ed.]

Pear Comte de Lamy.—This delicious fruit is not yet, after nearly a hundred years' existence, so widely known as it should be. Raised by M. Simon Bouvier, of Jodoigne, Belgium, about 1828, it was dedicated to Professor Curtet, of Brussels, its correct name being Berré Curtet. It has suffered badly, like so many good Pears, at the hands of the rechristeners. However, Comte de Lamy it is in England, and so it will have to remain. Rather on the small side, of pyriform or sometimes Bergamotte shape, its appearance says nothing for it; but perhaps that is all in its favour. How much more interesting it is to bring forward the Cinderellas of the fruit-room rather than the corpulent sisters who attract every eye! Certainly in "every well-regulated garden" a space should be found for this delicious October fruit. Mr. Blackmore at Teddington turned upon it the downward thumb, but his soil was not kind to Pears. In any medium soil it does well, and in a light sand excellently.—E. A. B., in *Garden*.

ROOM AND WINDOW.

WILSON'S BARBERRY.

This graceful and bright-berried plant is charming for the bold rock garden, and very useful also in a cut state for the house; best, perhaps, in a Japanese vase, the shoots fixed in glass holders. When cut it will remain in a good state for weeks.

NOTES AND REPLIES.

Spanish Irises for cutting.—Few plants give more delightful blossoms for cutting for table decoration than Spanish Irises. All who would have them another year should plant the corms in November, as I

INDOOR PLANTS.

WELL-TRIED PLANTS.

"E. B. S." has an interesting note on page 566 on some old and well-tried plants that still hold their own, despite the number of new varieties that have been distributed since they were first sent out. The variety of Ivy-leaved Pelargonium which he mentions, namely, Galilee, was raised by M. Lemoine, of Nancy, and distributed in the spring of Jubilee year, 1887. Old as it is, there are two varieties still much grown which are older, namely, Souvenir de Charles Turner and Mme. Crousse. This latter is the oldest of all, having been sent out in 1881 or 1882. A visit to

particularly Henry Jacoby (crimson), West Brighton Gem (scarlet), and Vesuvius (scarlet). These have been generally grown for many years. In the case of Fuchsias the popularity of old and well-tried varieties is particularly marked, especially among those that are grown into large specimens and employed for the flower garden during the summer. A probable reason for the favour shown to the older kinds is that many of the newer forms have very large and heavy blossoms, which do not resist the wind so well as the smaller blooms of the older ones. Of varieties with white corollas undoubtedly the favourite for growing out of doors is Mme. Cornellison, which was sent out in 1860 or 1861. Its stiff growth enables it



Wilson's Barberry in fruit in a Japanese vase.

have found from long experience that, put in then, the results are invariably finer. They make a fine show if planted in groups of eighteen or so in mixed borders, and any fairly light soil suits them. I give mine a mulch of old manure in the late autumn, and no winter, however severe, seems to affect them. They may be left two or three seasons, but after that it is advisable to lift and replant. Care should be taken not to plant the corms too deeply, 3 inches being sufficient.—WOODBASTWICK.

"The English Flower Garden and Home Grounds."—New Edition, 12th, revised, with descriptions of all the best plants, trees, and shrubs, their culture and arrangement, illustrated on wood. Cloth, medium 8vo, 15s.; post free, 15s. 6d. Of all Booksellers or from the office of GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

Covent Garden Market in the spring, or a walk through the fashionable London squares during the summer, will show the great extent to which these varieties are grown, while if note is taken of the contents of the costermongers' barrows in the poorer neighbourhoods much the same result will be obtained. It is very interesting to note the different subjects offered by the costermongers, many of whom obtain their supplies from the market after the wants of the better-class customers have been supplied. Sometimes a specimen or two of quite an uncommon plant may be obtained in this way. In the case of Zonal Pelargoniums "E. B. S." refers to the varieties Paul Crampel and King of Denmark. There are, however, still older varieties which are largely grown, par-

to withstand rough weather well, while it is harder than most of the others. Rose of Castile is even older than this, while, though I do not know the age of Mrs. Marshall, it was certainly a popular market kind nearly fifty years ago. Other old kinds that show no decline in popular favour are Scarcity, Wave of Life, Phenomenal, Amy Tye, Lady Heytesbury, Lord Beaconsfield, and Ballet Girl. The flowers of this last are, like those of Phenomenal, large and double, and the habit of the plant is so sturdy that they resist winds well. Of Chrysanthemums a few old and well-tried kinds still hold their own, while of Heliotropes, besides the variety Piccoli mentioned by "E. B. S.," such well-known kinds as Lord Roberts and Miss Nightingale, both richly coloured and

fragrant varieties, are still extensively grown. The double-flowered *Lobelia speciosa*, known now as Kathleen Mallard, which is the same as an old variety grown many years ago and long lost to cultivation, has made many friends during its second appearance. It is, however, of little use for bedding, as the blooms are spoilt by wet weather. Many other plants that still retain their old-time popularity might be mentioned, but enough has been given to show that a certain percentage of them still remains in the foremost rank.

W. T.

NOTES AND REPLIES.

Azalea Roi des Belges.—I have an *Azalea* called *Roi des Belges*. (a) Please tell me the botanical name? (b) Two blooms made their appearance a fortnight or more ago, but now the plant seems to hang fire (it is in a large pot). Does it require heat? (c) How is it propagated?—BEGINNER, *Eastbourne*.

[This is a variety of *Azalea indica*. If you wish the plant to flower now, then you may put it into heat, but if not, then the better way is to allow it to bloom naturally in the greenhouse. An excess of water or too little must be guarded against now that the plant is coming into bloom. *Azaleas* are increased from cuttings as also by grafting, but, as we said in regard to *Erica hyemalis*, unless you have the proper conveniences you cannot hope to succeed.]

Erica hyemalis.—(a) When should *Erica hyemalis* bloom? (b) What treatment does it like? (c) How propagated?—BEGINNER, *Eastbourne*.

[This blooms in the winter and early spring months. It should be given greenhouse treatment. This *Erica* is increased from cuttings, but unless you have the proper conveniences for doing so we can hold out but little hope of your succeeding. Directly after your plants have ceased flowering you ought to cut them into shape, shortening back the long, vigorous shoots to one-third their length, then place them in the greenhouse or in a frame, where they will soon start into growth. As soon as the young shoots are about half an inch long repot in sandy peat, which must be pressed down very firmly. After this the plants should be kept in the greenhouse till they have recovered from the check, when a cold frame is a good place for them till towards autumn, when the nights grow cold, at which time they should be removed to the greenhouse.]

Begonia Gloire de Lorraine.—I bought two plants of *Begonia Gloire de Lorraine* in July last. They were then in bloom, and still are, but show signs of failing. Please say: (a) What I can do with them and (b) how are they propagated? I repotted into larger pots about a month ago.—BEGINNER, *Eastbourne*.

[There was no need to repot your plants, which, late in the spring when they have finished flowering, should be cut back to where the first blooms have been produced. In a short time young shoots will be pushed out towards the base of the plant, these, when they are from 1½ inches to 2 inches long, forming the best cuttings. They should be cut off with a sharp knife close to the main stem, and be dibbled into well-drained pots of sandy soil, given a gentle watering, and placed in a close propagating case in the stove. Water only when necessary, and open the case occasionally to dry up any of the superabundant moisture. In about three weeks the cuttings will have rooted, when they may be hardened off and potted singly into small pots. Pot them on as necessary, and when the pots in which you intend to flower them are full of roots an occasional dose of liquid-manure is very beneficial. A suitable compost in which to grow this *Begonia* and its several forms is a mixture of loam and

leaf-mould, with, if the loam is inclined to be heavy, plenty of silver sand. You may retain the old plants, potting them when they have started freely into growth after they have been cut down, but the best plan is to raise young plants every year from cuttings.]

Primula malacoides.—It is pleasant to find how this *Primula* is finding its way into the greenhouse of the amateur. It is so easily raised from seeds and gives such a quantity of its purple flowers that it is most valuable to the amateur who wishes to brighten up his little greenhouse in winter and early spring. I saw a nice lot the other day in a small greenhouse containing a miscellaneous assortment of plants, and this *Primula* seemed to do well under such conditions.—S. A.

The Heliotrope as a climber.—Too often we think of the *Heliotrope* only as best fitted for the greenhouse stage or the flower garden, forgetting its value as a climber, in which way it is easily grown, either in large pots or tubs or planted out where light can reach both root and plant. To grow *Heliotropes* quickly over rafters one must be prepared to sacrifice blossoms for a season, pinching the shoots to induce lateral growths, and potting the plants in a compost of old loam and leaf-soil with mellow dung added. Mulchings of manure now and again will do much to stimulate them, and the second season should see a plentiful supply of blossoms.—WOODBASTWICK.

ORCHIDS.

SOME EASILY-GROWN ORCHIDS.

(REPLY TO "F. G. H.")

An impression is prevalent that to grow Orchids satisfactorily special facilities, as well as a particular knowledge of their requirements, are essential, and still further that they are expensive. Many of the best Orchids can be grown as easily as *Fuchsias*, or other greenhouse plants and Ferns, and they can be procured just as cheaply. The only knowledge required is as to the best varieties to commence with. One of the oldest Orchids in cultivation, and one of the most suitable for winter flowering, is *Cypripedium insigne*. This can be grown in a cool greenhouse in which the winter temperature is maintained at about 50 degs. at night. It will bloom from November onwards, and the flowers last for several weeks in perfection. Some later introductions have produced considerable variations. The potting should be done in early spring, shortly after the flowers have been removed, and the compost should consist of good fibrous loam and peat, intermixed with rough sand and a little *Sphagnum*. The plants require a liberal amount of moisture at all seasons of the year, but with low temperatures they should be kept rather drier at the roots, and the moisture in the atmosphere be reduced. In summer the plants may be accommodated in a cold frame, shaded from the direct rays of the sun during the hottest part of the day.

In addition to the above there are many hybrids which have been derived from the intercrossing of *C. insigne* with other species. These may be procured cheaply, and as they possess vigorous constitutions they are worthy of every consideration. *Sophronis grandiflora* will do well suspended from the roof in a cool-house. This is one of the most attractive of the cool-house species, its brilliant orange-scarlet flowers, produced in the depth of winter, being always welcome. There are several cool *Oncidiums* which are useful for winter flowering, two of the most useful being *Oncidium incurvum* and *O. ornithorrhynchum*. *Masdevallia tovarensis* is a charming white-flowered variety that produces its blooms in the depth of winter. This species should be protected from the scorching rays of the sun at all seasons of the year. *Lycastes*, of which *L. Skinneri*

is the most attractive, can be cultivated in a house in which 55 degs. would be the average temperature. The flowers last a long time in perfection. Under similar conditions many of the miniature-growing *Cattleyas* and *Laelias* of the Mexican sections may be included. The *Laelia pumila* section is especially suitable for basket culture and flowers during the late autumn months of the year. *Laelia harpophylla*, which produces its orange-red flowers in the early spring, may also be grown here, and the more showy *Oncidium Forbesi* section may also be included. All of the above are procurable at a trifling outlay, either in an imported or established condition.

AN ORCHID FOR AMATEURS.

ONCIDIUM AMPLIATUM MAJUS.

This is one of the showiest and best of the *Oncidiums*, and although an old species, it still holds a foremost place. This produces its bright yellow flowers during the months of May and June, and these, if not sprinkled with water from the syringe, will remain in perfection for a considerable time. *Oncidium ampliatum majus* is of easy culture, and succeeds well when grown in pots. It produces large, roundish, and much-compressed pseudo-bulbs, each 3 inches or 4 inches in diameter, streaked with purple and red, turning when old to a dark brown. The leaves are broad, of thick, leathery texture, upwards of a foot in length, and bright deep green in colour. The scape, which is erect and attains a height of about 3 feet, is much branched and produces flowers in abundance. These are quite white at the back and bright yellow in front. The sepals, almost entirely hidden by the other segments, are pale yellow with a few brown blotches, the petals bright canary-yellow, and the lip even brighter.

Oncidiums are naturally epiphytal, growing upon branches of trees; therefore it is very necessary that they have good drainage. They require to be potted firmly in a mixture of good fibrous peat and *Sphagnum Moss*, with a few nodules of charcoal. The plants, which should be raised on a cone-shaped mound above the rims of the pots, enjoy, when growing, a copious supply of water, but during the period of rest only enough should be given to keep the bulbs in a plump and healthy condition. They can be grown in the hottest part of the *Cattleya*-house or in any position where plenty of heat can be maintained, always taking care that the atmosphere is moist.

Dendrobium regium.—This may be best described as a summer-flowering *Dendrobium nobile*. It is a very desirable plant and deserves a place in any amateur's collection, as it blooms from July onwards, a period of the year when *Dendrobium* flowers, especially those belonging to the noble group, are not to be had. The colour of the flowers is a light rosy-purple, the throat of the lip clear yellow surrounded by a zone of creamy-white. The maroon disc, characteristic of *D. nobile*, is absent in *D. regium*. Repotting must be done later in the season than in the case of *D. nobile*, and, as a rule, it should take place a few weeks after flowering. *Osmunda fibre* and *Sphagnum Moss* in equal parts make a good rooting medium. The receptacles, either pots or pans, must be filled to one-third of their depth with drainage. During growth a warm, moist atmosphere is needed, and the plants, when they are well rooted, should be afforded plenty of water. When the season's growth is complete a cool and drier position is needed, but sufficient water ought to be given to maintain the pseudo-bulbs in a plump condition.—B.

OUTDOOR PLANTS.

PETASITES JAPONICA.

The species of this genus are not favoured by gardeners because of the rapid spread of their roots and the difficulty of eradication once they get established. In cool, moist loams, or even clay, some of the kinds are among the worst weeds with which the gardener has to deal. Under no circumstances should the more troublesome kinds be introduced into the border or other place where, for the reason named, they are likely to become a nuisance. That most esteemed by gardeners is

P. (TUSSILAGO) FRAGRANS (Winter Heliotrope), because of the time of its flowering and the fragrance—one cannot add ornamental character—of its flowers. That it was so esteemed and sought after at one time may be gathered from the fact that in my old Tooting days it was specially cultivated in pots, and in flower

the variety would associate well with some of our fine-leaved subjects. I have no experience of it at such a size, and would be interested to hear from anyone who has.

E. H. JENKINS.

THE ADONIS.

At one time there was but little choice among these, but we now have several fine new species.

ADONIS VERNALIS.—This, though first grown close on 300 years ago, still remains a general favourite, the handsome flowers, bright yellow, opening in March or April. It thrives best in a rather heavy, moist soil. It does not like disturbance, and it is not advisable to divide it, if possible to avoid it. Young plants can be raised from seeds, which ought to be sown as soon as they are ripe. Old seeds are slow to germinate, and may lie dormant for a year.

A. PYRENAICA often blooms as early as May, although July is said to be its normal flowering season. It is rather taller than *A. vernalis*, but has smaller flowers, its

sults, though in this position it is a little later than in a heavier and moister soil with more sun. *Adonis amurensis* is one of the most valuable of our early flowers, and well deserves some protection from the weather while in bloom.

TIME OF PLANTING.—Autumn is the best time for planting these varieties of *Adonis*, though they may be put in as late as November should the weather keep open. Some dealers supply the plants in pots, and they can be planted from these with but little disturbance of the roots.

S. ARNOTT.

NOTES AND REPLIES.

Erica cinerea.—I have two good-sized plants of Scotch Heather in bloom (white and pink). (a) Is the right name *Erica cinerea*? (b) What is the treatment when it goes out of bloom? (c) How is it propagated?—BEGINNER, *Eastbourne*.

[Yes, the Scotch or grey Heather is *Erica cinerea*. It is improved by cutting over in the early spring before growth starts, and is easily increased by division.]

Hardy plant notes.—The following notes by the late J. Wood, of Kirkstall, in *The Garden* of December 5th, 1891, are very interesting:—

OXALIS LOBATA.—This is one of the more seldom seen species, and I believe with many the idea prevails that it is not hardy. This is the point on which I wish especially to speak, but only two or three words of fact. Surely I need not do more than report that it stood out here unprotected all the last severe winter. If that is not enough, I know a friend whose climate is even worse than this—colder, a lower elevation, and heavier land. In his garden this little gem withstood the rigorous of 1890-91 winter.

OURISIA COCCINEA.—There has been the usual lamenting, owing to the non-appearance of flowers this autumn. As I believe I said last year, though the plant grows well in shade, it is all the better for sunshine if the moist condition of the soil can be maintained. I have recently proved plants to flower better in that way. One thing is certain, if you grow the plant well and manage to keep the leaves on in winter, you afford it the best possible chance to flower, and if you can get ever so few of its neat dwarf spikes of drooping scarlet plumes you will not begrudge the little pains needed.

About 1886 I spent a day in Mr. Wood's garden at Kirkstall, full of all sorts of treasures, many of which came from Mr. Wolley Dod's garden. In 1893 Mr. Wood spent several days here. He was very much taken by the brown slate chips, especially in the Lledr valley. I remember sending him a truckload to Leeds.—E. CHARLES BUNTON, *Coed-Derw, Bettws-y-Coed*.

Iris bakeriana.—I first grew this *Iris* twenty-five years ago, and I shall ever retain the pleasure it afforded me when it flowered. Unhappily, it succumbed, as it has since done, and its loss was, I think, due either to late frosts injuring the foliage before it was fully matured, or the wet winters we so often experience. A bulb which requires to be lifted annually has, in my opinion, many obvious drawbacks, and possibly the want of a complete rest may have had something to do with the loss of *I. bakeriana* at various times. On the whole, however, I am inclined to attribute it to late frosts, which have frequently been fatal to other exquisite *Iris*es, e.g., *I. Rosenbachiana*, *I. orchoides*, and other bulbs whose leaves were scorched by frost ere they had completed their growth.



Petasites japonica, var. gigantea (syn. Nardosmia japonica).

often sold at the seemingly ridiculous price of thirty shillings per dozen. In all probability the name Winter Heliotrope assisted to this end, since I do not recall a single instance of a "repeat order." This, notwithstanding, there is room for the species in the woodland where it may be permitted to run its course. The late Latimer Clark was very fond of it, and every year a few well-flowered plants in pots always found their way into his cool conservatory.

P. JAPONICA has flowers of a creamy hue—not fragrant, so far as I remember—and produced in a more club-shaped inflorescence than the one already named. At flowering-time it may be a foot high or less, and is usually seen minus leaves at that time. The flower-heads are not attractive, though the foliage is handsome in outline. An even greater development of this Japanese kind is the variety *gigantea*, also called *Nardosmia japonica*. This is said to attain to 6 feet high, the leaf-stalks being used as Rhubarb is in this country. Given such development,

main recommendation being its later blooming. It likes a lighter soil than *A. vernalis*.

A. VOLGENSIS.—This comes in midway between *A. vernalis* and *A. pyrenaica*. It has flatter and thinner stems than *A. vernalis*, but the flowers more resemble those of that species than those of *A. pyrenaica*.

A. AMURENSIS.—This is one of the greatest gains of recent years. This is partly due to its earliness and partly to the beauty and variability of the flowers. In warm, sheltered places and in good years it sometimes blooms as early as January, and in February is usually in full flower. It is about 9 inches high, and is highly attractive even before it blooms, so Fern-like is the foliage. The bright yellow flowers are each about 2 inches across, but there are several forms—one with double blooms and another with flowers with a greenish centre. This species likes a sunny place in a moist, rather heavy loam, but I have grown it for years in a half-shaded situation in light loam with satisfactory re-

With and without peat, with plenty of sand and with and without leaf-soil, amply drained, on rockwork or on the level, *I. bakeriana* has, with me, invariably succumbed, sometimes after two or three years.—S. ARNOTT.

The Kafir Lily (*Schizostylis coccinea*).—This is one of the most brilliant of autumn-flowering plants, albeit, unless special means are taken to ensure success, it does not in many parts of England attain to anything like its full beauty before the arrival of frosts. To this end and because of its late flowering a warm position will prove helpful by promoting an earlier flowering and giving the shelter a selected site affords. A warm position, indeed, should mean much to this South African subject, and most gardeners will appreciate the fact. It should not be regarded, however, in conjunction therewith that in common with many South African bulbous plants the "Kafir Lily" prefers root dryness. In my experience it is the reverse,



Petasites japonica. (See page 637.)

rich and moist soils being much more to the liking of the plant. From the cultural point of view, too, experience has shown that an increased vigour and finer spikes result from growing the plants practically to single crowns, a method of cultivation which, in conjunction with annual lifting and resting, specialists have found to answer well with the *Montbretia*. Those who lift the plant for the greenhouse should rest their plants when flowering is past, keeping them as dry and cool as possible. No harm will ensue if they are dried off entirely; indeed, they will be safer so, and better fitted for a new season's work hereafter.—E. H. JENKINS.

Aster Amellus from seed.—One of the brightest groups in the garden a few weeks ago was a bed containing about fifty *Aster Amellus* seedlings. The flowers vary greatly in colour, shape, and size, all intermediate shades between pale lavender and deep violet; some are of the starry type, others have good broad petals. The earliest to flower was in full bloom by August 20th; the latest is still in flower.—L. B. W., in *Garden*.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM DECEMBER 6TH.—*Erica carnea*, *E. mediterranea hybrida*, *Polygala Chamæbuxus purpurea*, *Periwinkle*, *Aubrietias*, *Double Arabis*, *Winter Heliotrope*, *Andromeda floribunda*, *Genista tinctoria*, *Laurustinus*, *Jasminum nudiflorum*, *Escallonia montevidensis*, *Veronicas*.

WORK OF THE WEEK has been chiefly of a routine nature. Beds of choice varieties of Daffodils that were not lifted last autumn have been cleared of all weeds and a little bone-meal carefully pricked into the surface. Some long borders which are during the summer devoted to *Antirrhinums*, *Pentstemons*, half-hardy and tender annuals, etc., have been cleared of their occupants, and will be well manured and dug up roughly, burying the manure as deeply as possible. As espalier-trained fruit-trees are planted at the back of these borders, trenching cannot be practised. The work of cutting over the stems and generally tidying up herbaceous borders are being

their best they should be planted in large groups. *Erica mediterranea hybrida* has been in flower for several weeks. *E. carnea* and varieties have also commenced blooming. *E. lusitanica*, *E. arborea*, and *E. Veitchii* are now a mass of flower-buds, those of the first being already tinged with colour. *E. australis* is one of the prettiest of the Heaths, and should be included in every collection where it proves hardy. It thrives here in a sheltered position. The summer-flowering varieties include *E. ciliaris* (Dorset Heath), *E. cinerea*, *E. tetralix*, *E. vulgaris*, and their many fine varieties.

F. W. GALLOP.

Lilford Hall, Oundle, Northants.

SOUTHERN COUNTIES.

Birds.—Where tits, bullfinches, and sparrows are in the habit of attacking and disbudding Gooseberry and Currant bushes, as well as Plum-trees, the two former should be netted over and the latter syringed with something to render them distasteful. A specific can now be had for the purpose. Much good can also be done by looking round occasionally and shooting at the depredators as they leave the trees.

Pruning.—As the leaves are with few exceptions now off the trees, pruning can be commenced in earnest. Where much fruit is grown on walls, it is the rule to commence with Morello Cherries and finish with Peach-trees. By the adoption of this plan the former, which are usually grown on the north side of a wall, and, therefore, occupy the coldest position, can be pruned, nailed in, or tied, as the case may be, with greater comfort than when severe weather has to be encountered. Too much young wood is oftentimes laid in in the case of the Morello Cherry. This must now be thinned out sufficiently so that when nailing or tying is finished it will be equally distributed all over the tree and stand about 4 inches apart. The wood to be dispensed with may, if desired, be cut back to three buds to form spurs, but if the trees are in a healthy bearing condition spurs are a superfluity, and the spare wood is best cut clean out. In the case of old trees, shoots conveniently situated should be left to eventually replace branches which have become bare at the base and for some distance up. As such walls, owing to the aspect, often become coated over more or less with Moss in the course of time, advantage should be taken of the present opportunity to cleanse them. If the trees are partly liberated from the face of the wall and the branches held on one side, an old bass broom will usually suffice to free the surface of Moss. If this is followed up with a vigorous syringing, using soap-suds from the laundry when obtainable, the wall will remain clean for some time. Other fruits grown on north walls are—dessert Cherries, Plums, and Red Currants. The first, if properly attended to during the summer, require but little pruning now. Plums require the spur wood shortening to four or five buds; and that on Currants to three buds. The best way of training the last is as double or triple cordons.

French Beans.—A commencement in the forcing of these may now be made. If a continuous supply is required a sowing should be made every twelve or fourteen days. Seven-inch pots are a suitable size to use for early forcing, and these, after being crocked, should be about two-thirds filled with a mixture of loam, spent Mushroom manure, with a dash of bone-meal added. Seven to nine Beans of a forcing variety should be dibbled into each pot, and when up and the first pair of leaves has been made, reduce the plants to five in number and fill up the pots with the same kind of compost to within $\frac{1}{2}$ inch of the rims. The spray from worn-out Birch brooms forms a good support for the plants, which should be placed just within the rims and a few twigs in the centre. Until germination takes place, the pots can be stood anywhere, but if stood on a board laid on top of the hot-water pipes germination is considerably hastened. A Cucumber or forcing house is the best place to grow them in, as they require a temperature of not less than 65 degs. Their greatest enemy is red-spider, consequently, except when the plants are in flower, they must be syringed

continued during favourable weather. The stems are taken to the fire-heap, together with all weeds and leaves from the borders. The longer shoots of Roses have been shortened to keep the wind from loosening the plants at the roots. This same treatment is meted out to Hybrid Perpetuals, as well as to Teas, Hybrid Teas, and Hybrid Chinas. Soil is then heaped round the stems to a height of several inches. Some beds and borders planted with Hybrid Perpetuals and Hybrid Teas will be given a good mulch of partially decayed manure. An effort is now being made to finally deal with the leaves lying about in the grounds. These are being raked up and carted to where they are required for different purposes. Many of the gravel paths having become green and Mossy on the surface, these, when opportunity occurs, will be turned, levelled, and rolled. Provided the weather is favourable, the present is a suitable time to plant many of the hardy Heaths. By a careful selection of varieties, hardy Heaths may be had in flower all the year round. With the addition of a little peat they will thrive in most soils; in fact, on good loamy soils peat is not necessary. The dwarf sorts are splendid for edging and carpeting beds, but to see them at

with tepid water daily. When the pods begin to swell off mild doses of liquid-manure are then beneficial. In an ordinary way, from three to four dozen pots are a sufficient number to sow on each occasion.

Mustard and Cress.—From now and onwards a good supply must be kept up by sowing and raising both in heat in boxes at regular intervals. After germination takes place, the boxes are best moved into a cooler temperature.

Miscellaneous.—Advantage should be taken of wet days to get late-keeping Onions tied in bunches of five or six and slung on cords stretched at a convenient distance from the roof in the root store, when they will not only keep better, but for a much longer period than if left on the floor in layers of two or three thicknesses. Carrots, too, should be turned over with a view to ascertaining if any have decayed, and run over the same. Potatoes, both ware and seed tubers, should be frequently looked to, particularly the former, as they are not keeping any too well.

Late Peach-house.—The foliage has been retained by the trees for a longer period than usual, owing to lack of sun and fire heat in forwarding the ripening of both wood and leaves, especially on trees which are inclined to make gross growth. Now is the time to counteract such tendencies by a partial lifting of the roots by opening a trench some 5 feet or 6 feet distant from the stems and down to the drainage. This will allow for the soil being properly worked from among the roots up to a point some 3 feet away from the stem, which is generally as far as it is necessary to proceed with the lifting in such cases. All fibrous roots should be carefully preserved and the strong ones shortened back to where roots of a more fibrous nature branch off from them. In the refilling of the trench, some fresh fibrous loam and a liberal quantity of mortar rubbish should be mixed with the soil. Before finally finishing off give a good soaking of water, which settles the soil more effectually into place than any amount of treading. If the drainage material when reached is found to be in a bad condition it should be taken out and cleaned. A. W.

MIDLAND COUNTIES.

Second-early Peaches have been pruned and cleaned and the borders top-dressed ready for starting. Early in the New Year will be soon enough to start the trees in this house. As the buds are already swelling, the front ventilators will be closed if very cold winds prevail. The trees in the latest house are now receiving attention in the way of pruning and cleansing. All wood is well ripened and well set with flower-buds.

Orchard trees may be pruned during mild, open weather. When it is necessary to remove a large branch the wound should be covered with paint to keep out the wet and prevent decay. If frosty weather prevails old and useless fruit-trees may be grubbed, all prunings and refuse of every kind cleared up and conveyed to the fire heap. When the ground is frozen all wheeling of manure and soil on to fruit quarters should be done. No definite instructions as to the manuring of fruit-trees can be laid down, as the grower must decide what are the immediate requirements of the trees under his charge. Trees that carry average crops annually usually need some manurial assistance, especially those having a limited rooting space. I do not advise the use of fresh farmyard manure at this season for such as Apples, Pears, and Plums, this being best applied as a mulch in the spring. Thoroughly decomposed manure mixed with a quantity of old potting soil forms a good top-dressing. As a stimulant for wall trees I use a light dressing of soot and bone-meal, which usually keeps the trees in a healthy and fruitful condition. This is lightly pointed in with a fork after pruning and training are completed. Gooseberry and Currant bushes require rich farmyard manure, and this should be forked in as soon as the prunings have been cleared away. Fig-trees have been unfastened from the wall and the branches tied in bundles of a convenient size. This will allow

them to be readily protected with straw and mats during severe weather.

Early-flowering Gladioli.—The varieties comprising this section of Gladioli are especially suitable for pots, and whether grown as pot-plants or for cutting they are equally valuable during the spring and early summer. We are now potting up a quantity of these into 5-inch pots in a compost consisting of two parts good fibrous loam, one part leaf-soil, and a little coarse sand. In potting, a little sand is placed under each corm, putting from six to nine corms into each pot. When potting is completed, the pots are placed in a cool-frame, standing them on a bed of ashes, and covering over the top of the pots with sifted leaf-soil. As soon as growth is visible this covering must be removed or the plants will become very much weakened. When well rooted, the plants may be placed in very moderate heat, but no hard forcing must be attempted. Keep them well up to the light, and when the pots are well filled with roots and the plants in full growth, apply occasional waterings of weak liquid-manure to assist the plants to properly develop the flower-spikes.

Calanthes are coming into flower, and have been removed from the stove to an intermediate-house, where the blooms will last in good condition for a considerable time, and when cut will not fade so soon as when brought from a close, moist atmosphere. After the spikes are cut, the plants will be allowed a complete rest, placing them on a shelf near the roof-glass in a house where the temperature does not fall below 60 degs.

Asparagus.—Batches of roots should be placed in heat fortnightly throughout the winter if a constant supply is desired. This crop may be grown without fire-heat, provided a hotbed is available, with sufficient covering material to maintain a suitable temperature. Where it is intended to make new plantations of Asparagus next spring the trenching of the ground should be proceeded with as soon as it is in good working order. The situation chosen for Asparagus should be sheltered from west winds, which frequently cause serious damage during the autumn unless the shoots are well supported. The ground should be fully exposed to the sun, this being necessary for the production of early Asparagus. If the land is light and of an open character, ordinary trenching and a good manuring will suffice, but if the soil is heavy and cold, drainage must be provided and the ground trenched to a depth of 3 feet, leaving the bottom soil where it is, but incorporating with it a liberal quantity of manure and lime rubble. The top spit of soil from the next trench should then be placed over this and covered with a quantity of manure, which, in turn, will be covered with the second spit of soil from the same trench, and so on until the required breadth has been prepared.

Mushroom beds spawned six weeks ago are now in full bearing, a good supply being maintained by making successional beds about every five or six weeks. An atmospheric temperature of from 50 degs. to 55 degs. is maintained, the paths and walls being damped twice daily with tepid water. It is far better to err on the side of too little rather than too much heat, as by this means the quality of the Mushroom is superior and the beds continue to bear for a longer period.

Seakale is now plentiful, and a good supply will be maintained by placing in the Mushroom-house successional batches as required.

Early vegetables.—All leaves, especially Oak and Beech, are now being collected and stored for future use and are found most useful for making mild hotbeds for bringing on early vegetables. A pit is being prepared for the sowing of early Carrots. No fire heat is necessary for this crop, however severe the weather may be, provided a bed of fermenting material is placed in the pit. Leaves make the best hotbed for this purpose, the heat from them being more lasting and milder than when manure is employed. The leaves having been collected and allowed to remain for a fortnight, they are turned, placed in the pit, and trodden firmly, leaving the surface as even as possible. A 9-inch layer of soil is placed over the bed and made moderately firm and level previous to sowing the seed, which is done in drills

drawn at 4 inches apart. During severe frost a covering of mats sufficient to exclude frost will be placed over the glass. F. W. GALLOP.

SCOTLAND.

Pruning.—In the case of old trees, which in the open have filled their allotted space, the pruning is reduced to a minimum, more especially in the case of Apples and Pears. While one would like at times to allow more extension in such trees, it is not always feasible to do so, and they are, therefore, kept pretty well spurred in. The treatment year by year does not interfere with their cropping, which, after all, is the main thing. In the case of Plums, wherever it is at all practicable, the knife is used as sparingly as possible. I am convinced that when Plum-trees are too severely dealt with, not only is their cropping value diminished, but, in addition, the trees are more liable to "gumming," and to the dying back of branches of considerable size. Naturally, however, all weak and useless spray is cut out; but, as has been said, a too free use of the knife is not favoured. As regards a collection of young Apple-trees on dwarfing stocks, pyramids and standards, the pruning, of course, varies from that of older trees. Due attention must be given to the shape and balance of the tree—within moderate bounds, that is—for I would not cut out a promising shoot merely because it interfered with the symmetry of any tree if it were not very plainly superfluous. A point that sticklers for shapeliness very often appear to forget is that the first and chief end of a fruit-tree is to bear fruit; and if that purpose be attained shapeliness is only a secondary consideration. When, however, symmetry and fruitfulness can be combined, so much the better. At the present time all of us are on the outlook for devices to save time. During the pruning, instead of, as hitherto, allowing the prunings to fall to the ground to be raked up afterwards, a large hamper has been kept handy, the prunings collected in handfuls as they were cut, and dropped into the hamper. This has resulted in a considerable saving of time.

Figs in pots.—These, having now lost their foliage, have been top-dressed during the week. The usual practice is to repot at this time; but, owing to want of labour, top-dressing must suffice. The compost used consisted of well decayed old fibrous loam with a proportionate quantity of lime rubble and a dash of wood ashes.

Pot Vines, now quite dormant, were re-potted in the course of the week. These will either be kept in a cold-house or placed in a sheltered position out-of-doors for a short time until they are again required.

Fruit-trees in pots will be much better out-of-doors from now onwards. One point must be attended to, and that is, while frost will do no harm to the trees, it may damage the pots. Therefore, precautions must be taken to avert accidents. The pots, if assembled, can be covered with dry leaves, those of Beech preferably. The leaves can be kept from being blown about by high winds by putting a piece of wire-netting secured to a few posts round the trees. In addition, this covering of leaves will keep the balls in an even state of moisture throughout the winter.

Planting.—There will not during the present season be so much planting and transplanting as is usually the case. At the same time, there is always something to replace or to shift, and the work ought to be carried out at as early a date as possible. The stations ought to be prepared in advance, in order that no unnecessary delay may take place when the trees come to hand. In the event of frosty or very wet weather setting in when the plants arrive, they should not be unpacked. If placed in a cool, but frost-proof, shed they will be quite safe until conditions are suitable for putting them out.

Roses.—Climbing Roses have been attended to at a rather later date than usual owing to pressure in other directions. Of course, the current year's shoots were previously loosely tied in to prevent damage from winds; but it was not found possible to cut out the exhausted flowering wood. This has now been attended to, and these Roses retained. No

more wood ought to be retained than is absolutely necessary for the furnishing of arches, trellises, etc., for if too thickly crowded, the bloom is never so good, and the plants in summer, after their growth is completed, are apt to assume a tangled appearance.

Hardy-plant borders.—Cutting over of the ripened stems is being proceeded with as time allows. In the case of one long border, which is occupied by principally the taller and more robust-growing hardy plants—Delphiniums, Rudbeckias, Asters, Chrysanthemum maximum, Erigerons, Echinops, Eryngiums, and so forth—after cutting over was completed, and as very few bulbs find a place in the border, it was decided to fork the ground over. As all the plants grown are of a hungry nature, a good allowance of short, well-rotted manure was worked carefully in. Another border devoted to Phloxes and *Statice latifolia* was lightly pricked over, and the spaces between the clumps planted with Wallflowers. It is rather late for the latter work, but as the weather continues to be mild they will soon take hold.

Surplus Wallflowers are again being disposed of by planting them out in colonies in Grass. This is a very good way of utilising plants which would otherwise be thrown out. They are put out in a very rough-and-ready way, being notched into the turf with a spade exactly in the way that small forest trees are planted. As is only to be expected, a proportion of these Wallflowers does not succeed, but in ordinary years a very useful display is made in corners by plants which would very likely have been wasted.

Arum Lilies.—These are now making excellent growth, but as for a considerable time no pressing need exists for them they are being kept quite cool. In order, however, to maintain progress stimulants are being given fairly frequently. Such stimulants may very well be varied—for example, soot-water may be given on one occasion, and a chemical fertiliser in solution or diluted liquid from the tank on another. Arum Lilies are rather gross-feeding, and I think appreciate the tank liquid more than chemical substitutes, or even than soot-water, although the latter certainly gives tone alike to spathes and foliage.

Plants for spring flowering under glass.—I have previously referred to the value of certain hardy plants for the spring decoration of the greenhouse or conservatory, and those who may intend to give such a trial are reminded that potting-up must be carried out without delay. Good-sized pots—say, 9 inches in diameter—filled with good clumps of the yellow Day Lily (*Heimerocallis flava*) will make handsome specimens. Any of the Plantain Lilies in 5-inch or 6-inch pots are useful. Potsful of Montbretias are not without value, and, as everyone knows, *Spiraea* (*Hoteia*) japonica and Solomon's Seal force easily. Other instances of hardy plants which are equally useful will occur to those interested. It ought to be said that the *Heimerocallis flava* and Montbretias must not be subjected to a strong heat, but brought along quite coolly. As regards Funkias, they will stand stove heat. In the case of all hardy plants intended for pots, they must, of course, be allowed to become established before taking them inside. After potting, let them be stood under a wall or in a cold-frame for at least a fortnight before removing them under glass. I have accidentally omitted *Dielytra spectabilis*—one of the most graceful as well as one of the most accommodating of hardy plants for the purpose in view.

Under glass.—In wet weather the cleansing of fruit-houses, the cleaning and pruning of Vines, the washing and re-training of Peach-trees, and the usual routine work which are general at this time of the year may be attended to. No pains are too great and no time is badly spent which are devoted to such work. Clean trees and Vines and well washed houses will go far toward success in the season to come. If plants can possibly be kept out of Peach-houses and vineries it is a distinct gain, because the houses can be flung open by night and by day; and there is no need to apply the heat which is necessary when Chrysanthemums or other subjects have, perforce, to find accommodation in such. W. McGuffog.

Balmæ Gardens, Kirkcudbright.

ROYAL HORTICULTURAL SOCIETY.

DECEMBER 5th, 1916.

THE last fortnightly meeting of the year, while not making for great fulness, contained exhibits of sufficient merit to warrant the granting of two gold medals—one for the magnificent group of Orchids from Tunbridge Wells, the other for as fine a lot of Carnations as we have ever seen. These latter were from Haywards Heath. For the rest, there was much to admire and not a little to interest. For example, the collection of *Cypripediums* from Usk Priory, Monmouthshire, while containing novelties showing great advance, also demonstrated the highest cultural excellence; indeed, we have rarely seen such quality displayed. The new H.T. Rose C. E. Shea, shown by Mr. Elisha Hicks, revealed forcing properties of a very high order, its value, wedded to a variety possessing fragrance, good decorative form, and the ever-popular pink shade, unmistakable. Fletcher's new form of the Lawson Cypress, which gained an Award of Merit, also attracted considerable attention. It is possessed of a neat, elegant habit of growth.

CARNATIONS.

The magnificent collection of these from Messrs. Allwood Brothers, which gained a gold medal, was one of the features of the show. From a great centre of Wivelsfield White, one of the most popular, other varieties were arranged, usually three vases of each, a far more impressive way of showing them than in single vases. Thus disposed, and with two or three dozen blooms in each vase, a most imposing display resulted. May Day, Bishton Wonder, Nancy (pink), Destiny (cerise) (both novelties of high rank for the coming year), Benora, Wivelsfield Wonder (a new scarlet and white fancy after the last-named, but superior to it), Nora West (one of the finest things in the pink shades), with Salmon Enchantress and Enchantress Supreme were a few in a very beautiful lot. In a small group from Mr. J. C. Jenner, Sunstar (yellow) and White Enchantress were good. Messrs. William Cutbush and Sons had excellent stands of White Swan, White Enchantress, Champion (intense scarlet), and Carola (crimson), displaying them on a generous scale in conjunction with growing plants. In that from Messrs. Stuart Low and Co., a great vase of the new pink Alice stood out well, hardly less conspicuous being Belle of Washington (scarlet), Mrs. Myles Kennedy, Countess of Wilton (of cinnamon red tone), and Pink Sensation (very large). The new coppery-leaved Begonia Mrs. Petersen was also staged by this firm.

SHRUBS.

Excellent fruiting sprays of the Sea Buckthorn (*Hippophae rhamnoides*) were sent by Mr. A. Wright, Golf Grounds, Skegness. Messrs. R. F. Felton and Sons contributed a considerable assortment of cut shrubs, hardy and exotic, Eucalypti of sorts, *Hakea laurina*, a variety of Pittosporums including *P. Mayi*, *P. tenuifolium*, and *P. intermedium*, neat, glossy-leaved evergreens of high ornament in the cut state, and others. Two promising novelties came from Messrs. Fletcher Brothers—the dwarf Douglas Fir (*Abies Douglasi* Fletcheriana) (a pigmy suited to the rock gardener) and a new seedling form of Lawson's Cypress, *C. Lawsoniana Pottensi* (of neat, elegant growth). C. L. Fletcher and *Aucuba longifolia* Fletcheri were also shown. In a group from Mr. G. Reuthe, *Picea Breweriana*, *Juniperus sinensis prostrata aurea*, and *Olearia semi-dentata* were remarked, together with *Correa magnifica* (white), which in favoured places is hardy against a wall.

GREENHOUSE PLANTS.

The finer exhibit in this section was that of Chrysanthemums, the outstanding novelty Joan Maitland (a deep chestnut-bronze of the decorative class), which appealed to all. The plants were about 3 feet high, and were shown by Mr. G. Carpenter, West Hall Gardens, Byfleet. Messrs. W. Wells, Limited, exhibited the new pink Lady Stanley; Mollie Godfrey, Lily Neville (single white, very fine), Enfield White, and Mary (a miniature golden Pompon) being remarked in a large collection. An extensive collection of Hart's Tongue and other hardy Ferns, together with many greenhouse kinds, with Begonias, Cinerarias, and Cyclamens, were staged by Messrs. H. B. May and Sons.

ORCHIDS.

These were well shown generally, and one of the two Gold Medals awarded on the occasion was for a particularly good group from Tunbridge Wells. Its main feature was about six dozen flowering examples of *Cattleya Maggie Raphael alba*, each plant bearing a two or three flowered scape of white crimson-lipped flowers. Evidencing considerable variety, the pick of the group was undoubtedly those named Brilliantissima and Dreadnought, both of which, in addition to their fine proportions, were well marked. The novelty of outstanding merit in the group, however, was *Brasso-Lælio-Cattleya The Baroness*, Orchidhurst variety (of rich golden-yellow colour), whose rounded, well-goffered lip was very striking. This gained a First-class Certificate. *Cattleya Venus Queen of Yellows* was also a considerable attraction. Other novelties included *Odontioda Madeline* var. Black Prince and *Odontoglossum Doris*, Orchidhurst variety, each gaining a Preliminary Commendation Card. This fine lot came from Messrs. Armstrong and Brown. Very fine, too, was the collection of choice *Cypripediums* sent by Mr. R. Windsor Rickards, Usk Priory, Monmouthshire; indeed, it teemed of novelties and high-class varieties throughout—two of them, C. John Cypher (*C. Antinous* x. *C. Leanum*) and C. Chardwar, whose pouch and sepals are uniformly coloured a rich chestnut, the large dorsal sepal being freely spotted. C. Antinous (white and rich yellow), C. Curlew, C. Nydia (crimson and rose), and C. Pyramus splendens were all of high merit. The finer things in a group from Messrs. Charlesworth and Co. were *Brasso-Cattleya Queen Alexandra* (pure white and very handsome) and *Lælio-Cattleya Mita* (crushed strawberry colour and gold and crimson lip). *Lælio-Cattleya Serbia*, variety Bryndir (in mauve and crimson) was very good from Dr. Miguel Lacroze, Roehampton. Messrs. J. Cypher and Sons contributed a fine series of *Cypripediums*, the more conspicuous of which were C. Golden Fleece, C. Tityus, C. Charlesianum, C. Endora (a very dark variety), and the handsome Mrs. F. Wellesley. *Cymbidiums*, in conjunction with *Cypripediums*, were the chief of an exhibit from Messrs. Hassal and Co., the former including C. Motra (fawn and yellow) and the nearly white C. Pollux among others. Messrs. Flory and Black contributed *Cypripediums*, Stuart Low and Co. some very pretty *Sophro-Cattleyas*, Messrs. Sander and Sons having *Cymbidiums*, *Cattleyas*, and *Cypripediums*, their *Cattleya Snowflake* (handsome and pure) commanding attention at once.

ROSES.

A remarkable exhibit of the new pink H. T. Rose Charles E. Shea, which received the Gold Medal in June last from the National Rose Society, came from Mr. Elisha J. Hicks, the raiser. The flowers, two or three dozen of them on stems

2½ feet long, were the product of forced plants started in September last, at once a tribute to responsiveness and adaptability to winter forcing; for colour, form, fragrance, and value for early forcing this new Rose is already held in high esteem. To-day an enhanced value is added thereto by the demonstrated fact that it may be forced into flower in the very depths of the winter season.

FRUIT.

A capital dish of Serbian Quince was sent by Mr. W. North Ross, Cove House, Tiverton. The fruits were large and handsome, and of a golden-yellow colour. A handsome and shapely cooking Apple—which is not of bad eating quality also—named Nutfield Beauty, was shown by Mr. T. W. Herbert (gardener to Mr. J. T. Charlesworth, Nutfield Court, Redhill). It is of the largest size, yellow, faintly touched red on the sunny side, and very heavy. It did not, however, gain an award.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Arum Lilies (L.).—At this time of year these require a temperature of about 45 degs. to 50 degs., keeping them well supplied with water. If in small pots liquid-manure will be beneficial to them. When they have done flowering in spring repot them or plant them out-of-doors in trenches of rich soil, lifting and potting again in September. Any good soil will do for the potting, but turfy-loam and rotten manure or leaf-mould make the best compost for them.

Growing Brugmansias (F.).—It is usual to cut Brugmansias back to the hard wood, or nearly so, in order to prevent their occupying too much space. During the winter when growth has ceased give them less water—only sufficient to keep the soil from getting too dry—and keep in an ordinary greenhouse. About the beginning of March shake the plants out and repot them, using as a compost one half good turfy loam, the other half leaf-mould and well-decayed manure, with some coarse river-sand. As the pots get filled with roots during the summer an occasional dose of liquid-manure is beneficial.

Nertera depressa (T. W.).—This does not need heat. In the southern counties it often succeeds in the open air, and is especially suited for a position in the rock garden. A partially shaded situation is advisable for this plant, which is easily propagated by the inser-

tion of young shoots in pans of sandy soil in gentle heat, covering with a bell-glass till established, when they may be potted off separately. A compost of loam, leaf-mould, and sand meets its requirements. Keep the Nertera in the shadiest part of your greenhouse, and remember that it only requires sufficient heat to exclude the frost.

Cutting back Fuchsias (Fuchsia).—The better way to treat the plants now would be to place them in the greenhouse, and there let them remain until January or later. They may receive just enough water at the roots to prevent their becoming quite dust-dry; but as long as there is any apparent trace of moisture in the soil water is not needed. They would do very well with the same treatment in any room from which frost is quite excluded. They may be cut back in March before they start into growth. When the shoots have just started to grow shake the plants out of the pots and place them in smaller ones, using moderately rich soil. The plants must not be watered too freely at first, but when well established they must not suffer in the least in this respect. When they have filled the small pots with roots they may be put into the pots in which you wish them to flower.

TREES AND SHRUBS.

Holly losing its leaves (Holly-tree).—In all probability the tree is suffering from dryness at the roots. Your only remedy is to mulch with a mixture of some fresh soil and well rotted farmyard manure, watering freely once or twice a week. If the Grass goes up to the bole of the tree, then the turf should be rolled back to, say, a distance of from 4 feet to 6 feet all round, the soil loosened and the mulch laid on, afterwards replacing the turf.

Pruning Pyrus japonica (Inquirer).—This will always flower in a far more satisfactory manner when allowed to grow naturally than it will if closely pruned. Such being the case, the plant should be cut back only as far as is absolutely necessary to keep it within the assigned bounds. No pruning to particular eyes or buds is required in this case, the main consideration being the space at disposal. At the same time any old or exhausted shoots should be cut out, as by so doing the young, clean growth upon which depends a good deal of the future display of bloom is thereby encouraged. A good time for carrying this out is directly the flowering season is over, as the specimen has then a long growing period before it.

FRUIT.

Vine on arch, pruning (E. W. C.).—Your best plan will be to unfasten the rods and cut the laterals back to, say, two or three eyes, at the same time cutting out any rods that are very weak, so as to encourage young shoots from the base. After it has been pruned the rods may be again fastened to the arch. The pruning may be done at once.

"Big-bud" on Black Currants (A. T.).—The "big-bud," as it is termed, is not a disease at all, but is due to the Black Currant gall-mite (Eriophyes Phytoptus). This has been known to scientists for a number of years, but it is within the last ten or fifteen years that it has worked such destruction in fruit plantations and gardens. The best remedial measures to combat this pest are to pick off every infested bud you can find now and burn them. Then in April and again the first week in May give the bushes a good dusting with a mixture of one part lime and two parts sulphur after having thoroughly damped them with a syringe. Also try syringing them weekly with Quassia extract both before they flower and after the fruit is set until the middle of June.

The various Loganberries (Novice).—These should be not less than 6 feet apart, as the plants grow very strongly. The long-summer growths should be tied up to stout stakes or trained to a wire fence in the same way as Raspberries. The shoots will reach a height of 8 feet or 10 feet. A warm, sunny position is best to enable the wood to get thoroughly ripened. In hot weather a mulch of manure should be placed over the roots. The old fruiting wood should be cut out every year to allow space for the new growths, which should in the winter be cut down to the height of the stakes or the wire fence. We should advise

you to cut down close to the ground the growths you refer to in order to encourage the establishing of the plants.

Shanked Grapes (J. E.).—That so many berries on your bunches of Grapes have failed to ripen and shrivelled is due to shanking. If you examine the stems of these berries you will find that they are brown and withered. The defect is due to several causes. First, the roots have gone deep into sour, poor soil, where they fail to find proper food. That is the common or chief cause, and to remedy it the border should have the top soil removed, the roots lifted, the bottom soil broken up, and have bone-dust, wood-ashes, and lime-rubbish mixed with it, then relaid shallow, and have a surface-coating of quite fresh soil, with which similar manures are mixed. Very heavy cropping and occasionally lack of moisture at the roots cause shanking.

VEGETABLES.

Vegetable refuse (G. J.). With regard to the disposal of all descriptions of vegetable garden refuse, it matters very little whether it is put into a broad, deep trench as collected to decay, or is put into a heap and occasionally turned to accelerate decay, and then used. It may be, however, most convenient for you, if you have the trench open, to put it into the trench at once, letting it lie all the winter to decay, then in the spring throwing in upon it some soil, mixing it with the refuse, then on that some manure and more soil, mixing that also. Such a trench should produce very large Celery and Leeks; but these may be coarse, and not so solid as less manured soil would give.

Vegetables for kitchen garden (Ignoramus). Beyond Cabbages and Lettuces, there is nothing else in the way of vegetables you can plant at the present time. You can, however, manure and dig the ground so that it will be in readiness for cropping in the spring, when early Potatoes, Peas, Broad Beans, and, in due course, Spinach, Radishes, Lettuces, Onions, Carrots of the Shorthorn type, Parsnips, and Globe Beet can be planted and sown. Seeing the garden is of limited area, you may wish to omit the first-named. In any case, you will not be able to devote a great deal of space to any one crop. Dwarf Beans, if you desire to grow them, should not be sown before the middle of April, and Runner Beans the first week in May. You may plant a few Cauliflowers the end of March, and as the ground becomes vacant set out Cabbage, Savoys, Cauliflowers, and Broccoli for autumn use, and Kale and winter Broccoli for spring cutting.

MISCELLANEOUS.

Liquid-manure (D.).—One of the best of all liquid-manures can be made with fresh horse-droppings. These should be put loosely into a coarse sack or canvas bag, tied at the mouth, and put into a tub of water—say, 1 bushel of droppings to 20 gallons of water. Give the bag a turn now and then to ensure that all the droppings therein are thoroughly saturated with water. The liquid will be ready for use after three days' soaking, and it should be diluted before use according to its strength. By adopting this plan the liquid is clear and free from impurities, and does not smell unpleasantly if made fresh frequently.

SHORT REPLIES.

Walsall.—It is immaterial. Either of the Vines will do on the east or west side. We do not understand what you mean by growing one Vine under the other, and shall be glad of a further explanation. In any case, we should prefer Foster's Seedling.—*E. P. S.*—Yes; you will find Hop-manure very good for Roses. The best way, we find, is to remove the soil to a depth of 2 inches or 3 inches round each plant and fill in with the manure, afterwards replacing the soil.

NAMES OF PLANTS AND FRUITS.

Name of plant.—*M. J. C.*—Cotoneaster Simonsi.

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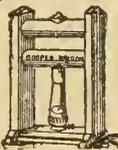
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In consequence of the Christmas Holidays, we shall be obliged to go to press earlier with the number of **GARDENING ILLUSTRATED** to be dated **DECEMBER 30th, 1916.**

Orders should be sent as early as possible in the week preceding to ensure insertion. No advertisement intended for that issue can be received, altered, or stopped after the first post on **WEDNESDAY, DECEMBER 20th.**

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FLOWER SHOW FIXTURES.

1916.

DECEMBER.

December 18.—National Chrysanthemum Society's Executive Committee.

1917.

JANUARY.

January 15.—National Chrysanthemum Society's Executive Committee.
" 16.—Royal Horticultural Society's Committees.
" 30.—Royal Horticultural Society's Committees.

FEBRUARY.

February 17.—Annual Meeting and Committees.
" 27.—Royal Horticultural Society's Committees.

MARCH.

March 6.—Royal Horticultural Society's Bulb Show (2 days).
" 13.—Royal Horticultural Society's Committees.
" 27.—Royal Horticultural Society's Committees.

APRIL.

April 11.—Royal Horticultural Society's Committees.
" 17.—Royal Horticultural Society's Daffodil Show (2 days).
" 24.—Royal Horticultural Society's Committees.

MAY.

May 8.—Royal Horticultural Society's Committees.
" 22.—Royal Horticultural Society, Chelsea (3 days).

JUNE.

June 5.—Royal Horticultural Society's Committees.
" 19.—Royal Horticultural Society's Committees.

JULY.

July 3.—Royal Horticultural Society's Summer Show (3 days).
" 17.—Royal Horticultural Society's Committees.
" 31.—Royal Horticultural Society (dry bulb show).

AUGUST.

August 14.—Royal Horticultural Society's Committees.
" 28.—Royal Horticultural Society's Committees.

SEPTEMBER.

September 11.—Royal Horticultural Society's Dahlia Show.
" 25.—Royal Horticultural Society's Vegetable Show.

OCTOBER.

October 2.—Royal Horticultural Society's Fruit Show (2 days).
" 9.—Royal Horticultural Society's Committees.
" 23.—Royal Horticultural Society's Committees.

NOVEMBER.

November 6.—Royal Horticultural Society's Committees.
" 20.—Royal Horticultural Society's Committees.

DECEMBER.

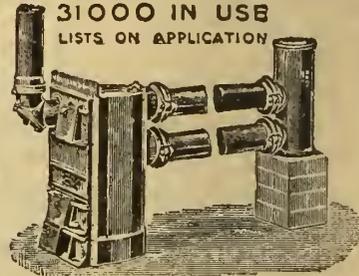
December 4.—Royal Horticultural Society's Committees.

We shall be glad if Secretaries of Horticultural Societies will kindly send the dates of their various shows to Editor, **GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.**

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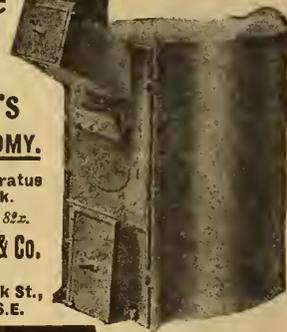
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Founded by W. Robinson, Author of "The English Flower Garden."

DECEMBER 23, 1916.

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THE TRUE SPRING GARDEN.

If we think of the waste of means and time involved in the inartistic and stupid ways of spring flower gardening in the gardens about London and Paris for many years it may lead to dealing with the matter in a simpler way. The man with a town garden cannot help himself, he must bed out spring or summer; but in a country place the old way of digging up the flower garden twice a year was a stupid and costly way.

The lawn shown in the picture on page 653 between the house and the water was, a generation ago, without a trace of a spring flower in it. It is now every year as full of flowers as any alpine meadow, and has even a variety of early flowers. Very early in the year its beauty arrives with the Winter Aconite, the early Crocus, and so the story goes on for the following three months without any trouble to the gardener beyond the first planting of the bulbs. Let it be noted that no attention—manuring or special culture—is given; we simply put the roots into the turf, usually a few inches below the surface. The soil is a cool loam on sandstone, in which the Narcissi and some other things do well; but other bulbs do not do so well as they would in warmer soils.

A great point is only to use things that naturally bloom very early, and which in the mountains of Europe would be deeply embedded in snow when our green fields are a mass of Crocus, Snowdrop, and Snowflake, which flower much earlier than they do under deep snow. By confining early spring gardening to flowers that come early there is no limit to what may be used, except that it will depend on the nature of the soil. The reason for confining ourselves to early things like the Crocus is that the Grass of this field is mown for hay just as it would be grazed in the alpine meadows. As a rule, in this soil most plants increase and are happy, some less so than others, like the Crocus, that does not run about as in the chalky open soil. The blue Windflowers and the scarlet Windflower are among others that thrive and never go back. The only Windflower that fails in the turf is the Greek one, which probably does not part with its leaves so soon. The splendid scarlet Windflower does not thrive in the ordinary garden soil, but set in the turf in light and open groups is a brilliant success.

Any plants that keep their leaves all

through the summer should be omitted from the Grass where mowing is done twice a year; such plants are better in the copse or shrubbery.

This plan is well worth carrying out for the sake of its beauty alone; but that is not the only reason for it. One is that it leaves the flower garden proper free for its true object. If we have to drag up our flower garden twice every year we can never make a true garden of it. Roses and Lilies, Clematis, and many other beautiful things will not bear being disrooted every year. The value of the system is that it gives a real chance for a flower garden, in which more than half the things want permanence if to give a full result. Anyone can see the result of the opposite system at Kew or in the London parks, where there is a continual turning up and down of the beds. There are other real gains in the enduring way—first, that one may work at it on all fine days in autumn, winter, and spring, and get all ready for the final effort in planting out in early summer the tender plants essential for a good garden.

W. R.

NOTES OF THE WEEK.

Box edging in kitchen gardens.—"W." (page 615) is quite right in deprecating the use of Box edgings for kitchen gardens. Box looks well when properly kept and doing satisfactorily, but how often is this the case? Not very frequently, I fear, while the amount of labour it involves is very great. Then, as "W." points out, an edging should be one which gives no "shelter or shade to mouse, rat, or slug," and this cannot be said of Box.—S. M. D.

Cattle-poisoning at Ockham.—I am sending a piece of the Yew out of Ockham Park which is cut off one of the trees the cattle got at. I have never known any of our horses or cattle hurt by eating young green Yew, but should they get any old brown dead pieces, that, I know, is very bad, and generally fatal.—ANTHONY WATERER.

[The green Yew, we suppose it is, and it could not well be anything worse. A viper under a bush is not nearly so deadly as a green Yew within reach of horse or cow.—Ed.]

Chrysanthemum Joan Maitland.—This was the only new variety to gain an Award of Merit from the Royal Horticultural Society on December 5th, and if "bronzy-crimson" were permissible, so far as colours go, it would at least go some way to give an idea of a somewhat unusual

shade. As it was, I wrote it down "chestnut-bronze," since the colour came rather near to the rich reddish-crimson of the fruits of the Horse Chestnut. The colour appeared to attract everybody, there being three handsome flowers on a plant 3 feet high. It was shown by Mr. G. Carpenter, West Hall, Byfleet. The award was unanimous.—E. H. J.

Syringa Emodi.—"D.," who writes of *Syringa Emodi* on page 622, does not mention that the inflorescence of this species is not so graceful as that of the common Lilac and its varieties. It is a very distinct Lilac, seldom seen, but I do not care much for the flowers, which are not a good white. I have cultivated *S. Emodi* for twelve or thirteen years, but it is only within the last few years that it has bloomed well.—S. A.

Desfontainea spinosa.—Recently I saw a bush in fine flower in the gardens of Penrhyn Castle, near Bangor, within a few miles of the sea. It was some 6 feet high and 8 feet in diameter. The site was ideal, with a western aspect and sheltered from the east by a high wall some few yards away, the ground sloping gradually into a ravine. Thus the damp base, with abundance of exposure to the sun, appeared to favour healthy growth.—E. M.

Carnation Red Ensign.—This was much the best, in my opinion, of the three new Carnations gaining Awards of Merit at the Perpetual Carnation Show on December 6th last. A well-fashioned flower of the rosette type, large, good of stem, and with perfect calyx, cut flowers side by side with bushy, well-cultivated examples, also in bloom, were shown of what promises to be a most useful variety. The colour is light scarlet, a most effective shade under artificial light. It is an ideal habited sort.—E. H. JENKINS.

Chinese Primulas.—The highly interesting notes by "A Scottish Gardener" on this subject (page 624) lead me to remark upon the lessening cultivation of the older forms of *Primula sinensis*, so popular for very many years. The double varieties, long favoured, are rapidly going by the board (I do not regret this) and the small-flowered singles are favourites, although we still meet with a fair number of growers who cling to the large singles. *P. obconica* and *P. malacoides*, with *P. Forbesi*, have also done much to reduce the cultivation of *P. sinensis*.—S. M. D.

Scabiosa caucasica.—Where a difficulty is experienced in establishing bought in plants of this, as in "Byfleet's" case, seedlings should be used. Sow the seed in a cold frame in the latter part of the sum-

mer. Prick out the seedlings when strong enough, and finally pot them singly into large 60's, plunging them before winter sets in in ashes in a cold frame that should be kept freely aired. In this state they winter well, and, when planted out in early spring, grow straight away without any trouble or misgiving—such, at least, has been my experience after having failed with bought in plants.—C. T., *Highgate, N.*

The new forms of the Alpine Forest Heath (*Erica carnea*).—I have grown all these since they were first sent out, and have found that in some seasons certain varieties will bloom well and others poorly in the same soil. In other years those which generally flower freely may be disappointing. My poorest one this season is Mrs. S. Doncaster. Generally speaking, there is slightly less bloom than usual on my plants, which are grown in sandy loam. I attribute this to the wet season, the rainfall having been greatly in excess of that of most years. Regarding the remark of "N. L." about the white variety of *E. carnea* not blooming so freely as the type, this has its flowers more widely scattered along the branches and not in a cluster, as is the case with *E. carnea*.—S. ANNOTT.

Chrysanthemum Progne.—This bright amaranth-purple coloured flower used to be much grown, and was appreciated for the sake of the pleasing violet-like fragrance of the blossoms. It seems to have almost, if not quite, disappeared, though its perfume would suggest whether it might not with advantage be employed as a seed-bearer in the production of new varieties. I was reminded of Progne by seeing the name in a list of "New and Beautiful Rare Plants," offered by William Rollison and Sons, of Tooting, for the spring of 1858, in which it was quoted at the price of half-a-guinea each. Another variety, at half the price, was Julie Lagravere. While all the others in the above-mentioned list soon disappeared, the two herein named held their own for many years.—W. T.

Felicia petiolaris.—This was planted in the spring of 1915, and flowered freely in September and October. A slight protection—fir branches, etc.—was given during the winter. Whenever the trailing growths touch the ground they root. From February to June of this year there were quantities of flowers. The plant is now 3 feet across and 2 feet high. On December 9th a number of flower-buds were formed. These will open in a few days, unless there is hard frost. The foliage is very pretty, and the flowers are like tiny Asters, pink and white. In May last I put a small rootlet into a 6-inch pot, and have kept it in the greenhouse. Two or three flowers opened in June, and at present there is no sign of more. This plant is now 18 inches across, and the trailers try to root on the pavement. I should like to know whether this *Felicia* usually behaves as I have described. In two other gardens no flowers have ever appeared.—E. CHARLES BUXTON, *Cood Derw, Bettys-y-Cood*.

Sparmannia africana.—Complaints are sometimes made that this does not flower so freely as might be wished. This is frequently due to its being treated too liberally, the result being shown in its rank growth and poor display of blossoms. It is best to allow the plants to become quite pot-bound, and to supply the necessary stimulant either in the shape of liquid-manure or one of the many plant foods now available. If the plants have been grown on in the greenhouse they should, soon after midsummer, be stood outside in a spot fully exposed to light and air. This ensures a thorough ripening of the wood and consequent formation of

flower-buds. During the time they are out-of-doors the plants must not be neglected for want of water, otherwise the leaves will turn yellow, and their ornamental qualities be, therefore, much impaired. Should this happen, an occasional dose of soot-water will put matters right. Care must, of course, be taken to remove the plants under cover before the nights get too cold, otherwise the embryo blossoms may be injured. Large specimens may, as standards or bushes, be grown in pots or tubs, and in this way the white flowers, with their brush-like mass of stamens, gold and purple in colour, form a delightful mid-winter feature. Smaller plants in 5-inch pots will also flower freely.—K. R. W.

Anomatheca cruenta.—This Cape bulb is not much grown by the amateur or gardener. It is a capital subject for the warmer districts of the United Kingdom. In these it is hardy, but in other parts it is not to be relied upon. In such cases it is safer to lift the bulbs in autumn as soon as the foliage becomes yellow, and store them in a frost-proof place. It is not generally known that it is much brighter and more effective in shade than in sun. The late Mr. F. W. Burbidge pointed this out to me in the Trinity College Botanic Garden, over which he presided so ably. In cold districts planting should be performed about March. *Anomatheca cruenta* makes a good plant for pots for the conservatory or greenhouse. One bulb will be enough for a small pot, but about three in a 6-inch one will give a fine display. It is a beautiful plant 6 inches to 12 inches high, with a spike of rather starry flowers of red tinged with scarlet, and with a deep blotch on the three lower segments. A rather sandy soil suits it well.—S. ANNOTT.

The pergola and its proportions.—A lady told me the other day that she was worried by the climbers on the pergola interfering with her hat, feathers, etc. That may happen with the ill-designed and worse built pergola of the British garden. Knowing Sir Ernest George had an important one in hand I wrote to him as to its proportions, and here is his reply:—

In the scheme sent to you the roof is 11 feet or 12 feet high. The height seemed necessary in relation to the length and width of the structure, and for the proportion of the columns. I have only wondered if this was inconveniently high for the planting and covering of the pergola. Certainly the lady's bonnet and feathers should be free of any hanging tendrils. The width between pillars is about 10 feet. The length is about 230 feet.

No fear of the height being too great for the climbers, *Wistaria*, *Vine*, etc., often growing 50 feet or more high. One of the real gains of the pergola is that it allows of the noble growth of all the beautiful climbing plants in a far more natural way than the old crucifixion on walls with nails and shreds.

Shortia galacifolia.—I do not know whether of this popular North Carolina subject there are forms which rarely give good leaf colour, no matter what the circumstances attending its cultivation, but it would appear that some plants colour only slightly, while others are of exceptional brilliance and very striking during autumn and winter. Some growers, I find, regard exceptional leaf brilliance as a decadent sign, others, taking an opposite view and approving of it, regard it as the product of full exposure. I have it, however, at the moment brilliantly coloured and in the best of health in a position where it has hardly experienced a gleam of sunshine this year. The plants are in a mixture of about equal parts peat and leaf-

mould, with a little sand and finely-powdered brick, the last being added from a personal fancy I have for the material rather than as a considered necessity. Anyway, the plants have done well in it, and success is the best test. By the side of the above and under precisely similar conditions *S. uniflora grandiflora*, from Japan, while in excellent health, has pale green leaves. If anything, this latter is the more vigorous, though I do not remember noticing that at any time it colours so well as the first-named. In the circumstances I am looking forward with interest to their flowering next spring. What is the experience of others? One prefers flower to leaf beauty, naturally, in such a plant, but if, while retaining health, both may be found possible, a dual pleasure will be afforded to many.—E. H. JENKINS.

Cotoneaster frigidus.—I quite agree with all that Mr. Jenkins writes regarding the attractiveness of this species of *Cotoneaster*. I saw a number of trees and bushes of it heavily laden with fruit in a plantation bordering the public road at Alsop-en-le-Dale, in Derbyshire, in the latter part of September. At the time I was puzzled to know what it could be, but found out a week later, when in London, that it was the above-named species of *Cotoneaster*. As seen growing, I was greatly impressed with its beauty, and then and there made a mental note to include it when the time arrived for the planting of ornamental shrubs.—A. W.

A note from Tipperary.—In spite of an excessively wet October and November, an unusual number of shrubs was in blossom late in the year. On November 20th the following kinds were in flower:—*Spiraeas*, *Escallonias* (several), *Erica codonodes*, *St. Dabec's Heath*, *Fuchsias*, *Laurustinus*, *Salvia Grahams*, *Sutherlandia frutescens*, *Abutilon vexillarium*, *Solanum jasminoides*, *Myrtle*, *Ceanothus Indigo*, *Veronicas*, *Jasminum nudiflorum*, *Hydrangeas*, *Tree Mallows*, *Eupatorium Weinmannianum*, *Coronilla glauca*, *Berberidopsis corallina*, *Abelia floribunda*, *Medicago arborea*, *Pittosporum Tobira*, *Buddleia asiatica*, *Leptospermum bullatum*.—P. H., *Co. Tipperary*.

Carnation Beacon.—For those who keep their eyes open there are object-lessons not to be ignored in the way those who obtain their living—or a portion of it, at least—out of growing Carnations cling to well-tried varieties. In the above-named variety one of these object-lessons is obvious. As a scarlet "it takes some beating" the largest growers say, and the statement is made on the strength of an experience which is nothing if not progressive. Conservativeness as applied to flower growing has no standing, every grower being out for the best and most productive sorts of the colours chiefly in demand. And the sorts most approved by the florists should be good enough for all so far as standard varieties go. It is these facts which bring Beacon to-day, as it has been for several years past, into the category of a virtually indispensable scarlet. It is not that it is perfect—that *Carnation* has yet to be raised—but that it possesses many good qualities—rich and consistent colour, that continuity of growth which is the forerunner of perpetual flowering, and, while not of the largest size, a cropper of no small importance. Loss of crop owing to blind or slaty-coloured flowers is not large in Beacon, and the less where intelligent cultivation prevails. Beacon may still be improved so far as strength of stem and size of bloom go, and with these, wedded to the variety as we know it to-day, a scarlet approximating to the ideal would be very near at hand.—E. H. JENKINS.

FRUIT.

PLANTING FRUIT-TREES.

TREES of all sorts will now be in the best condition for moving, for, with their roots lifted in good condition and transferred to fresh soil without being allowed to dry up in the interval, they will immediately begin to push forth fibrous roots that will enable the trees to become at least semi-established before winter has set in. Trees planted in autumn, and well looked after as regards mulching and watering later on, if need be, will hardly feel the check of removal and may be allowed to carry a crop next year, a thing that it would be unwise to allow winter or spring planted trees to do. Planting from home-raised stock need not be further delayed, and the getting of these out of hand will help matters forward considerably and leave all available labour open to deal with bought-in stock in an expeditious manner when it arrives.

In taking out the stations for planting,

ramming the soil immediately round the roots with a rammer or from treading it. These operations should be left until sufficient soil to protect the roots from injury by direct contact with rammer or boot has been added. If the roots are too plentiful to allow the soil to be worked in among them in a satisfactory manner by the hand, then by all means use water to wash it in, and leave the filling up and finishing off until another day. Of course, a little water is of no use. It should be a thorough soaking, sufficient to melt the particles of soil and cause them to settle down close together.

PEAR PASSE COLMAR.

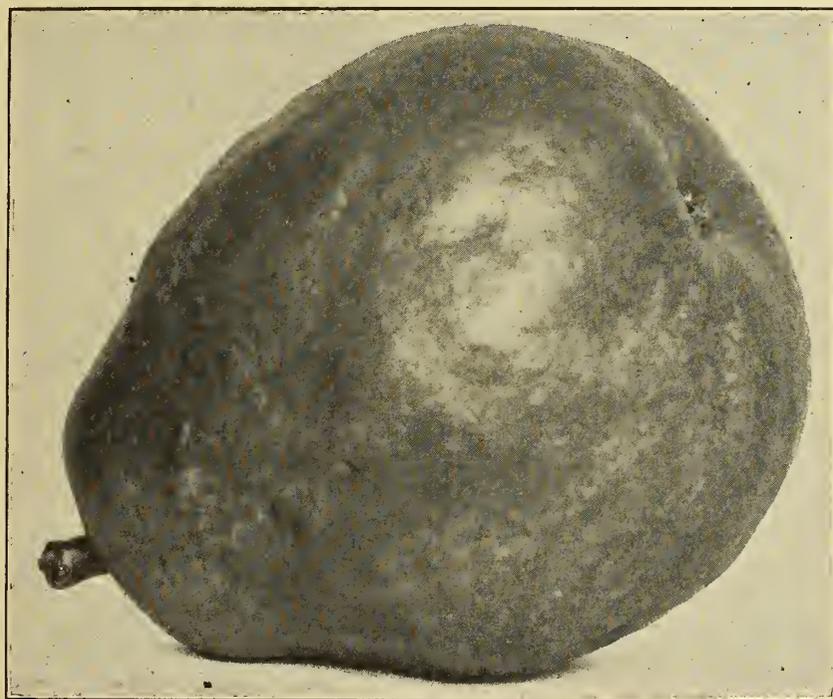
This Pear varies in quality, this largely depending on the soil in which the trees are planted, the best fruits coming from those on a warm soil. In the Royal Horticultural Society's gardens at Chiswick this Pear was grown as a pyramid, and also cordon-trained on a wall. In both cases the quality was excellent, due, in great measure, to the soil and also the fact that

variably succeeding, and upon some trees he has worked as many as five different varieties. Nor does Mr. Halliday confine himself to Apples. Standard Plums, such as Coe's Golden Drop and Jefferson, claim his attention, and in his modest glasshouse he grows the most wonderful mixture of plants I have ever seen. Cacti, Hydrangeas, Ferns—mostly raised from spores—Begonias, Chrysanthemums, Pelargoniums, and Fuchsias all find a place. On the wall—a lean-to structure—is a fine piece of Maréchal Niel Rose, while on the glass front there are a couple of Black Hamburgh Vines, which, I was told, ripened a fairly good crop. The mixture, no doubt, would appal the orthodox gardener, but every plant in the house was clean, and the picture of health.—W. McG.

NOTES ON PRUNING.

THERE is no necessity to wait until the leaves have fallen ere a start be made, for by the time these lines are in print all foliage will be showing signs that it has performed its necessary task. While advocating an early start, a little discretion must be used by the pruner in attending to those trees that lose their foliage first, and getting the work forward before too severe weather sets in. Those trees occupying north sites should be the first to claim attention. The reason for attending to north walls first has a twofold object—the work can be more expeditiously carried out, and the men engaged in the operation while the weather remains fairly mild are more comfortable. Here will be found Morello Cherries, Gooseberries, and oftentimes Currants, especially red, all of which can now be pruned and retrained if thought necessary. Taking Cherries, many unnailed the trees, and as these often lose a branch it is necessary to do so. This will give an opportunity to thoroughly cleanse the tree as well as the wall. The latter, if it cannot be fresh coloured, should have the garden engine or the hose laid on, and be well washed down after old ties, shreds, etc., are removed. Next see to the trees, and either thoroughly syringe or paint them with an insecticide strong enough to destroy aphides, red-spider, or any other enemy of the host a gardener has to grapple with, before attempting to replace the shoots. As regards pruning this Cherry, it is known by all who have had a few years' experience in the general cultivation of fruit, that it bears principally upon wood made this season, so that enough shoots must be retained for next year's supply of blossom, if not of fruit. Are not Morellos usually trained far too thickly? At any rate, I think that they are, and that much better crops would be had if more space were allowed between the current year's wood. The trainer should bear in mind when nailing in the shoots to the wall that many more will require space in July or early August, therefore 4 inches should intervene between each young growth, so that one at its base can be retained for the following season's supply, as above stated. These said shoots should be laid in their full length, and unless there is a scarcity of young wood it may be shortened to where required. Fan-shape is the best mode of training all stone fruits, as it is much easier to replace a branch should one die off.

It has been said the Cherry bears chiefly on the preceding year's wood, but it also bears upon spur growths, and it must be the pruner's aim to encourage a moderate number (not enough to crowd each other), or the older wood presents a naked appearance. Therefore, all young shoots, evenly distributed and not required for training in, should be cut back to within



Pear Passe Colmar.

make sure that the bottom is made firm so that there shall be little or no sinking, and allow for each tree only sufficient depth to admit the roots so that the upper ones may be quite near the surface and, above all, see that the stem is buried no lower than it has been previously. On heavy and damp soils elevate each tree on a slight mound, as the depressions between the mounds act as surface-drains and the feeding roots are kept in a healthier state than they would be if planted on the level. On the other hand, in very light soils any such elevation would be a mistake, as in dry seasons the roots would get dried up. If the trees to be planted are of a size to make staking necessary, the stakes should be driven down into the holes before the trees are planted, as this will prevent all fear of driving the stake on to any of the roots and injuring them. Cut away all damaged portions of roots, severing them at the point of junction with a branch root wherever possible, then the cut surface will heal over instead of dying back. Work some of the best soil well in among the roots, so that no hollows or badly filled crevices may be left, but refrain from

the trees when the fruits were swelling were freely mulched with manure and abundance of water given. The fruits are green at first, but as they ripen they take on a dull lemon colour with a tinge of brownish-red on the sunny side. Its season is from November to the middle of December, though if trees are grown in different aspects fruits may be had up to the end of the year. The flesh is yellowish, very juicy and melting. The growth is moderate and the tree can thus be depended on for regularity of bearing. T.

An amateur's garden.—It was well said recently, by a writer in GARDENING ILLUSTRATED, that size in a garden is not everything, and quite as much pleasure may be had from a moderate area well attended to as from a larger extent of ground cultivated in a haphazard way. This was borne in on me the other day during a visit to Mr. John Halliday's garden at Greystone, Kirkcudbright. Mr. Halliday is a most enthusiastic gardener, and is more especially interested in Apples—particularly in grafting. His success is wonderful, every graft which he uses in-

two eyes of their origin, at the same time cutting away altogether any that have got far away from the surface of the wall, for they not only look unsightly, but they do not, as a rule, set their fruit so well as when close in. Gooseberries, also Currants, need like treatment, as both fruit principally upon spur growth, though a young shoot for extension, or to take the place of an exhausted branch, must occasionally be laid in, as after a few years the old ones produce small fruit, and get in a similar plight to the Cherry. Many of our best kitchen Plums also occupy northern positions, and may receive attention afterwards, these fruiting mostly on the spurs. No reason can, however, be assigned why a convenient shoot here and there should not be laid in where space affords or where an old branch can be covered, so that few bare places on the wall can be noted. A. G.

WATERING FRUIT-TREES IN AUTUMN.

If there is one point on which growers agree more than on another it is on the importance of the thorough ripening of the wood in autumn. It is a good omen to see the leaves change to a rich golden colour and drop off naturally, leaving plump buds behind. Drying off or forcing to rest from lack of moisture is a most dangerous proceeding, and many a crop of fruit is thus wrecked, even while yet in its embryo state. The roots of fruit-trees are never wholly at rest, and can no more be safely left without a supply of soluble food than can any living thing without feeling its effects, and not only feeling them, but showing them the following season. Let anyone take the trouble to examine fruit-tree borders either under glass or in the open, in the months of August and September, when all the roots have been actively draining them of moisture, and when they have been subjected to the still larger drain by evaporation; the work of watering must have been more attentively carried out than I have generally found it to be, if a thorough good deluging would not prove more conducive to the proper ripening of the wood and plumping up of the buds than any amount of drying off. If there be green or immature wood in any case, I have generally found it in trees that have been checked by drought from perfecting their growth until late in the season, when the moisture from autumn rains has started them afresh, clearly indicating that growth was only arrested, but not completed.

If amateurs would only consider that fruit-trees under glass are solely dependent on the supplies of moisture given them by means of the hose or the watering-pot, and that keeping their trees on what is called the "dry side" is dangerous at any time, we should have fewer complaints of Peach buds falling off and the buds of Vines refusing to break regularly. These things only occur when the rains are intercepted by a glass roof, and where no means are taken to supply the deficiency of moisture. This is the time when the roots of fruit-trees, bushes, or whatever other term they may go by are in active search of food to fill up the fruit buds of another year. Do not, therefore, imagine that, because the old leaves are putting on their autumnal tints, the roots are dormant; for on examination they will be found more active than when the blossom is expanding in spring. Therefore, to curtail their supply of root moisture is certain to throw the whole constitution of the tree out of gear. Let anyone take the trouble to examine a Gooseberry or Currant-bush at this time and note how the fruit buds are swelling up. But although the autumn

rains are filling the buds, ready for the first breath of spring to awaken them into action, there is no fear of their anticipating that season unless they have been arrested in growth through lack of moisture. Those who have fruit-tree borders would not think of keeping them on the "dry side" when the crop was swelling; and yet next year's crop is equally dependent on a supply of root moisture now, even though there is not much visible sign of activity. T.

GOOSEBERRIES FOR HEDGES.

THOSE whose gardens run by the side of roads are often troubled by fowls, dogs, and the like if the hedges have been neglected in the early stages of growth or are composed of unsuitable plants. In this neighbourhood, for instance, there would seem to have been a craze for planting Elder—certainly not a fence plant. Having had experience of this, and not caring to go to the expense of uprooting the Elder, I decided to fill the gaps on the inner side with some strong, healthy, young Gooseberry plants. The ground—a good, heavy loam—is, naturally, well adapted for fruit-trees, so it was only necessary to turn it up deeply and add a little good manure to give the trees a start and ensure plenty of annual growth. A few iron rods were inserted at intervals and some of the shoots fastened from the ground upwards, crossing them in different directions so as to secure something of a fence from the start. The hedge now, at the expiration of three seasons' growth, presents quite an impenetrable barrier to anything outside, and I am now drawing some of the stronger shoots upwards and lacing them across other rods so as to have an inner hedge of Gooseberries about 4 feet in height. Of course, there are occasional places where toll is laid on them from the outside, but this is only a trifling matter, and no damage is effected from the hedge standpoint.

When growing Gooseberries in this way one does not get or expect high-class fruit, but an abundant supply is provided for picking green and bottling. Those who care to experiment on a Gooseberry hedge should choose strong-growing kinds of fairly erect as opposed to a drooping habit, especially if a height of 3 feet or 4 feet of hedge is required. A still more impenetrable thicket can be obtained (if one can afford to wait for it) by inserting cuttings in the gaps, leaving all the buds intact, although with a lot of wood springing from the base the top growth is, naturally, not so luxuriant, and probably it is best to start with young, clean-stemmed trees.

Hardwick.

E. B. S.

STRAWBERRIES.

WITH the exception of those recently planted, all beds should be manured the first opportunity, and if, when this is done, the ground does not happen to be frozen sufficiently firm to bear the weight of the barrows without cutting into the soil, boards should be laid between the rows to run them on. If very weedy, the ground should be hoed and the weeds raked off beforehand, but if it is fairly clean the few weeds that are present can be turned in when pointing takes place after spreading the manure. The manure for this purpose should be the best obtainable, and the quantity to apply governed by the age of the plants and the quality of the soil. As a rule, two-year-old plants and upwards are generally benefited by being given a good dressing, which, if applied now and just buried beneath the surface, quickly becomes available as plant food. Deep digging is not advocated, as great numbers of roots are destroyed as a result, but if the soil is

moved to a depth of 3 inches or 4 inches only and placed on top of the manure as the pointing proceeds no harm in this direction will ensue. If manure cannot be afforded, artificials should be used instead. These are best applied early in the year. If means are at command for making a good quantity of wood ashes by the charring of refuse wood, preferably that in a green state, these may be applied at once, and, on account of the potash they contain, do an infinite amount of good. This, though a rough-and-ready method, is one way of imparting potash to the soil now that it is unprocurable. Plants set out last August and September should be looked over, and if any have been lifted by frost, make them firm again by treading the soil well round the collars. Remove weeds and late-pushed-out runners at the same time. K. P.

Root-pruning fruit-trees.—There can be no doubt but that root-pruning is a very great help to fertility in the case of trees whose roots have got out of bounds and, possibly, into the crude and ungenial subsoil. The well-doing of trees is not regulated by the immense spread of root which some of them have, but by the number of feeding roots which can be produced in a given space where food is plentiful, and root-pruning is one of the greatest possible aids in the production of such roots. Some people are very particular to carefully lift and relay every root that can possibly be saved, but it has been proved over and over again that, provided root-pruning be done properly—i.e., each root severed with a clean cut to a point close to the junction of a less root and not too close home to the bole of the tree—the loss of a portion of each root is immaterial, and the work is greatly facilitated by getting rid of the trouble of relaying the uncovered portions. In this matter I make a great distinction between the trees to be simply root-pruned and those to be replanted. In the latter case I carefully try and preserve every possible bit of root, as I know that all will be required to assist in re-establishing the tree, but the case is very different where no lifting is intended, as the roots are then ready to produce feeders, and plenty of them, immediately. When root-pruning, a good broad trench should be taken out round the tree at a distance from the bole corresponding with the spread of the branches, or nearly so, and if there is a suspicion of gross growth and unfruitfulness proceeding from one or more tap-roots, the ball should be undermined and such roots severed, for if they are allowed to remain the severance of any spreading roots will be of little avail in inducing a more fruitful tendency. When refilling the trench be careful to incorporate with the soil a plentiful supply of mortar rubbish and burnt earth or wood-ashes. If some good turfy loam can be added, so much the better, but whatever may be used should be well trodden or rammed home, as firmness in fruit borders is a very desirable condition. If on examination the subsoil is found to get wet or sour, the excavation made should go to a depth of from 30 inches to 36 inches and the bottom be filled up with brick-rubble several inches in depth before replacing the soil.—T.

The folly of growing Crab Apples.—One cannot too often repeat the statement that it is folly to grow sour, ill-conditioned Crabs when it is possible to produce really good, wholesome Apples. Some of the best dietetic experts condemn manufactured sugar as unwholesome. Now, we may not object to a little of it, but the quantities that have to be added to these Crabs at once condemn their use as a rational food. People tell us that the blacks who chew

sugar-cane extensively are very healthy, but in chewing the cane they get all the juice, which contains many elements absent from table sugar. We may be quite sure that it is best to get our sugar as it is naturally combined in first-class fruit. Again, where is the economy in buying or

TREES AND SHRUBS.

THE PORTUGUESE HEATH.

We have so often written about this beautiful Heath that, perhaps, it is unnecessary to say much more about it now, save that

the flowers separates it from most other things of the season. It is, indeed, a precious gain to our island garden flora.

W.

TREES AND SHRUBS CERTIFICATED IN 1916.

The different subjects so honoured show a considerable increase on the preceding year, when no first-class certificates were given and only 18 awards of merit. In 1916 five first-class certificates and 22 awards of merit were made by the Floral Committee. They were as follows:—

ABIES BRACTEATA.—This Silver Fir is a native of California, from whence it was introduced by William Lobb when travelling in North America. It forms a very handsome tree, but, unfortunately, it is particularly liable to be injured by spring frosts. The specific name is derived from the long terminations of the bracts, which give to the cones quite a distinct appearance. First-class Certificate, January 11th.

BERBERIS JAPONICA BEALEI.—A well-known member of the pinnate-leaved section of Barberries, which is often regarded as a true species under the name of *B. Bealei*. It is somewhat more tender than the typical *B. japonica*, and the lemon-yellow blossoms are borne in spring. Award of Merit, February 8th.

BERBERIS JAPONICA HYEMALIS.—Remarkable from the fact that it flowers from late autumn till the spring, a very desirable feature. Award of Merit, February 8th.

BERBERIS RUBROSTILLA.—An accidental hybrid, which originated in the Wisley Gardens. Its general appearance would suggest *B. Wilsonae* as one of the parents. The new comer forms a graceful-habited, deciduous shrub, whose most attractive stage is when laden with its brilliant coral-red fruits. The entire plant is spiny. First-class Certificate, November 7th.

BERBERIS SARGENTIANA.—A beautiful evergreen species, native of China. Its nearest affinity is with the Himalayan *B. Wallichiana*. Though an evergreen, most of the leaves in autumn take on various shades of red and bronze, though some remain quite green. The straw-coloured spines form a very notable feature, but the small, blackish-purple berries are not particularly attractive. It was given an Award of Merit in 1915. First-class Certificate, November 7th.

CLEMATIS CRIMSON KING.—The flowers of this garden variety are, when first expanded, of a kind of crimson tint, but change to more of a wine-red. Award of Merit, May 23rd.

COTONEASTER HORIZONTALIS PURPUSILLA.—A variety of the well-known *C. horizontalis*, which differs from the type principally in its smaller leaves. Award of Merit, January 11th.

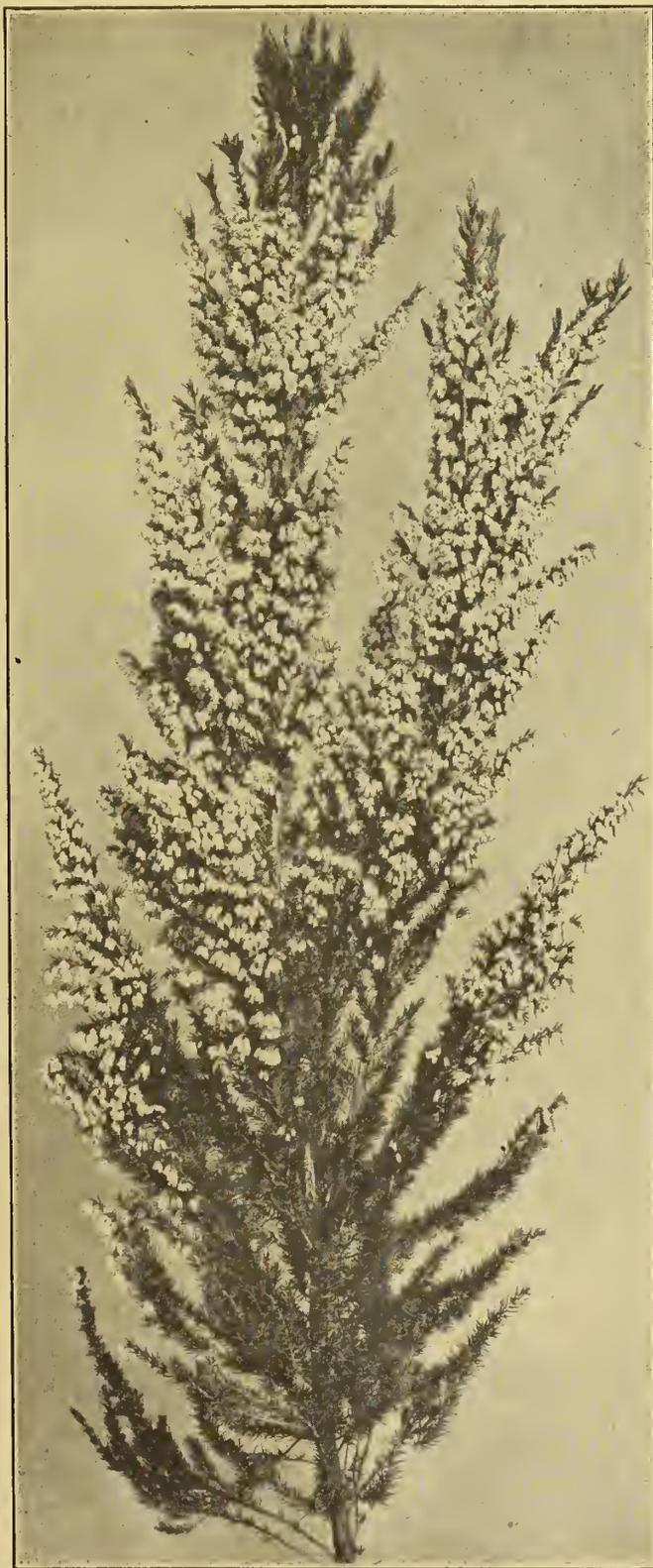
CUPRESSUS LAWSONIANA POTENSI.—A seedling variety of Lawson's Cypress. The new-comer, which is of a pleasing glaucous hue, is of a columnar habit of growth. Award of Merit, December 5th.

DAPHNE CNEORUM VERLOI.—This variety of the Garland-flower has longer leaves than the species, while the blossoms are borne in loose clusters. It is also said to be somewhat later in flowering than the type. Award of Merit, May 16th.

DEUTZIA CRENATA MAGNIFICA.—One of the hybrids raised by M. Lemoine, of Nancy, between *D. crenata* and *D. Vilmorenae*. The flowers of the new-comer are double, pure white, and borne in great profusion. Award of Merit, June 20th.

ESCALONIA DONARD SEEDLING.—A very promising Escallonia, obtained by the crossing of *E. Philippiana* and *E. Langleyensis*. It has large bluish-coloured flowers. Award of Merit, July 4th.

EUONYMUS LATIFOLIUS.—This is a well-



Spray of the Portuguese Heath.

growing fruit that one cannot eat without first buying an equal weight of sugar to enable us to tolerate it? As I have said before, why not grow our own sugar in the fruit itself? I am quite sure that natural methods are the best.—W. J. FARMER in *The Garden*.

this mild season has induced in it a charming way of beginning to flower early in the winter. In cold years it does not begin to flower until early in the spring. In some parts of our islands it is so happy that it naturalises itself, as in Dorset, and in my own case I find it does so. The blush on

known shrub that has been grown in this country for nearly a couple of centuries. It is a native of Europe, and when in good condition forms quite a small tree. Nearly related to our common Spindle-tree, it, like that well-known kind, depends for its beauty upon its bright rosy-red capsules and orange-coloured fruits. Award of Merit, September 26th.

LEPTOSPERMUM DONARD BEAUTY.—A bright rose-coloured flower of the Nicholli group, belonging to *L. scoparium*. Award of Merit, July 6th.

LILAC PRESIDENT FALLIERES.—A double-flowered variety raised by M. Lemoine, of Nancy. The flowers are large and of a soft lilac tint. Award of Merit, May 23rd.

LILAC REAUMUR.—Another of M. Lemoine's raising, but with single dark carmine flowers. Award of Merit, May 23rd.

LOMATIA FERRUGINEA.—A very ornamental evergreen shrub belonging to the Protea family. It forms a dense bush, which, under favourable conditions, will attain a height of 10 feet to 12 feet. The much divided leaves give it quite a Fern-like character, while the flowers, borne in the summer, are rosy-red and white, suggesting those of some of the Grevillias. It is a native of Chili, and, like many shrubs from that region, is seen at its best only in the milder parts of the British Isles. A liberal amount of atmospheric moisture suits it best. Also known as *L. piunatifolia*. Award of Merit, August 1st.

OLEARIA SEMI-DENTATA.—A very striking member of the New Zealand Daisy-trees. Like the preceding, it needs a mild locality. The leaves are hoary on the undersides, and the large flower-heads are of a pale-mauve tint, with a deeper centre. Award of Merit, June 20th.

PYRUS MALUS ALDENHAMENSIS.—A very showy *Pyrus* that may have been obtained from *P. floribunda* and *P. Niedzwetzkyana*. It is very free-flowering, and the blossoms are of a rich pink colour. Award of Merit, May 16th.

PYRUS VILMORINI.—A very distinct and attractive member of the *Sorbus* group. It forms a shrub or small tree, remarkable for its small, handsomely-divided leaves and clusters of pure-white blossoms. The fruits, too, are very distinct, in colour being of a pale rosy-red tint. It is a native of Western China, and has proved to be quite hardy. Award of Merit, September 26th.

RHODODENDRON BAGSHOT RUBY.—A very showy variety that bears in great profusion compact trusses of rich ruby-red flowers. Award of Merit, May 23rd.

RHODODENDRON DONALD WATERER.—The flowers of this are pinkish-white, with a deeper coloured border. The inside of the flower is dotted on the upper part with brownish yellow. Award of Merit, June 6th.

RHODODENDRON DIPHOLE PINK.—A variety with clear rose-pink blossoms, with yellowish dots on the upper petal. Award of Merit, June 6th.

RHODODENDRON DUCHESS OF TECK.—This produces large clusters of pale rose-coloured flowers edged with a deeper tint. Award of Merit, June 6th.

RIBES CRUENTUM.—One of the Californian Gooseberries with Fuchsia-like blossoms, the calyx crimson and the petals white. It forms a deciduous spiny bush 3 feet to 6 feet high. Award of Merit, May 2nd.

ROSA MOYESI.—A beautiful species from Western China that forms a large bush, whose flowers are of a distinct shade of rich red, while the scarlet, bottle-shaped fruits also form a striking feature. It received an Award of Merit some time ago. First-class Certificate, June 20th.

SPHERALCEA CANESCENS.—A sub-shrub belonging to the Mallow family, with hoary

leaves, and rich orange coloured flowers. Suitable only for the milder districts. Award of Merit, June 20th.

TRICUSPIDARIA LANCEOLATA.—One of the most striking of evergreen shrubs. It was first introduced from Chili in 1848, and is seen at its best in mild districts with plenty of atmospheric moisture. The rich-crimson, urn-shaped blossoms hang suspended by long stalks. Known also as *Tricuspidaria dependens*, *Tricuspidaria hexapetala*, and *Crinodendron Hookerianum*. First-class Certificate, June 20th.

VIBURNUM DASYANTHUM.—A deciduous species from China that forms a bold-growing bush. The most notable feature is the autumnal crop of bright-red berries. Award of Merit, October 10th.

W. T.

CORONILLAS.

CORONILLA GLAUCA is so well known and so commonly grown that there is no need to say anything about it, but there are two others closely allied that are worth growing and, generally speaking, very little known.

C. VALENTINA is a particularly useful and cheerful winter-flowering shrub on the Riviera, as it blooms all through the winter, beginning in early November and reaching its fullest beauty in the month of February. It is more slender in growth than *C. glauca* and makes long shoots that bend down with the weight of the mass of flowers. While perfectly hardy on a dry bank, whether in sun or shade, it is a trifle less hardy than *C. glauca*. It seeds itself so freely that it is well to pull up the older bushes that have grown lanky, to make room for the young ones. *C. glauca*, on the other hand, does not naturalise itself in the same way. In the end of February, when *C. Valentina* is covered with seed-pods, it is necessary, if you wish to keep the older bushes in health, to cut it back freely and spare it the exhaustion of excessive seed-bearing.

C. CORONATA begins to flower in March and is the most powerfully scented of the three. This is in some ways the finest and most vigorous of all. Unlike *C. glauca*, whose habit is rather close and needs staking when in full flower, *C. coronata* makes a bold and vigorous growth, quite stiff and sturdy in stem, and with rather solid deep green leaves. It hybridises freely with *C. Valentina* when they happen to coincide in their flowering period, while I have never noticed traces of variation in *C. glauca* seedlings. *C. coronata* makes by far the finest bush of the three; I have seen it 7 feet or more in height, but then it is apt to get overweighted with its flowers after heavy spring storms of rain. On a warm April day or towards the end of March the whole air is filled with the powerful scent of this plant, which delights in the semi-shelter of an open wood in this climate, but it is much hardier and more robust than *C. glauca* and should survive ordinary seasons in most English gardens, where, of course, it will not bloom till May or June, being the last of the trio in time of flowering.

To sum up the comparative merits of the three, I should say that *C. Valentina* is the best pot plant, as it flowers so freely all through the winter; and as it stands pruning so well, its rather lanky growth is no objection. Its bright green leaves and stems are always attractive, but it has little or no scent unless it has a touch of *C. coronata* in its parentage. *C. glauca* is the least charming of the set. *C. coronata* is much the finest shrub for outdoors or for a big pot. It would not be satisfactory in a stunted and starved condition. Its bold habit, however, and powerful perfume make it very desirable for corridors or big

cold houses, and I feel sure that in the South of England it is a better shrub for outdoor gardening than the better-known *C. glauca*.—E. H. WOODALL in *The Garden*.

PRESERVING TIMBER BY CHARRING.

THERE can be no doubt as to the beneficial effect of charring Oak posts before placing them in the ground. In renewing, on the Holwood Estate in Kent, an Oak boundary fence that had been erected for seventy-three years, it was found that the majority of the old posts, or rather that portion of each that had been charred, was perfectly sound. Probably the open, porous soil, as well as the charring, had something to do with the condition of the posts. Be that as it may, the fence had cost little in the way of repairs for just on three-quarters of a century. To the last the charred part of the posts, which extended to about 1 foot above and 3 feet beneath the ground, was perfectly sound, the remaining portions being so decayed that they would not carry the horizontal bars on which the upright pales were nailed. The charring is readily and cheaply carried out as the fence is being erected by lighting a fire of wood and placing that portion of each post which is to be treated over the flame. This is easily carried out by supporting the ends of each post on a stone or block of wood at about 2 feet from the ground, the fire being made of old posts and rails. The wood should not be merely surface-scorched, but thoroughly burnt or charred to fully half an inch in depth. This forces the tannin and other products inwards and forms an outer crust or covering to the timber, thus effectually sealing up the inner layers of wood and preventing the ingress of moisture as well as the attacks of insects and fungus. Where charring is most beneficial is a foot above and entirely below ground-level, which in most cases will be from 3 feet to 4 feet in length of each post, this being the part that is most readily affected by atmospheric and other changes. The lifetime of the timber may be still further increased by dipping the burnt end of each post in a barrel of tar. As both the charring and tarring can be expeditiously and cheaply carried out as the erection of the fence proceeds, there is no reason why this simple method of prolonging the life of Oak fencing should not be generally resorted to. The cost of charring and tarring works out at 2s. 6d. per 100 posts. A. D. W.

The trailing *Arbutus* (*Epigaea repens*), although at home a common native plant in cool woods throughout the north and north-eastern States, usually does not do well when attempts are made to take it from its natural surroundings and place it under garden conditions. Unlike most ericaceous plants, it grows in areas where lime is present in the soil, for the writer has seen it thriving over large areas of limestone regions. It is also common in regions where there is no lime in the soil. Usually it is found at its best in sandy loam, on a gravelly, well-drained subsoil, under partial shade, with its roots penetrating a cover of leaf-soil or humus. The only thing to do is to try and imitate these conditions. In removing it from its native haunts dense tufts of low-growing and apparently young plants should be selected. These should be lifted intact and to such a depth that the roots are not in the least disturbed and placed in conditions in the home grounds or garden exactly similar to those from which they were taken. To place the plants in ordinary herbaceous borders and cultivate them in the same way as *Columbines*, *Campanulas*, *Iris*es, etc., certainly means failure. If there is

not a cool "woody" corner on the grounds, select some sloping corner as near as possible to these conditions, well drained, cool, and partially shaded. They must not be choked out with Grass or coarse weeds. In dry weather water the plants occasionally. In winter give a little mulching of leaves.—*American Florist*.

THE RED-DROP BARBERRY

(*BERBERIS RUBROSTILLA*).

THIS graceful and very beautiful form received a first-class certificate from the Royal Horticultural Society on November 7th last, and probably no member of the genus has better deserved that honour. Of more or less erect carriage and freely branched in its upper parts, it is of exceptional beauty late in the year when full of brilliant coral-red fruits, which dangle on short foot-stalks from the undersides of the branches. Overcrowding of the fruit clusters is not present; instead, there is an easy distribution of them throughout the greater portion of the arching branches, which renders the plant of considerable decorative value. The spiny character of the new comer, which is, presumably, of hybrid origin, should guard the berries from the attacks of birds. It is summer-leaving, and was sent up from

30 feet high; here it is about half that height with a considerable spread. During June and July pendent inflorescences up to 9 inches long of white flowers, which are followed by curious hairy fruits, are produced. It requires a sunny position, and thrives in loamy soil, forming a good shrub for gardens where uncommon subjects are desired.—D.

Cotoneaster horizontalis.—The berries of *Cotoneaster horizontalis* are still bright. In few years does this *Cotoneaster* fail to set its fruits profusely. At present they are as brilliant as those of the Holly, and give a bright little bit of colouring highly acceptable at this time of the year.—S. ARNOTT.

PLANTS AND FLOWERS.

INDOOR PLANTS.

STOVE AND GREENHOUSE PLANTS CERTIFICATED IN 1916.

DURING the year no first-class certificates were given to stove and greenhouse plants, but the following, excluding *Chrysanthemums*, received Awards of Merit:—

AURICULA EDITH.—A distinct variety, whose flowers are of a rich lilac-purple colour with a yellow centre. May 16th.

BEGONIA MRS. C. F. LANGDON.—A bril-

EUCHARIS LAWRENCEE.—The flowers of this are large and bold, while the habit of the plant is robust. It is said to be the result of a cross between *E. Richardiana* and *E. Burfordensis*. January 25th.

KENNEDYA ROSEA.—An old but by no means well-known member of this genus of Australian climbing plants. In this species the flowers are white, or nearly so, with a rosy shade. February 22nd.

LACHENALIA ROSEMARY.—This is a striking garden variety of an orange-red colour, marked with green and crimson. February 8th.

NERINE ROTHERSIDE.—A welcome addition to this desirable class of autumn-flowering bulbous plants. The flowers are of a clear, rich-salmon colour, and the crinkled segments are sprinkled with glittering coronations. October 10th.

PELARGONIUM GENERAL JOFFRE.—Said to be a sport from the well-known King of Denmark. The semi-double salmon-coloured flowers are shaded with orange-scarlet. October 10th.

PRIMULA MALACOIDES PRINCE ALBERT.—A particularly bold, richly-coloured variety of this universally-grown *Primula*. February 22nd.

PRIMULA ZULEIKA DOBSON.—Said to be the result of crossing *Primula viscosa* with a variety of show *Auricula*. The new-comer has very large bluish-purple coloured flowers, with a conspicuous white eye. April 11th.

SPIRÆA PRINCESS MARY.—A very fine type of pink-flowered *Spiræa* of the Queen Alexandra class. May 10th.

STREPTOCARPUS ROSE QUEEN.—The large rose-coloured blossoms are freely borne. It represents a superior strain. July 4th.

STREPTOCARPUS SOUTHGATE WHITE.—Equally beautiful as the preceding, but with white flowers. July 4th. W. T.

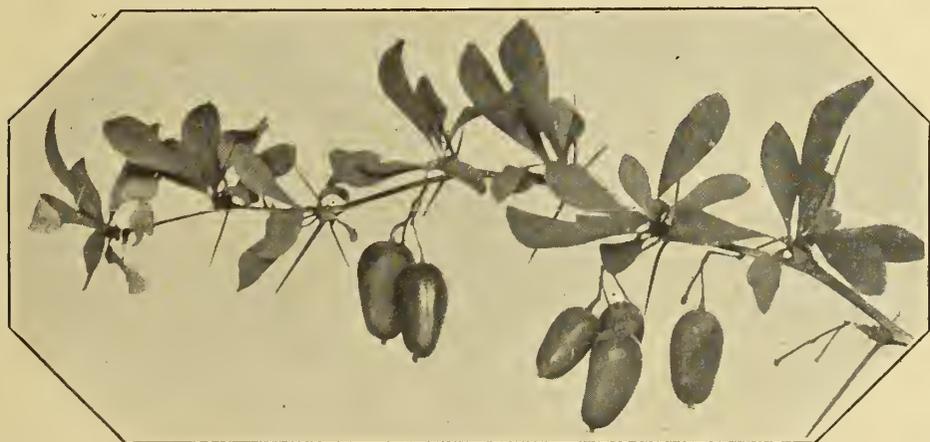
NOTES AND REPLIES.

Begonias unhealthy.—Will you please let me know what is wrong with these leaves of *Begonia Gloire de Lorraine*? My plants are the same each year.—SALOPIAN.

[The trouble with your *Begonias* is, undoubtedly, caused by the plants being grown in too close and moisture-laden an atmosphere. Owing to this the leaves are extremely succulent and apt to decay at the edges. In order to retain the foliage in good condition this *Begonia* needs a light buoyant atmosphere, free from draughts, and a temperature at this season of 55 degs. to 65 degs. At the same time, the structure in which the plants are must not be too dry, otherwise the *Begonia* mite and thrips will be liable to put in an appearance. These may be kept under by vaporising with nicotine. The appearance of the leaves sent would suggest that the plants may have had rather an excess of stimulants, but, of course, we cannot say definitely. A few words as to the treatment the plants have received would have been of great assistance to us towards determining the cause of the trouble.]

Habrothamnus, treatment of.—Can you tell me how to treat some plants of *Habrothamnus* in order to induce them to flower? I raised them from seed, and they are now three years or four years old, fine-looking plants, some 3 feet or 4 feet high.—W. M. CROWFOOT.

[The *Habrothamnuses* are naturally of a loose, rambling habit of growth, and the most satisfactory way of inducing them to flower will be to train them up the wall or supporting pillars of the greenhouse. It is very essential that they get a reasonable amount of light and sunshine. If they can be planted out in a small border, so much the better. Provided it is necessary to keep them in pots, they should in the spring have a fairly liberal shift, using



Berried shoot of Berberis rubrostilla.

the Society's Wisley Gardens, where it originated.

—This Barberry was brought to public notice on November 7th of the present year, when fruiting specimens were exhibited at the fortnightly meeting of the Royal Horticultural Society, the Floral Committee awarding the plant a first-class certificate. It originated in the gardens of the Royal Horticultural Society at Wisley as a chance hybrid from *Berberis Wilsonæ* and, it is thought, *B. concinna*. In habit it forms a shapely, well-branched bush, the branches thickly beset with slender spines nearly an inch long. The yellow flowers in spring are followed by small clusters of rich red fruits, about four being borne together. Individual fruits are about half an inch long and very similar in shape to those of *B. concinna*. When exhibited early in November they were at their best.—D.

NOTES AND REPLIES.

Pterostyrax hispidum.—The genus *Pterostyrax* is allied to *Halesia*, and the species are sometimes included with the *Halesias*, though the two families are abundantly distinct. The plant under notice, a large-growing deciduous shrub or small tree, native of China and Japan, has been in cultivation here since 1875. In its native country it sometimes grows upwards of

liant deep orange coloured flower. It belongs to the Rose type of double varieties. July 4th.

BEGONIA NORBURY WHITE.—Said to be a sport from Her Majesty. Flowers white, tinged with pink towards the edge. January 11th.

CARNATION GRIZEL.—One of the Perpetual-flowering class, with bright purple flowers. March 28th.

CARNATION J. G. FORTESCUE.—Said to be a sport from Horace Hutchinson, a small Malmaison type of flower, white, heavily flaked red. May 16th.

CARNATION LORD KITCHENER.—A Perpetual-flowering variety of a bright salmon-pink colour, with a pleasing fragrance. May 2nd.

CARNATION ROSE SENSATION.—A sport from the Perpetual-flowering variety *Sensation*. The flowers are of good shape, the calyx good, and the colour a kind of rosy-cerise. November 21st.

CINERARIA MATADOR.—This variety, which has been grown for some time, has massive heads of flowers of a distinct cinnabar-red colour, the undersides of the florets of a pale tint. February 22nd.

COLUMNEA GLORIOSA DISCOLOR.—A very striking Gesneraceous plant of pendent growth, suited for a hanging-basket. The large, curiously-hooded flowers are scarlet and yellow. January 20th.

a mixture of loam, peat, or leaf-mould, and sand, the loam being double the amount of the peat or leaf-mould. They will then grow away freely, when they may be trained to any support, and will, no doubt, flower in due course. If they are kept altogether in pots and just secured to a stake, instead of training them up a pillar, they may in the summer be plunged in a sunny spot out-of-doors, where the growths will be well ripened, and plenty of flowers the probable result. Care should be taken that they are not allowed to suffer from want of water when outside. As the pots get full of roots an occasional stimulant in the shape of liquid-manure or one of the plant foods now available will be very beneficial. Of course, the plants must be removed under cover before autumn frosts make their appearance.]

Cuttings in heated pits.—When cuttings are stored over winter in pits heated by hot-water pipes it is obvious that the soil will dry up much more quickly than would be the case in cold-frames. It is, therefore, necessary from time to time to inspect such cuttings in order that over-dryness may be guarded against. Naturally, during the dull months there will not be very much moisture required; but it is as well to make an inspection at stated intervals, at the same time removing all decayed leaves.

Bouvardias.—Comparatively few Bouvardias appear to be grown compared with the numbers met with years ago. In a garden I visited the other day a fair number of these useful winter-flowering plants were in bloom. Maiden's Blush (blush-rose), Hogarth (bright scarlet), and the white Alfred Neuner were all good.—S. M. S.

ROSES.

NOTES AND REPLIES.

Rambler Roses.—I should be glad if you would give me the names of half-a-dozen Rambler or similar Roses suitable for covering the front of a terrace. The position is full south and exposed to the westerly gales. Dorothy Perkins does well in this position, but I want other colours. I prefer Roses flowering over a long period, and, if possible, fragrant.—G. H. S. R.

[A few Roses of the Dorothy Perkins type are Lady Godiva (soft flesh-pink), Rene Andre (saffron-yellow, suffused with orange-red), Sweetheart (light pink shading off to white), Alberic Barbier (creamy-white), Excelsa (crimson-scarlet), and White Dorothy Perkins. These, like Dorothy Perkins, are almost evergreen, and the second, third, and fourth are fragrant. They also remain in bloom for a long time. Of the multiflora section, of which Crimson Rambler may be taken as a type, there are Mrs. F. W. Flight (bright pink, one of the best), Euphrosyne (pale pink, white centre), Blush Rambler, Flower of Fairfield (similar to Crimson Rambler, perpetual bloomer), White Tausendschon, and Tausendschon (large pink flowers). If you wish for a variety with bright crimson flowers substitute Philadelphia Rambler for the last-named. Paul's Scarlet Climber would be worthy of a trial. We also append a list of six varieties of climbing Tea Roses, which may, perhaps, be useful. These do not grow so tall nor cover so large an area as the preceding. Caroline Test-out (bright pink), Gruss an Teplitz (crimson), J. B. Clark (scarlet), Belle Lyonnaise (creamy-white), Billiard et Barre (orange-yellow), and Tea Rambler (coppery-pink.)

Rose Jessie.—This dwarf Polyantha has been very fine this year in the south-west of Scotland. It is one of those which has not been much affected with mildew in a season in which this pest has been unusually prevalent, and when in many gardens the scarcity of labour made it almost impossible to do anything to check it.—S. A.

CHRYSANTHEMUMS.

CHRYSANTHEMUMS: NEW EARLY-FLOWERING VARIETIES.

Those who have grown the early-flowering Chrysanthemums have been disappointed because so few new sorts have been introduced in recent years. Not a great many years ago French and other raisers sent us quite a large number of very beautiful new sorts, and for several years English raisers, too, were very successful in the novelties they introduced. We appear to have been quite stationary in this respect for some three or four years at least. It is all the more gratifying, therefore, to find that new varieties from a quite original source have been seen in public for the first time this season, and these novelties are of the very best. Mr. A. W. Thorpe, of Lichfield, has taken up the cultivation of early-flowering Chrysanthemums professionally, and if we may take the four new sorts which he has submitted to the Floral Committees of the National Chrysanthemum Society and the Royal Horticultural Society as an earnest of his work in raising new sorts we may, with confidence, anticipate great things from this source. First-class certificates, Awards of Merit, and commendations have been gained in London for each of his novelties, and he has also been successful across the border when he has submitted flowers to the leading Horticultural Societies. In the early days he, like many other growers, grew his plants naturally, *i.e.*, he allowed his plants to grow on to the terminal buds without any stopping or pinching of the growths, and the terminal buds were not disbudded. Very beautiful results are usually obtained in this way. In later years, however, a demand has risen up among market growers and others for Chrysanthemums that will produce a good crop of disbudded blooms under fairly easy culture. It is astonishing how kindly some plants take to this disbudded method of culture. The varieties that Mr. Thorpe brought to London and placed before the respective Floral Committees of the National Chrysanthemum Society and Royal Horticultural Society appeared to succeed very well under both systems of culture—disbudded and undisbudded. The following four varieties have gained several distinctions:—

HARRY THORPE.—A handsome flower of a bronzy-yellow colour having long florets of medium breadth, making a splendid flower some 5 inches in diameter when disbudded. It is the result of a cross between Hector and Golden Glow, Hector being the seed parent. Raised in 1913. Commended National Chrysanthemum Society and Award of Merit Royal Horticultural Society. This plant is also good when naturally grown.

DICK BARNES.—This is a splendid acquisition to the rosy-crimson—some say rich crimson—sorts. It is a seedling from Dolores and an unnamed variety, and the seed parent was Dolores. Raised in 1914. The plant is about 3 feet high. It is good disbudded or undisbudded. First-class certificate National Chrysanthemum Society and commended also by the National Chrysanthemum Society as a market variety. Award of Merit Royal Horticultural Society September 26th last.

LICHFIELD PINK.—In this the colour is a soft mauve-pink, and the form, of a slightly drooping character, exquisite. This is a seedling from Hector and Dolores, Hector being the seed parent. Raised in 1914. Useful for cutting and home decoration, and splendid for market. First-class certificate National Chrysanthemum Society and Award of Merit Royal Horticultural

Society October 10th last. The National Chrysanthemum Society's award was made eight days earlier.

NELLIE THORPE.—Although not so good as the others, this is a very dainty sort of a bronzy colour, and also of pleasing form. It is a seedling from Golden Glow and Dolores, the latter being the pollen parent. Raised in 1914. E. G.

NOTES AND REPLIES.

Chrysanthemum La Triomphante.—This old variety, and its sports White Triomphante and Yellow Triomphante, are behaving rather curiously this season. On the type, in addition to the pink blooms, there are pure white flowers, and on the white sport there are white, pink, and pink-and-white blooms. The yellow sport, too, is throwing white flowers. I still grow a goodly number of La Triomphante, and, if old and rather addicted to mildew, I would not care to discard it in favour of many of the more modern Chrysanthemums.—W. McG.

Chrysanthemum Lady Stanley.—This was one of three varieties which received an Award of Merit from the Royal Horticultural Society on November 21st last. It is of the decorative set, that ranging itself, as it were, between the exhibition sorts and hardier border varieties, finds such favour with the market-man and the florist. To be favoured by the market-man the flower must be firm and crisp of petal, and, therefore, travelling well, and of good colour. If combining all these attributes it will soon take front rank. That named above is well endowed in some respects—colour, a refined silvery-pink; and that petal crispness which denotes lasting properties. Under artificial light it is excellent. It was staged by Messrs. Wells, Limited.—E. J.

Single Chrysanthemum Doris Stevenson.—This has been very good this season, and has been valuable from the middle of November. It is a very attractive variety, suitable either for growing naturally or disbudded. The florets are broad and flat, and the colour is of the deepest crimson, which sets off the golden disc to advantage.—SCOT.

Chrysanthemums after flowering.—There is nothing gained by allowing Chrysanthemums to occupy room in a greenhouse after they have done flowering. It is an advantage to lightly stir the soil, and in the case of varieties backward in producing cuttings to add a little fresh soil, and if need be give additional warmth. Generally speaking, however, the cooler the conditions which prevail the better and stronger are the cuttings which are produced.—LEAHURST.

Chrysanthemum Niveus.—Discussing late Chrysanthemums with a market-grower in the south-west of Scotland the other day, he assured me that Niveus was still the most useful variety for sale. He grows it in great numbers, and finds a ready sale for the blooms. The flowers are of a really good white, the shape also good, and the plants bloom freely. The grower referred to finds that large blooms do not now pay, as was at one time the case.—S. A.

Single Chrysanthemum Countess of Egmont.—In this we have one of the brightest and most effective of the single Chrysanthemums. It is of good size, with several rows of petals, the colour orange with a tinge of terra-cotta. It makes a good plant, and is excellent either grown naturally or disbudded. It was one of the best in a nice collection I saw the other day.—SCOTSMAN.

Chrysanthemum Mensa.—This still remains one of the best white singles. If disbudded, it can be grown to a great size; but I think flowers from disbudded sprays are not so effective as those more naturally grown. The yellow variety is, decidedly, not so good as the type, the colour being a poor yellow.—SCOT.

Single Chrysanthemum Peter Pan.—This small-flowered variety is especially adapted for cutting in sprays. When well grown it will give sprays of flowers almost, if not quite, 9 inches long, composed of from fifteen to twenty individual blooms, starry in form and of a charming fawn colour.—SCOTSMAN.

ROCK, ALPINE, BOG, FERN, AND WATER GARDENS.**WATER HOLES NEAR HOUSE.**

Of recent years it has been the custom of people who aspire to be "landscape architects" to introduce into gardens a number of silly little incisions for holding water. These are very often not fenced in any way and are usually not big enough for a frog to swim in. In a garden in Surrey there is a little canal 8 inches wide running through the flower garden. It is difficult to suppose that any gardener would make such a puny thing for the growth of delightful water plants. If we want water

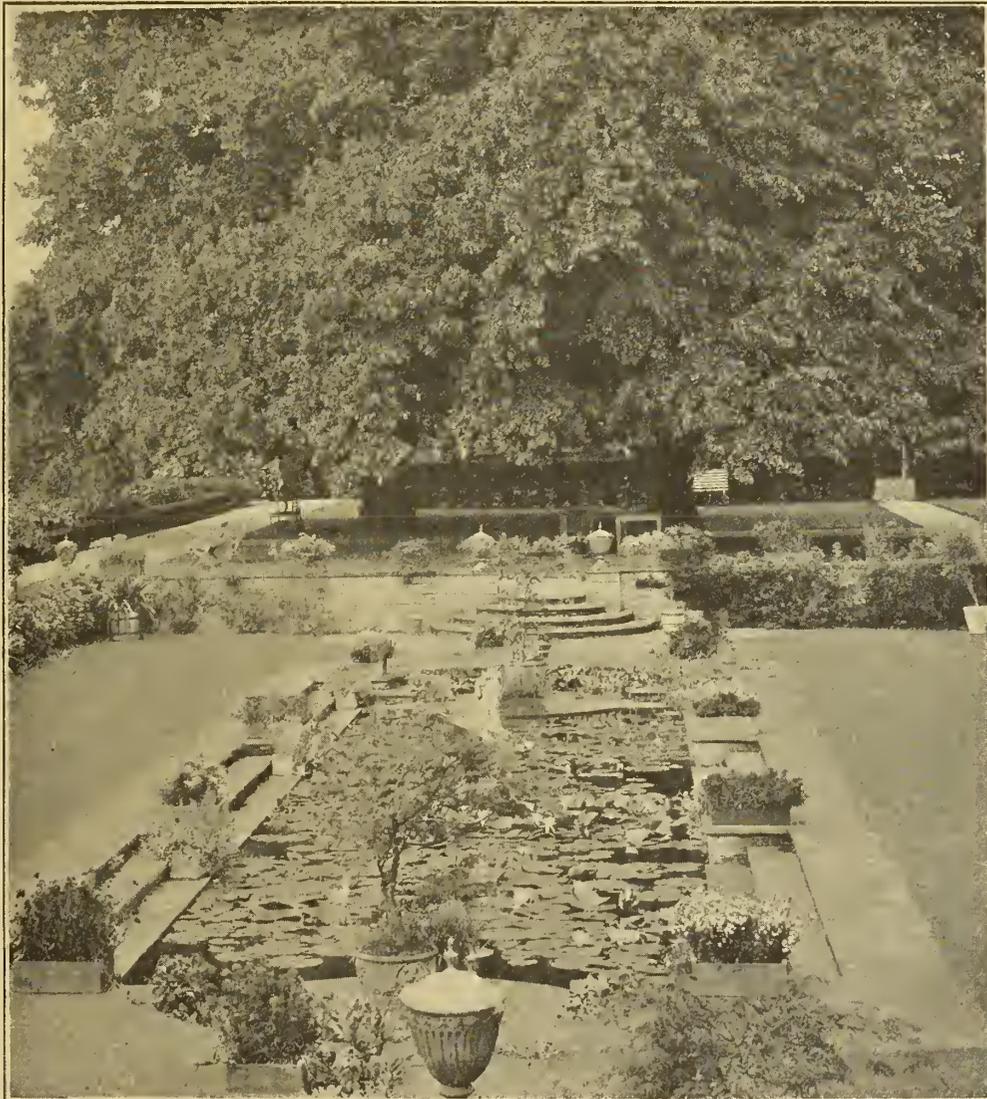
evidently resent the weather conditions and miss the natural covering of snow at home. One may again repeat the useful cultural hint which has often proved so effective, and this is that they should be covered with glass from about the beginning of October until they flower. A sheet of glass supported on a wire frame supplies all they want during the winter months. The great necessity is dryness overhead.—S. ARNOTT.

GARDEN PESTS AND FRIENDS.**NOTES AND REPLIES.**

The Cabbage caterpillar.—On taking over a new garden at the end of September, I found all Cabbages, Broccoli, etc., almost entirely

hand-picked, doing this directly caterpillars are found on the plants. It is a tiresome business, but a boy or girl can pick off and dispatch a great number in the course of a few days. This is a better method than trying to get rid of them by applying insecticides, for reasons which are obvious.]

The Raspberry-bud caterpillar.—I was sorry to see this was directing its attention to the Loganberry (p. 528). We shall have it attacking the homely Blackberry next if it has not already started. The information respecting the bright red larvæ of the *Lampronia* is not altogether correct in some cases. It is said, for instance, the larvæ are found feeding on the tips, work-



Garden basin at Buckhurst.

it is well to put it at a distance from the house, if only to guard against mosquitoes and things of the sort, not to name the danger that water in such a place is to children and people of unsteady gait. There is no room to work in such little puddles. The one we show is a little bolder than most of them, but still, we think it not nearly so good as water in its right place, where it can be done. The "stews" made use of in old gardens were quite a different and better thing, also a stream led through a garden as at Littlecote and other places was charming and of some use and meaning.

The Soldanellas.—Many disappointments are experienced by growers of the *Soldanellas* from their shyness of flowering. They

devoured by a plague of caterpillars of the Cabbage white butterfly. They have somewhat recovered, but I am anxious to avoid a return, particularly as I am told that the plague has occurred three years in succession. I have some well sweetened gas-lime. When the crop is cleared off would it kill the chrysalises if I were to have this dug in? What quantity should be applied?—CAMBRIDGE.

[The gas lime will certainly do good, as it will kill any pupæ which may be present in the soil, as well as other species of insects. The gas lime should be reduced to a fine condition and applied at the rate of a breakfast cupful to a square yard. Do this at once and incorporate it as thoroughly as possible with the soil in the course of digging it. The attack, both present and future, can be greatly reduced by

ing their way down the shoot, whereas they are generally found working up from the base. It is one of the enemies to plants extremely difficult to deal with, and although one can reduce the numbers by clearing away everything at the base after the fall of the leaf, including an inch of soil, there is no guarantee it will not be more or less in evidence another season. It would almost seem that the only effectual remedy would be to spray occasionally very early in the season. Doubtless in the promised information, we shall get, as well as the life-history of the pest, the best means to adopt to check it. The larvæ of a beetle are also very troublesome in some districts, and this would also seem to be found largely on Blackberries.—E. B. S., *Hardwick*.

GARDEN FOOD.

SOME EFFECTS OF GARDEN FOOD.

A READER has called our attention to some unpleasant effects of adopting a diet of the above, and asks our opinion.

Without doubt such effects may occur, but mainly they are not the fault of the food. In our great cities, where the question mainly arises, there is harm done by bad choice of kinds and their being obtained in a coarse or wilted state. As to kinds, our markets are well supplied with coarse Cabbages, ill-flavoured Broccoli, Carrots big enough for a shire horse, and overgrown Beans and Parsnips. These may, without doubt, be blamed for some of the discomfort named, but there are much more wholesome things to be had. Also these first enumerated kinds are not uncommonly sold in anything but a fresh state, and are afterwards ill-treated by the cook.

Considering the great amount of food obtained from our gardens, farms, and orchards, there are many such things absolutely free from any such unpleasant effect. In the gardens, for instance, Spinach, Artichokes, English Peas, French Beans, Celeriac, and the American Sweet Corn, which is quite wholesome, cooked Lettuce and Cucumber are free from objection.

Also the question of cookery comes in with much effect. For instance, there are the dried pulse, Haricots, Peas, and Lentils, we use in the winter. As served in England they are not always well cooked. In France they are much better prepared, more digestible and so appetising they seem to melt in the mouth. Even so cooked the pulse require to be taken with moderation. The same thing treated by two cooks may have entirely different effects—wholesome in one case, injurious in the other.

Nothing would help us so much in this way as the adoption of the Italian way of cooking these precious pulse and cereals. The value of these foods may best be considered in view of the longevity and strength possessed by men of the great nations which live entirely on these foods without discomfort—the Italians, Greeks, Turks, other Balkan peoples, and some Indian and African races, Zulus, and Kroomen. Anybody open to consider evidence can have proof from these nations that foods from the vegetable kingdom are perfectly beneficial and can be used free from all the drawbacks mentioned.

The countryman has a great gain in getting his garden food fresh, and even the small cottager with his garden has a supply at his hand of healthy food, in itself sustaining and obtained at a minimum of exertion with the best results. The quack who heralds it that all his goods are from plants says nothing of the fact that the most deadly poisons come from the same source. We who claim much good from garden food must not copy the quack and must not try to conceal the fact that some of the food classed as vegetable is far from wholesome.

The way the Paris market is supplied with tender vegetables as compared with ours is instructive. The cook is the master of the market in Paris, and would at once return much of the vegetable and fruit that London folk have to put up with.

Green Top Beetroot.—What a conservative lot we gardeners are, to be sure! Nine out of ten of us sow year after year the purple-topped variety, because we think that unless the top is of this colour the roots cannot be Beetroot. Anyone who has tried Cheltenham Green Top Beetroot

will never grow the old-fashioned purple-leaved varieties, which more often than not are coarse and stringy. Cheltenham Green Top is a superb Beetroot, as soft and melting as a Willam's Pear, and every bit as sweet.—*Garden.*

WHAT TO DO WITH GREEN TOMATOES.

ALL growers of Tomatoes are faced at the end of the season with a quantity of green Tomatoes which will not ripen and are frequently thrown away. They, however, make not only delicious pickles, but nice jams, sauces, and chutney.

TOMATO PRESERVE.—Take 3 lb. of large green Tomatoes and slice them into a preserving-pan. Add the same quantity of sugar, four Lemons sliced very thinly and the pips removed, and a large red Chili. Allow all to stand until the syrup begins to run, then place the whole over a clear, bright fire, and bring slowly to a boil. Simmer gently, removing all scum as it rises, and stir continually to prevent burning. When the jam looks clear and of a pretty green colour test some, and if it thickens it is done. Pour into small glass jars, and cover in the ordinary manner with parchment paper.

GREEN TOMATO GINGER.—Take 6 lb. of small green Tomatoes and the same quantity of sugar. Bruise a $\frac{1}{2}$ lb. of fresh root Ginger, and place in a pan with a quart of water. When boiling hot plunge in the Tomatoes and allow them to simmer for five minutes. They must not break on any account. If any show signs of this take them up at once. When all have simmered for five minutes remove them from the pan and allow to drain. Add $\frac{1}{2}$ lb. of the sugar to the same water and boil up and skim. Turn in the Tomatoes and allow to just boil. Remove from the fire and allow them to stand until quite cold. Drain off the syrup and return to the pan and add half the remaining sugar and once more boil up and skim carefully. Turn in the Tomatoes and stand the whole aside until the next day, when once more boil up. Take out the Tomatoes with a skimmer and drain on a sieve until the remaining sugar has been added, then after boiling and skimming replace the Tomatoes and boil until quite clear. Set the pan aside with a cloth over till the whole is cold, and then boil up again for five minutes. Repeat this a second time, then, if the syrup is thick enough, place the Tomatoes in jars and pour the syrup over. If, however, the syrup is thin, remove the fruit and boil for a few minutes or until thick enough. This preserve is better for keeping for a few months before eating as it improves in flavour the older it is.

GREEN TOMATO PRESERVE (another method).—Take 6 lb. of green Tomatoes and slice them into a pan with 4 lb. of sugar and 1 lb. of dry preserved ginger sliced, and the juice of three large Lemons. Place over a clear fire as soon as sufficient sugar has dissolved to prevent the pan burning. Simmer gently, and skim carefully for half an hour or till the preserve looks clear and stiffens when tested. Take care not to lose the pretty green colour by over-boiling. This is a delicious preserve, and not much trouble to make, and is much liked by children. Pour into small pots and cover in the ordinary way.

GREEN TOMATO CHUTNEY.—3 lb. of green Tomatoes, 3 lb. of Apples, 1 lb. of large raisins, 1 lb. of Shallots, a head of Garlic, 3 lb. of brown sugar, four large Chillies, one tablespoonful of salt, and a $\frac{1}{2}$ lb. of green ginger. Chop all the ingredients thoroughly, mix, and place in a jar large enough to hold them all. Pour over two quarts of brown vinegar. Cover the jar closely, and stand the whole in a slow oven for six hours. It should keep quite hot, but not boil. Set aside for a day, then stand in the oven till quite hot, and then remove to a cool place. Repeat this for six days. Stir the contents of the jar every time it is removed from the oven. Add a tablespoonful of mixed spice and a tablespoonful of common pepper, and turn the whole into a preserving-pan and simmer until the chutney is thick. This usually takes about an hour's simmering. Pour into large, wide-necked bottles and cork tightly. This chutney im-

proves with keeping, and will remain good for years.

SWEET GREEN TOMATO PICKLE.—Take small green Tomatoes and place in a jar with an equal quantity of peeled pickling Onions. Cover them with boiling white vinegar. Allow this to stand till the next day. Then drain off the vinegar and place it in a pan with a pound of granulated sugar for each pint of vinegar, a half a saltspoonful of cayenne pepper, and a teaspoonful of Mace and a few Cloves. Boil up, and skim if necessary. Add the Tomatoes and Onions, and simmer for ten minutes. Place the Onions and Tomatoes carefully and prettily in glass jars, and pour the vinegar over. Cork tightly, dip the tops of the bottles into melted bottling-wax, and store till required. This pickle keeps indefinitely.

GREEN TOMATO PICKLE.—Heat some white vinegar to boiling-point in a brass preserving-pan. Slice some Tomatoes across the fruit, and dip into the boiling vinegar to set the colour. Do this carefully or else the shape may be destroyed. Have ready some pickle-bottles, well cleaned and dried, and arrange the Tomato halves prettily and carefully in them. Fill up the spaces with sliced English Onions and a few small Chillies to give colour. Meanwhile, add a tablespoonful of sugar and salt to every quart of vinegar, 1 oz. of white pepper, a teaspoonful of allspice, a piece of ginger well bruised. Simmer these all well together until the vinegar is well flavoured. Pour as hot as possible over the contents of the bottles and stand aside. When cold, cover closely, and store for three months before eating. This is a very good plain pickle, and is usually much liked. Green Tomatoes may be added to any ordinary mixed pickle and do very well.

GREEN TOMATO SAUCE.—Take 6 lb. of large green Tomatoes and slice thinly into a pan with a pound of English Onions, also sliced, 2 lb. of brown sugar, two quarts of vinegar, a dessertspoonful of ground allspice, the same of Cloves, Cinnamon, Ginger, Mustard, and a pinch of Cayenne pepper. Boil all for twenty minutes. Then rub through a sieve and return the pulp to a pan and simmer for ten minutes longer. Bottle in wide-necked bottles and store till required. It is ready for immediate use. H. T. C.

NOTES AND REPLIES.

Apple Forge.—For some time past I have been using this well-known old Sussex Apple, both for eating and cooking, and for the latter purpose find it to be a fruit to which the addition of sugar is quite unnecessary. The rich sugary flavour which characterises well-grown, fully-ripened examples when eaten in a raw state is retained by the fruit when cooked, hence the adding of sugar, which is necessary to correct the acidity in many varieties of cooking Apples, is quite superfluous, a fact worth knowing now that this particular commodity is both scarce and dear. There are, of course, many varieties superior to Forge for eating, but when Apples are not plentiful medium-sized specimens make a very pretty dish for the table, and as regards flavour and juiciness, are not then to be despised. As is well known, the variety under notice derives its name, or is supposed to do so, from its having originated near to a forge in the old iron district of Sussex.—A. W.

A waste of Tomatoes in Jersey.—Tomatoes are grown here in the open fields, and this year's crop has been a splendid one, but, unfortunately, there have not been enough boats to take them away. One evening my father and I calculated that there were 300 tons of Tomatoes waiting on the quay all ready packed for shipping, but there were no boats to take them, and it was a heartrending sight to see cartloads of beautiful-looking Tomatoes being emptied into the sea. In the shops you could buy them at a halfpenny per pound, but you can get them for nothing if you take a basket to the growers.—*Garden.*

OUTDOOR PLANTS.

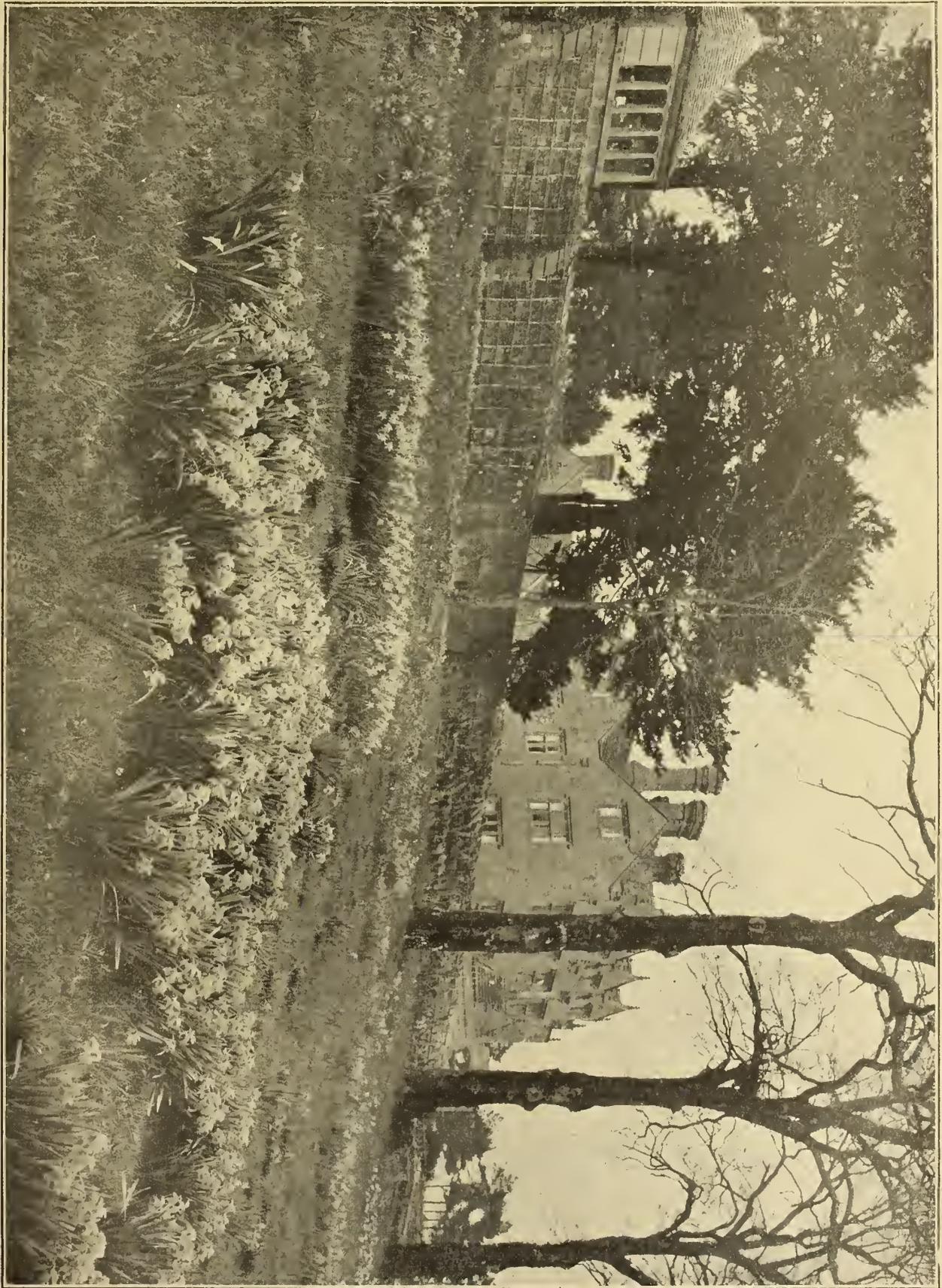
SPRING FLOWERS ON A LAWN.

If I had to do this again I think I would not plant Narcissi so freely, because there

way of scratching up the flower garden every year, simply putting into the Grass hardy things that cause no trouble, and leaving for the flower garden itself other things that want care, time, and patience to develop. On the lawn the best of the

snow for long months after the same plants are in bloom with us. Plants that show growth throughout the summer should be omitted from turf mown as this lawn is. The soil is cool loam on sandstone rock, and even better or different results may be

Spring flowers in the Grass (*Gravetye*).



are so many beautiful spring flowers that might be used. My general idea is that simple grouping is more effective, beautiful, and economical than scattering things all over the ground. The question of spring gardening in all country places is very easily settled by the abolition of the old

early spring flowers are grown, and do not mind in the least the mowing at hay-time, the leaves of Crocuses, Snowdrops, Blue Wood Anemones, and Snowflake by that time having gone or are dried up. The best selection is the early flowers that, on the mountains of Europe, are asleep in the

had on warm limestone soils, where Snow-drop, Crocus, and Winter Aconite would grow freely. W. R.

Ourisia coccinea from seed.—It is, I think, sometimes overlooked that this fine plant can be raised from seed, and with a minimum of

trouble. It is generally supposed to be a shy seed-bearer, but seed is by no means rare, and it germinates very readily. Any good firm which makes a speciality of hardy-flower seeds will supply those of *O. coccinea*. The recent discussion on the plant was interesting, for *O. coccinea* has acquired, rightly or wrongly, the reputation of being a very difficult subject.—W. METZ, *Balmac*.

HARDY PLANTS.

ONE of the most satisfactory features of modern gardening is the high position occupied by hardy plants. It was not always so. Many of your readers may be surprised to hear that there was a time when one would have to travel miles and visit a score or more gardens without seeing even a Japan Anemone or a Gentian. With the exception of some Crocuses, Snowdrops, old double Daffodils, and Wallflowers gardens generally were practically bare in early spring, and it was not until tender plants came into bloom that the outdoor garden was interesting. I am speaking of some fifty years ago, when the reign of the tender bedders began. I do know that before that time hardy plants were cherished, for I had the catalogue of a man named Cree, who had a hardy plant nursery at Addlestone, Surrey, and this list contained several hundred species and varieties, a large proportion of which were in pots in the same way that trade growers manage them nowadays. I remember one garden owned by a lady who must have been a hardy plant enthusiast, for, after her death, I found many things which I did not know at the time, and which I did not meet with for many years afterwards. The bedding craze, as it has been termed, was responsible for much evil in many places. Hardy plants were dug up to make room for long rows of tender plants. Some of these things became so uncommon that the younger generation of gardeners did not know them, and they had later on, when the change came, to be re-introduced. In a small garden here there was a white Everlasting Pea which must have been grown there many years, and which was the only plant I had ever seen in this locality.

It was moved and given a good position, and I managed to raise about a thousand plants, but the demand was so great that I could not meet it. Evidently this white variety was but little known at that time, and this is exactly what happened to a good many fine, hardy plants. They disappeared from gardens generally and found a refuge in out-of-the-way places.

There came a reaction and hardy plants once more came into their own. In spite of this progress much remains to be done. In the gardens of the wealthy, and where there is an experienced man in charge, hardy plants are grown in much variety, but it is otherwise in villa and small gardens generally. There is a drab monotony about them that is painful. One sees the Phloxes, Delphiniums, Michaelmas Daisies, etc., everywhere, but the dwarf-habited things, of which there are so many, are seldom seen. In how many villa gardens in this locality should I find a *Lithospermum*, *Platycodon*, or *Gaultheria*, for instance? Either from ignorance or indifference such things are rarely found in villa gardens, and one garden is the replica of another. There is nowadays no excuse for ignorance, there is the gardening literature, which is within the means of all and where notes are constantly appearing by experienced men.

The year 1916 is approaching its end, and I would urge those who may have been contented with the ordinary run of coarse-growing things to try some of the choicer hardy plants. Any of the following may be tried:—*Anemone Robinsonii*, A.

japonica Mont Rose, and A. Coupe d'Argent, *Astilbe* Silver Sheaf, *Lithospermum prostratum*, *Ranunculus acitofolius*, *Gentiana acaulis*, and *G. septemfida*, Rock Roses, *Epimediums*, *Cyclamen neapolitanum*, *Gillenia trifoliata*, and *Gaultheria Shallon*. These are a few of the numerous things that would impart variety.

J. CORNHILL.

AMONG THE HARDY FLOWERS

ERICA CARNEA.—This comes at a time when we have but few outdoor flowers, and appears utterly regardless of the weather. It may be a little later some years than others, but it never fails me in mid-winter, and though it may be shrouded in snow, pelted with sleet, or drenched with rain, it yet comes up smiling and cheery through it all. It does not need peat, a fact which should make it of more value to many of us amateurs, who often find a difficulty in securing this useful soil ingredient unless at considerable expense. It grows quite well with me in ordinary garden loam, not too heavy. There is now a considerable number of varieties of *Erica carnea*, but beginners may content themselves with *Erica carnea*, with its rosy-red flowers, and the white variety, with pearl-like flowers on the slender branches. With me *Erica carnea* does best in full sun, this being an advantage in winter, as it means that the plants can be put so as to face the south, and will, consequently, obtain almost every gleam of sunshine in the short days. I think, also, that it looks prettier when above the ground level. *Erica carnea* may be planted at almost any time, except in the dead of winter during frost or in the most torrid days of the year. I have always planted in spring, after flowering, or in earliest autumn, and in both cases have had no difficulty if a good soaking of water was given after planting.

PRIMULA SIEBOLDI IN THE OPEN.—This is one of the plants which die down to the crowns in winter. These crowns are exceedingly small, and invisible without careful examination, while they are easily injured when forking over the soil. I have found it necessary, unless when I have a few plants together in a group in a position absolutely familiar to me, to put a stout label to each plant. *Primula Sieboldi* is obtainable in several colours, some of them with names, and I have been successful in raising them from seeds sown in a small frame, in which the seeds were sown in spring in loam, leaf-soil, and sand.

MEADOW SAFFRONS (Colchicum).—My few clumps of these have got bigger, and where I had only one or two corms I now have several owing to their natural increase. I know gardens where there are very big clumps of some of the finest of these flowers, but it is pleasant to have them growing in one's own garden, even if there are only a few corms of one kind. The common *Colchicum autumnale* is to me one of the least useful. I admire *C. speciosum* and its white form as much as any, though the double varieties of *C. autumnale* are also worth attention.

HELIANTHUS MISS MELLISH.—A correspondent of mine in Scotland tells me that with him this sometimes flowers so late as to be spoiled by the frost before the blooms open. By giving it a warm, sunny place, I think *Helianthus* Miss Mellish should flower well in early autumn everywhere. The flowers of this ought to be cut before the disc or central florets expand. If this is done the blooms will open in water and last much longer.

AN AMATEUR OF HARDY FLOWERS.

Thalictrum corynellum.—This is a fine plant for the back of the hardy plant border.

The foliage is somewhat similar to that of the *Aquilegia*, and of graceful appearance. It flowers freely (especially in the southern counties) in June and July, some of the flower-sprays being 2 feet or more in length. Its height ranges from 4 feet to 6 feet, according to circumstances. The site should be well dug and freely enriched with rotted dung.—E. T. ELLIS, *Weetwood, Ecclesall, Sheffield*.

A WIGTOWNSHIRE GARDEN.

AMONG the notable things at Logan are the fine plants of *Cordylina australis*, established here for years and annually increasing in effect. There are many plants at Logan, and these flower and ripen seeds freely. Associated with a group of these is an uncommon thing in the open in Scottish gardens—*Dicksonia antarctica*.

Probably the finest plant of *Abutilon vitifolium* in the open in Scotland is that at Logan. It is of great size, and is most beautiful when in bloom with its hundreds of drooping lavender flowers. Logan is also one of the few Scottish gardens in which the Chatham Island Forget-me-not (*Myosotidium nobile*), is to be met with in the open in a really happy condition. It is given the shelter of a little straw in winter, but is otherwise unprotected, and annually shows above its handsome shining leaves its fine blue flowers. The white variety is also grown. Then the queenly Lily is also fully represented, and Logan is noted for this flower, especially for *L. auratum*, which is splendidly grown and shows its beauty in perfection in the congenial soil and climatic conditions.

The climate and surroundings would point to Logan being a favourable venue for the cultivation of the Himalayan *Rhododendrons*, and within a few years many of these have been planted. On the occasion of my visit they were looking very happy, indicating that they would prove in a few years equal to the other attractions of this garden.

A delightful scene is afforded by a Water Lily pond, so placed as to be in entire consonance with the spirit of the place—not an easy thing to do. When I visited this paradise the day was of the most brilliant kind, and the fine collection of the best *Nymphaeas* raised by M. Latour-Marliac and others was in full bloom.

There is a glorious bit of *Romneya Coulteri* 10 feet to 12 feet high. It is a true delight against and over a wall, and marvellously fine with its crinkled white blooms, each adorned by the golden stamens.

Phormiums abound in Wigtownshire, and Logan is no exception in possessing noble specimens of *P. tenax*. Then *Exogonum purga*, the Jalap-plant, a subject not too often met with, gives its handsome lilac-rose flowers in profusion, and *Eupatorium Weinmannianum* also flowers to perfection.

The attractions of this truly wonderful Scottish garden are not confined to uncommon subjects.—*The Garden*.

Late blooms.—The mildness of the season has resulted in the prolongation of the period of bloom in the case of many hardy plants. It is not claimed that the flowers in the annexed list are in first-class order; but they are sufficiently good for cutting, although, naturally, their duration is somewhat brief. The plants mentioned below were in bloom on December 4th, no notice being taken of the few shrubs which flower in the usual course of events at this season of the year:—*Potentillas* in variety, Japanese Anemones, Violets, Lothian and Ten-Week Stocks, Anthemises in variety, *Erysimums*, Pentstemons of the "Gem" varieties, *Alyssum*, *Schizostylis coccinea*, *Eupatorium ageratoides*, *Senecio grandiflora*, *Chrysanthemum*.

mum maximum, and Aster Drummondii. Hardy annuals include Godetia, Lavatera trimestris, and Saponaria calabrica. Fuchsias yet remain quite passable in the more sheltered places, while Chrysanthemum Mrs. Desgrange, Ceddie Mason, and Sylvia Slade, if a little weather-beaten, are yet usable. Roses, too, may yet be picked, these including Zephirin, Fellenberg, Fabvier, D. Perkins, Hiawatha, La France, and Captain Hayward. The Ten-Week Stocks referred to are the result of an experiment. The seeds were sown out-of-doors early in May—on the 8th of the month to be exact—and were afterwards pricked off into their flowering quarters. They made excellent progress, and the experiment will be repeated on a larger scale—and with these and similar half-hardy annuals—in 1917.—W. McG., *Balmœ, Kirkcudbright.*

"BEAR'S-BREECH" (ACANTHUS).

THESE rank high with the more stately-growing, hardy, fine-leaved plants, albeit they are too rarely seen in gardens. Ornamental in the highest degree, they are, by

thought of them for tubs and terrace gardening? I have never seen them thus, but, having grown them to a large size in pots for exhibition in the past, know something of their worth in the direction indicated. Well grown, a dozen plants of the best of them—*mollis*, *latifolius*, and *spinosa*—when established would, by reason of handsome proportions and high ornament, be a revelation. To this end, then, would I direct the attention of gardeners having terrace gardens to garnish, suggesting that youthful examples be first grown and established in pots as the best means of attaining success. With liberal cultivation and a year or two of patience this should be forthcoming, and, once established, may continue for years.

CULTURE.—Culturally the *Acanthuses* present few difficulties. Disliking heavy clay, and favouring warm soils, they grow and increase freely on those of a loamy nature, whether light, sandy, or stony, or of medium weight, in conjunction with a cool bottom. Rooting moderately deep, the soil should be well prepared, the more

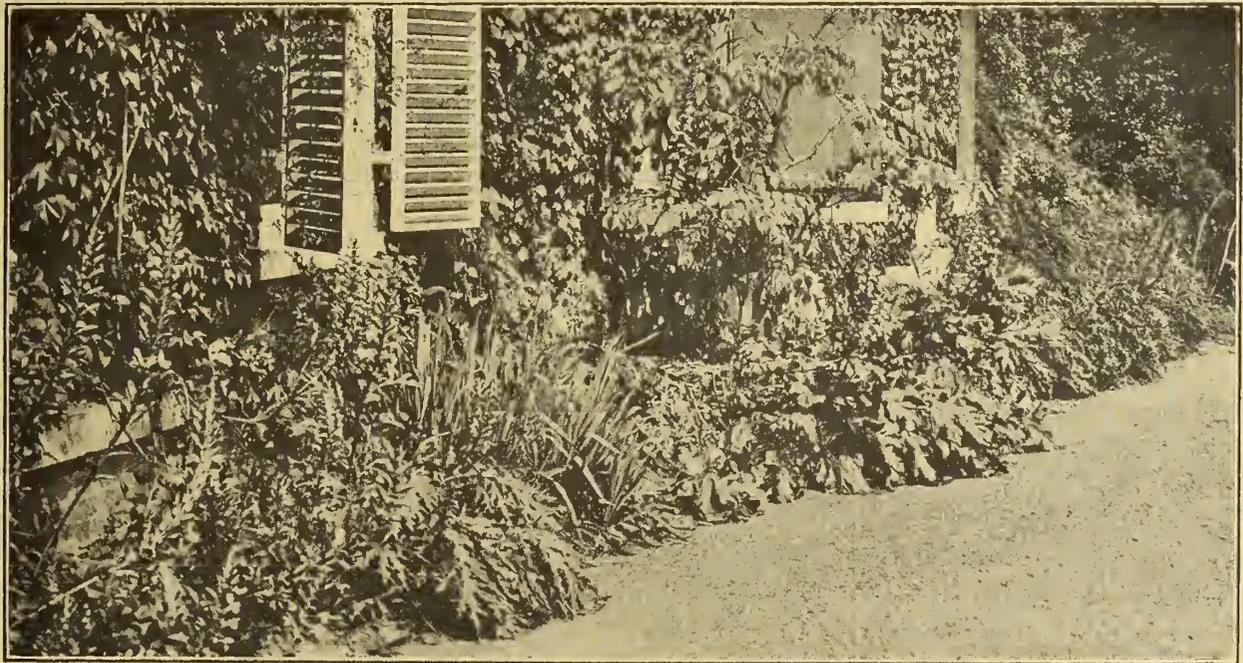
lustrous than the type, is very bold and imposing, the broader leaves less deeply lobed. The leaves of the typical kind are those usually represented in Corinthian architecture. A *Schotti* is probably but a synonym of the above.

A. LONGIFOLIUS, from Dalmatia, also attains to a considerable size, the leaves attaining 2 feet to 3 feet long, but even so, it lacks the characteristic ornament of the first-named. The green leaves are not lustrous. The pink flowers appear from spiny bracts of reddish colour.

A. PERRINGI, a smaller-growing, erect-habited species from Asia Minor. The flowers are pink. A comparatively modern introduction that is better suited to the border.

A. SPINOSUS AND *SPINOSISSIMUS*, from South Europe, are highly ornamental, the silvery effect of their spiny leaves adding a distinctive beauty. The flowers are purplish and rose respectively. I have not found that these flower with the same freedom as *A. mollis*.

A. CAROLI ALEXANDRI, a Grecian species,



Acanthus at Myddelton House.

reason of a contour which is practically unique, ill-suited to the ordinary herbaceous border, and should be either grouped or disposed in isolated examples, where their fullest beauty may be seen. This may well be on the lawn, in bold recesses in the rock garden where from a background of good rock their finer attributes would be apparent, or at the parting of ways in garden or woodland—anywhere, indeed, where scope for full development presented itself. In the herbaceous border, no matter what its size, this could not be. So large-growing a subject would, of necessity, have to go into the background, where but a tittle of the plant's beauty would be seen, and the gracefully arching leaves all but lost to view. Like the *Yucca* and other plants of outstanding character and distinction, these *Acanthuses* are best alone. Taking longer to establish than most hardy perennials and not lending themselves to frequent division are other reasons for not putting them into herbaceous borders which, from time to time, have to be replanted.

I wonder whether any gardener has ever

so since rather slow to establish. They dislike frequent interference. Increased readily by division and by seeds, the quickest and most prolific means of increase is by root cuttings secured and inserted in autumn. So readily and abundantly do they come from roots, indeed, that I have known a hundred or so result from the detached roots from lifting and dividing a solitary specimen. The other methods mentioned are slow. Where roots are required, enough may be secured by digging at one side of a clump, thereby saving the trouble of lifting and its weakening effects. There are not many kinds, those enumerated below being the best. The flowering period is August and onward.

A. MOLLIS.—I look upon this Italian species as the finest of the genus. When established, the arching, olive-green, lustrous leaves may each be a foot wide and a yard long, the plant isolated forming a clump 6 feet across. High above the deeply sinuated leaves tower the spikes of white or rose flowers, which, with the toothed bracts, are curious and interesting. Its variety *latifolius*, if a little less

is also very spiny, producing its flowers in somewhat globose heads. I have never grown it. E. H. JENKINS.

NOTES AND REPLIES.

Manuring hardy plant border.—I have recently undertaken the management of a large semi-public garden. Owing to war economies I have a difficulty in obtaining farmyard manure or labour. There is a long so-called herbaceous border with trees and flowering shrubs at the back and hardy perennials in front. I have had the greater part of this bastard trenched and replanted, but have not been able to add any nourishment. What chemical dressing could I apply during the winter and spring at a moderate cost? The soil is light, with a fair amount of lime, and has a gravel subsoil.—CAMBRIDGE.

[We regret you had not written us earlier or before you replanted the border, as we should then have advised you to give the soil—both spits—a good dressing of bone-meal, which can be purchased at a cheap rate. This you could have employed at the rate of 2 ozs. per square yard for both the top and bottom spits, and would have become more quickly available as a plant food next season than basic slag. It is,

however, not too late to apply a 2-oz. dressing to the surface, taking care it does not come into direct contact with the roots of the plants, and fork it in. The sooner this is done the better. When ordering, ask for best bone-meal, and do not accept bone-flour. In early spring apply $\frac{1}{2}$ oz. sulphate of ammonia and $1\frac{1}{2}$ ozs. superphosphate per square yard, and lightly fork or hoe them in. By measuring the length of the border and multiplying the result by the width you will obtain the total area in square feet. Reduce this to square yards, when an estimate of the total quantity of the manures required can then be quickly arrived at.]

VEGETABLES.

VEGETABLE NOTES.

EARLY POTATOES.—We may take it for granted that Potatoes will be dear next spring. Last year the Government commandeered the Jersey crop, the consequence being that the earliest tubers in this district made as much as 12s. per bushel, and as the same thing will, in all probability, happen again it behoves all who have the power to do so to make timely preparations for the production of an early crop of this indispensable vegetable. The ground for early Potatoes should be very free, and, if possible, a sheltered position should be chosen, but well open to the sun. It should be roughly dug, or, in the case of stiff soil, ridged up, so that it becomes thoroughly sweetened by frost. Ridging may be done at once, digging in February, but keeping a rough surface. If the sets are prepared by being put in single layers into boxes so that short, green shoots are formed, with embryo roots forming, there will be no need to be in a hurry, as in a few days roots will be entering the soil, whereas in the ordinary way the shoots have to form, which will make quite a fortnight's difference. Should the weather be inclement the soil perhaps frost-bound, the grower with these prepared sets has no need to worry, but can wait for the change. The experienced grower will choose the variety which he has proved to do well with him. Eclipse is much grown in this locality, and Sharpe's Express is favoured by many. Early Puritan I have found reliable, and May Queen is in favour now, but is not quite so early as Eclipse. The earliest Potato is, of course, the Ashleaf, and the true old Myatt's is probably still the best and most reliable, but do not plant this in cold, heavy land. The soil for it must be very free. Plenty of well-rotted manure or leaf-soil will promote a free growth. As is well known, the great enemy of the early Potato crop is the May frost, as the labour and expense incurred may be rendered useless in one night. Therefore, where it is a matter of a limited area some kind of protection should be afforded. A rough framework on which boughs, old Pea-sticks, or anything of a similar nature can be laid will make all the difference between failure and a valuable crop.

BROAD BEANS.—I remember the time when the sowing of Broad Beans in November for an early crop was generally practised, but I find that most vegetable growers nowadays defer sowing until February. I would strongly advise your readers to sow this year as soon as this note appears. This sowing will advance the gathering season by several weeks, and under present circumstances this early crop must prove very valuable. This should be succeeded by another sowing in February and another in March, so as to give as long a season as possible. In many

districts black fly renders the culture of this esculent precarious, and occasionally in a very hot, dry time the whole crop fails. It is impossible to grow field Beans here. As regards garden crops there need be no loss. When fly appears I syringe with XL All insecticide, somewhat stronger than in the directions, and in forty-eight hours the plants are thoroughly clean. By doing this I have a good crop of Beans when they have been a complete failure all round me. I do not know how the Broad Bean compares in nutritive value with the Potato, but it is a very satisfying vegetable.

PARSNIPS.—Those who have a good breadth of these may consider themselves lucky. The Parsnip will not, of course, take the place of the Potato, but it is a wonderful help when Potatoes are scarce. The Parsnip is the most easily grown of all vegetables, is not particular as to soil, and is immune, so far as I am aware, from disease. It is certain that a greater weight of food can be grown on the space by using the Parsnip than with any other esculent. We do not know how long this war may last. I, therefore, strongly counsel your readers to devote a fair breadth of ground to the Parsnip, which never under decent culture fails to yield a rich reward for labour expended.

BYFLEET.

GROWING TOMATOES IN GREENHOUSE.

I wish to grow Tomatoes in a span-roofed greenhouse 12 feet long; but, instead of planting them in 8-inch or 10-inch pots, I want to grow them in wooden troughs. Will you kindly inform me: (1) How deep and wide the troughs should be? (2) The right sort of soil? (3) The general culture of the Tomato? I propose sowing the seed in January and planting in March. Will you please say which sorts you consider best for this purpose?—NEMO.

[The troughs may be a foot in width and the same in depth. These should not be filled with soil at the start. At first just put in enough soil to cover the ball of roots of the young plants, then add as required as the season goes on. A suitable soil for Tomatoes is pure loam—that is, rotted turf, the more fibrous the better, and bone-meal at the rate of 2 lbs. to the bushel may be an addition worth while in aiding a solid, healthy growth. Press the soil down firmly; this assists firm rather than gross leaves and short-jointed stems. In rearing the young plants it is well to keep this sturdy growth in mind, because all too often they are brought on in a hot, confined atmosphere, and thus become drawn. Shelves near the glass may be suggested as being a good position when the young seedlings have advanced to a few inches high. Put out the plants 15 inches apart in the troughs and keep each plant to one stem throughout the season, rubbing out all side growths whilst quite small. In the matter of air there should be some care in cold weather; still, there are not many days on which a little may not be given—at least, if the sun is shining. As the spring advances so must there be more ventilation, with, of course, fire-heat at night. Artificial warmth may continue till the end of May; indeed, the plants and the crop of Tomatoes will benefit if there be a little heat in the pipes at night throughout the summer, except during a spell of very hot weather. Be sparing with water after planting up to the time the first truss of flowers shows, and use lukewarm water. As the season goes on there is not much danger in over-watering—that is, when fruits are swelling. To keep vigour and a crop right up to the last, stimulants must be given. Tomatoes are not particular as to variety, whether they be of the forms known as

"artificial" or "liquids" from animal manures. If plenty of air reaches the plants there should be no trouble about the fruit setting—or, rather, if warmth, air, and water combined are not stinted. By following the above items briefly put there should not be an over-abundance of leafage, the leaves themselves should not be of huge dimensions, and until the fruits are turning colour none should be removed. The points may be shortened, perhaps, and the lower leaves cut away. Proceed in this way the whole year—that is, take away the lower leaves as the fruits ripen, but leave undeveloped ones practically intact. Kondine Red and Ailsa Craig are fine varieties. These produce good-sized Tomatoes in abundance. Sunrise is ideal in shape, but by some may be considered rather small.]

NOTES AND REPLIES.

Celery disease.—As a subscriber to your valuable journal, I would like to get some information re a disease which has been very prevalent in this district (Navan) for the past three years. The disease is familiarly known as Celery-rust. Up to three years ago I used to pride myself on the fine Celery I could grow, but for the past three years, owing to this destructive disease, my Celery is a total failure. I consulted, some time ago, an eminent horticulturist from the north of Ireland, and he advised me that the disease came from seed. The seed the year mentioned came from a leading firm, but the following year I determined to change, and got my seed from another leading Irish firm, with exactly the same result. Last autumn I was staying with a friend, who was one of the best gardeners in the south of Ireland. I placed my grievance before him. He showed me some splendid Celery, and advised me to spray the plants thoroughly with spray used for Potatoes, but only half strength. Accordingly, when the plants were well established in the trenches last June I gave them a thorough spraying, and, acting on advice, I gave another thorough spraying in August, but I am sorry to say it was of no avail, and my rows of Celery are covered with the disease; in fact, the rows are nearly all rotten. I may state, every suspected diseased leaf was picked off before the second spraying was done.—H. J. CULLEN.

[You will find in our issue of December 5th, 1914, p. 786, a paper dealing fully with this trouble, which has spread very freely during the last few years. A copy of the said issue can be had from the publisher post free for 1½d.]

Food production and the garden.—The note at p. 610, over the signature of "I. Blackburn," is interesting, and certainly opens a way to the disposal of waste in the garden. But in a general way a couple of pigs can readily use up the surplus. What I meant, more particularly, was that increased production above the actual requirements of the establishment would lead to increased waste, and that, therefore, was to be deprecated. At any rate, I would hesitate to undertake the management of a Belgian-hare farm in addition to the work which already threatens to fall into arrears. The better way, as I indicated, is to plant only what experience has shown to be an abundant supply—that is, in cases where, owing to circumstances, the Navy or Training Camps cannot be benefited by the surplus. Nevertheless, there may be places where the advice tendered might be acceptable, and so far the writer is justified.—A SCOTTISH GARDENER.

Wood-ashes as manure.—The chief fertilising ingredient in wood-ashes is potash, and potassium carbonate being readily soluble in water must be kept dry till it is applied to the soil. It may be noted that small brush and foliage are far richer in potash than is large timber. Bracken, which is becoming a serious scourge on hill

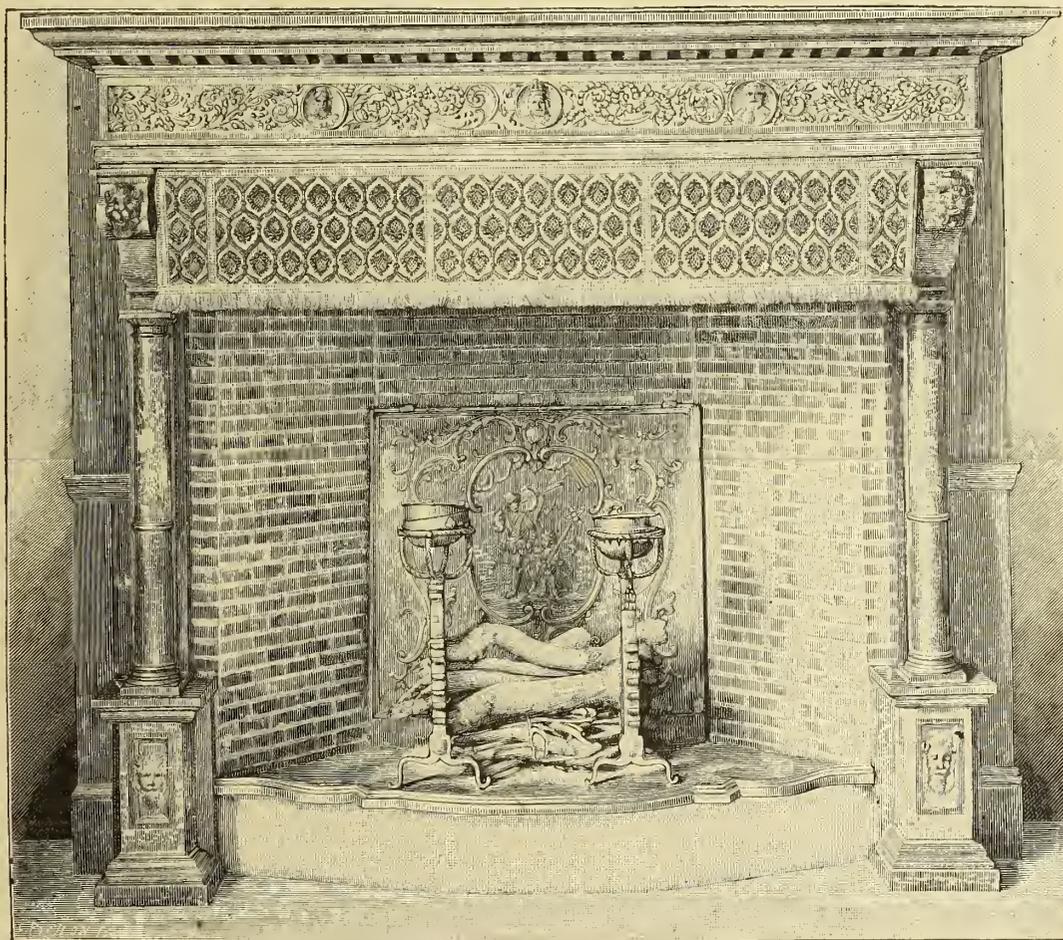
pastures in the North, contains much potash. I am informed that, if cut at mid-summer or in July, the ash returns 25 per cent. of potash, whereas if the Fern is left standing till August the proportion falls to 5 per cent. Here, I submit, is a promising field for experiment. If we could rid our pastures of Braeken and, at the same time, harvest a good supply of potash, we should be doing ourselves double service. Hitherto, I believe, British glass-blowers, soap-boilers, and farmers have relied for supplies of potash on the potassiferous minerals of Stassfurt in Germany. That source is now closed; the deposits in the Carpathian Mountains are not yet opened up. It would be well if we could produce this indispensable material at home. I believe there is already some revival of kelp-

in many households is worthy of more trouble than is usually accorded it. Earthing-up the plants with soil will do much towards helping them in a time of extended frost. Particularly is this beneficial in the case of plants that were not got into their permanent quarters until late in the autumn.—LEAHURST.

Spinach all the year.—I have met with many people whose experience of Spinach is confined to the growing of the Round for summer use only, leaving out of their account the Long Standing, which has a more extended season; the Prickly, which is in capital condition now (December 9th) from a July sowing; and the Perpetual or Spinach Beet, which is a splendid standby in any garden. Sown in succession, one may have a plentiful supply of this very useful vegetable. Those who are planning for next year's produce will do well to bear in mind Spinach, leaving space between lines of dwarf Peas, etc., for a few

THE HALL FIRE.

In our wet and cold country, even in the best parts, a good fire is essential in what in country houses is called the hall. Even in bad summers it is not amiss to have it, and the best of all fires is the wood fire. We speak for the country house and farm, where there is plenty of wood, and there is often stuff for cutting round almost every country garden, owing to past mistakes in planting rampant evergreens and trees out of place. Some people hesitate to cut down a tree whether it is rightly or wrongly placed. The mixed-muddle shrubbery is a great source of firewood—Willows, Poplars, Sycamores, put among Japanese and other foreign trees. There is a lot of firewood to be got from these clumps when old. Even the stumps of trees that are



Hall fireplace for burning wood only. Hearth, an iron plate raised 10 inches above stone floor; mantel, old Flemish.

burning in the West Highlands and in Ireland.—HERBERT MAXWELL in *Country Life*.

Disposing of garden refuse.—When manure and cost of carting are so expensive it is advisable to see what one can do with the refuse in one's own garden. Amongst vegetables there is always at this time of the year decaying foliage that should be collected, and if it is not decided to deposit it at the bottom of trenches for another year, the next best plan is to burn it; indeed, I do not know, when everything is considered, whether burning all garden refuse is not the best, as it is the most effective way of destroying slugs and other enemies that lurk in the soil, and the ashes from such fires are most useful when preparing beds for Turnips, Onions, Potatoes, and general garden produce.—W. F. D.

Spring Cabbage.—People in the North of England have sometimes told me that it is only in a mild winter that they can be sure of Cabbage for cutting the following spring, unless they afford protection. This vegetable

rows to be sown in succession, not forgetting to sow in July a good breadth for use from November onwards.—LEAHURST.

Stacking turves on allotments.—I have noticed that on new allotments some of the tenants have made a practice of stacking turves instead of digging them in. In some instances as many as four and six stacks are to be seen on one patch of ground. I am told that these stacks were made so that the turves would rot more easily, but it seems to me that it is altogether wrong, for they would decay just as soon if buried in the soil, particularly where the land has been trenched; and, what is of equal importance, the space they occupy might be put to better use with crops. It is true that some few of these heaps of turf have been used for growing Marrows. My experience is that to keep turves out of the soil is to rob it, besides which in a dry time, buried beneath the surface, turves help to conserve moisture. Those who are entering on new allotments should, when digging, work in the turves under the second spit.—LEAHURST.

grubbed out of the ground will burn in a well-made wood fireplace in a hall.

The essential thing is to have a good hearth. We see in illustrations of great country houses that the old down fire has given place to some kind of raised grate, mainly because the modern architect makes his chimneys much too narrow for a wood fire. In these you can never have a wood fire such as one wants for a hall. The hearth should be flat and raised 10 inches above the floor for the sake of a better draught. The main point, however, is that the chimney should be not less than 14 inches x 14 inches. As the hall is usually where there is no lack of air, it is seldom necessary to make special provision for air. In the one illustrated the room communicated with another hall and had several doors, so that there was no lack of a draught, but the architect had made the chimney much too narrow.

After much consideration I decided to rebuild the chimney, and since then I have had perfect fires in all ways. From such a fire the ashes should be removed only when they have nearly overflowed the hearth. They are excellent for lawn or flower-bed, and much better for that purpose than the ashes from a filthy coal fire.

W.

LAW AND CUSTOM.

EMPLOYEES OCCUPYING COTTAGES.

It is quite a common thing for persons engaging gardeners and farm labourers and similar employees in country districts to allow them, as part of their remuneration, to occupy a cottage and garden rent free. When this is the case difficulties frequently arise upon the termination of the employment, and I have frequently had enquiries as to the relative positions of employer and employee in regard to vacating a cottage. There seems to be a prevalent idea, especially among gardeners, that when they are allowed the use of a house as part of their remuneration their position becomes that of a tenant entitled to the ordinary notice to quit applicable to the tenancy of a cottage of that description. I have before me at the present time a case in which a farmer put up some cottages for his labourers, and one of them, on leaving the farmer's employment, refused to leave his cottage on the ground that, although he is no longer employed by the farmer, he is yet a tenant of the cottage and garden, and is entitled to have formal notice to quit and also to be compensated for improvements to his garden under the Allotments and Cottage Gardens (Compensation for Crops) Act. I need hardly say that this man is mistaken in his view of the legal position. It was decided in a case of this sort something like seventy years ago that an employee occupying a cottage belonging to his master is not a tenant and has no estate or interest in the premises, so that he may be forcibly evicted without the necessity for taking the ordinary proceedings to obtain an eviction order which are necessary when a landlord wants to evict a tenant who refuses to quit. The discharged employee may be turned out of his cottage at the same time as his employment is terminated, and his goods may be put into the high road without any liability on the part of the landlord unless it be a liability at the hands of the local authority for obstructing the highway, against which, of course, he must be careful to safeguard himself by not putting the goods in a place where they would be likely to be regarded as an obstruction.

There is, however, another side to the question which needs to be kept in view. A gardener or other employee is, of course, entitled to proper notice to determine his employment, and if he is discharged without that proper notice he has a right of action for damages. Imagine a man employed as a gardener or coachman entitled, according to custom, to a month's notice being suddenly discharged from his employment and being turned out of his cottage at the same time. Unless that action on the part of the employer could be abundantly justified the man would be entitled to take into account as part of the damages recoverable the loss he may have been put to by suddenly being turned out of the cottage, because it is quite a reasonable supposition, though I cannot at the moment find any case in which the point has been decided, that a man entitled to a month's notice who, as part of his remuneration, has free occupation of a cottage should be entitled to continue in

occupation of the cottage at all events until the date of his employment expires by effluxion of the notice given.

BARRISTER.

Dangerous trees (Hugonot).—We quite agree with you in the view you express that, inasmuch as your neighbour had ample warning of the dangerous state of his trees, he ought to have taken steps to prevent this mischief from happening, as it was bound to do sooner or later. He appears to us, therefore, to have been guilty of negligence, and, although we should not like to predict a successful issue to litigation, we think it is quite likely that if the law on the subject were tested it would result in your favour. It is, however, an open question, and as you do not feel disposed to go to the expense of testing it the only advice we can give is that you should instruct your solicitor to apply to your neighbour for compensation and give him further warning in regard to the dangerous state of the other trees. Possibly, rather than face litigation, your neighbour would be willing to compromise.—LEX.

THE ROYAL HORTICULTURAL SOCIETY'S TRUE WORK.

The following letter, signed by the secretary, has been sent, in the interests of the Society, to a Fellow of the Royal Horticultural Society, who had sent in his resignation, together with a statement of what the Society has done of late, some of it not wisely:—

At their last meeting the President and Council of the Society had before them a statement showing the numerical position of the Fellows, when they noted with regret that for the first time since 1888 there has been a considerable decrease, the number of resignations being particularly heavy. Whilst, doubtless, this is due to the war, this old-established British Society was committed to a certain annual expenditure before war broke out wherein retrenchment is practically impossible. All possible economies are being introduced with a view to the demands upon Fellows being reduced as far as possible, but if this process of resignation continues the Society before long will be faced with grave difficulties. I am therefore writing to ask you earnestly to consider allowing your name to be reinstated on our list.

POSTSCRIPT.—*May I add one personal word? I have devoted the twenty-eight best years of my life to building up the old Society, and I do hope the Fellows will help at this difficult juncture to prevent it from again falling back into the derelict state in which I found it in 1888.*—W. W.

The secretary does not mention the rebirth of a true taste for gardening as a cause of the Society's past success. He is now doing all in his power to get the Society back into a bad state by costly and useless experiments at Wisley, bringing the Fellows of learned Societies to take the place of good gardeners. If our Agricultural Society were so unwise as to have a farm of its own, what would be thought of it if it put a Fellow of the Royal or Linnean Societies in charge? The reverend gentleman, like so many who waste the best years of their lives at a university, is led to put words before things, and to suggest professors of wordy futilities instead of experiments on the ground that all might see the value of.

One of the great mistakes the Society makes is in arranging for

TRIALS OF SLIGHT VALUE.

The true way for the Society is to make the gardens of these islands an experimental garden. In every county there are people who would be happy to make trials with slight cost to the Society. Often in such places we find better conditions for carrying out trials than there are at Wisley. Trials of Peas and Beans are carried out already by seedsmen and private growers, and there is no need for the Society to make them. The right way with any trials worth making is to follow the French method—that is, to send out trustworthy men to report on trials made by others. These trials are, as a rule, made under better conditions than the Society can command.

The learned Fellows who are supposed to manage this garden, which, observe, was meant for gardening only, are a director, a Fellow of the Royal Society, a head of the school of horticulture, a professor of entomology, a professor of chemistry, a lecturer in botany, an hon. researcher in electrobiology. It is clear that none of these things has much to do with the true work of the Society. In all our great universities there are professors of such chemical or biological studies who would be willing to undertake the solving of problems the Society might put before them. It is folly having a professor of botany for a small place in Surrey when the finest botanic garden in the known world is in the same county at Kew. It is a serious mistake not to distinguish botany from gardening, the former a world science, and gardening a practical question that must arise out of the ground and in any country and its soils, climates, and varied conditions.

No word herein is meant to the detriment of any of these gentlemen, who are learned in their own ways—it is the foolish policy of putting them in the place of a trained gardener, and is part of the folly of mistaking botany for horticulture. If the Society has a garden, it should be managed by a gardener like the late George Nicholson, of Kew. Gardening has now so many branches that it is a serious labour for a youth to master them, and the prizes in the art should go to the best men trained to it, and not to professors of things wholly distinct.

VALUE OF THE GARDEN.

The garden is a mistake as managed. Some who have thought much of the matter say that the right way for a garden society in a centre like London is to have a good house and a full library. This is proved by the prosperity of the great central societies of France and New England. No great garden has ever been well managed by a committee.

All the most inspiring and the best gardens of our own time were managed by gardeners like Moore, of Dublin, McNab, of Edinburgh, and others, for whom the garden held the first place, and botany and other sciences came afterwards. Amateurs like Thomas Hanbury, and enterprising nurserymen like the Veitchs, with their brave travellers from Lobb to Wilson, had their heart in the work. In France, the most splendid thing done for our open-air gardens was the raising of the finely coloured Water Lilies—not the work of an academician, but of a modest amateur in a small town near Bordeaux. Gardening is an art of observation, like soldiers', sailors', and farmers' work. The idea of learning it thoroughly in a college or in any way but through the work itself is a delusion.

We find an example of the futility of the Society's laboratories in a report on

inoculated peat invented by Professor Bottomley. After several pages of the report, in which we are told nothing, the writer says the inventor of this peat has not revealed its nature. Here is a case of a learned society experimenting with a substance of the nature of which they are in ignorance. Any experiment that is thought to be of real importance for the country garden should be tried in the open garden. It is only fair where objection is made to the management of the Society to speak of the work that it should do when it has a garden.

IMPROVED FRUIT CULTURE.

The stocks for fruit-trees used by the trade should be looked into carefully as regards their results, and the stocks some of our best Apples are worked on might be tested in a Society's garden. Thus an Apple like the Ribston, now neglected, should be shown grown on the different stocks that nurserymen sell it on, when it would be seen whether these stocks varied among themselves, as some suspect, or not. What the definite effects are of such stocks should be carefully studied from trees planted side by side. The Crab is the stock for the standard Apple, but whether it is the true wild Crab or some chance Apple seedling that is often used in nurseries is important for us. Judging by the weak trees often sent out, the point is open to doubt.

Take a single fruit—a noble one, too—the Apricot. For generations this has been rarely seen in good health in gardens, and why? It is not on its natural stock, the wild Apricot, but is grafted on the Plum. Before we can get over that evil it should be tested by the Society on its natural roots and on the wild Apricot, and seedlings should be raised from the best varieties to see if this precious fruit can be grown in health in our own country. It has been dying away in most gardens for many years.

GRAFTING AND ITS EVIL EFFECTS.

Few know the amount of harm that for generations past has been done in our gardens by grafting. That should be worth the care of a society with a garden, and no other body could do it so well, because it could put side by side in its gardens trees on their own roots and grafted trees. It would be well within the work of the Society to have its own garden examples of trees grafted and trees on their own roots raised from layers or cuttings. The harm of grafting ornamental trees is enormous, and in the case of fruit-trees there is much working in the dark. All the stocks in use should be put to a thorough test, and in all cases tried under the same conditions as the tree on its own roots from cuttings, layers, or seeds.

INFERIOR KINDS OF FRUIT.

Many frivolous pretexts are given for the founding of societies, but there is good work as well as bad in such, and the best is that of the Pomological Society of France, which prints a standard list of fruits, revising it from time to time, admitting only the best and discarding inferior kinds. The greatest drawback to British fruit culture is that there are too many kinds alike equally useless for the market and the home. In America anyone who observes what is being done in the orchard will find a man planting enough Newtown, or what good Apple it is that thrives in the locality, to get a supply of fruit for the market or other use. In Northern France, too, if one sees a good south wall in the garden, the chances are that it will be covered with a

fine Pear easily sold at a high figure. Confused by the voluminous lists in catalogues, our people go on planting poor kinds not good to eat or sell.

THE PEAR.

A large area of England and Ireland is admirably suited for the growth of this most delicious fruit of the northern world, but owing to the almost total neglect of the tree in its natural form of a standard on the natural stock, our gardens are robbed to a great extent of it, and there is not one-fourth of the production of the best Pears that there ought to be. There is so much use of stocks like the Quince that do not allow all good varieties of the tree to grow well, and so much stupid work in pruning that very few country places can show a good collection of Pears in their fruit-rooms. The greatest mistake is the neglect of the natural form of the tree.

The trade fruit catalogues are overdone and are very often compiled by men who have not tasted the fruit, as fruits that have not good quality are praised. The Society should control this by making a standard list of fruits into which no sort which is not proved to be of first-rate quality should enter. To reject the bad is as needful as to select the good. That Controlling Committee should be composed of growers and of those who eat and pay for the fruit, and the fruit list should be revised every three years.

THE APPLE AND ITS FUTURE IN THE BRITISH ISLES.

This, the noblest fruit of the North, deserves our best care, but our growers are so confused with too many kinds in catalogues and exhibitions, in which at least fifty kinds may be shown out of season, that it is impossible to determine which are the best kinds for general use. Americans and Colonials are not so mistaken as we are, and send us vast quantities of their best kinds. As fine might be grown in the warmer parts of Great Britain and Ireland, for some of our Apples are as good as any grown in the northern world, and, moreover, they have the merit of freshness. The energy that should carry us through to good crops is dissipated by growing too many kinds. What might be done by the Society, if we had a good one, would be the encouragement of the growth in orchards of one of each of the best kinds of Apple, such as, say, Blenheim, Ribston, and Sturmer.

Growers should be encouraged to make an orchard of one such standard kind, of which we cannot well have too many. When we grow a first-rate kind in quantity all that concerns it is better attended to—culture, cleanliness, and gathering. We should promote the natural form of the tree, far too much attention being now paid to dwarfing stocks and fooling ways of pruning. Over-pruning and bad pruning are far too common, reducing the amount of fruit and doing infinite harm. A rigid choice of kinds should be made. Diseases are far too rampant, American blight worst of all. With our present knowledge of washes we should be able to control these. In this way our own growers might compete with those of any country, but never so long as we cultivate a great number of poor kinds.

Now our Horticultural Society leads to mistakes by encouraging the exhibition of many kinds often out of their true season of use. We can never compete with the Pacific coast and other growers without a complete change of system; and growing well such fruit as Ribston, Blenheim, Sturmer, Roundway, Bramley, Alfriston, and Wellington orchard fashion, would be

far better worth cultivating than the numbers of kinds we now have.

Some control of the issue of new kinds might well be in action. Of recent years new Apples have been sent out which are no improvement on old kinds (some quite inferior). This evil might be lessened if we have a revision of a standard fruit list every three years, as is done by the Pomological Society of France, with power to exclude from it any worthless new kinds arising from time to time. Controlled in that way the trade would be more cautious about bringing out new kinds before they were well tried.

EXAMINATIONS FOR GARDENERS.

The Society has issued a printed statement about examinations being held for gardeners. It is a movement for bringing young gardeners into the folly of examinations with doubtful results. Colleges may be essential for chemists, doctors, and other technical professions, but gardening is a work to be learnt only in the open air. There is so much to learn, and so much variety of garden to be studied, that little time could be spared from it for passing paper examinations and storing the memory with facts that have little to do with the work itself. Men with a faculty for memorising books only will arise. Many of the best gardeners would not be able to pass an examination, nor would they be any the better gardeners if they could. The gardener has much book matter to avail himself of in the current papers of the day, and he must be to some extent dependent on books for his instruction. But in addition to such sources of knowledge, to attempt to cram him with lore which examiners may expect of him is a mistake.

The old way of teaching gardening by several years' apprenticeship was the right way. It was in that way also that the great painters were taught their art, and not by the multiplication of academies and lecturers. There never were so many critics, teachers, academies, and exhibitions as in our day, but ask the opinion of the men wisest about good pictures in London or Paris, and they will tell you that no good work is being done. The artists think more of how the work will look in an exhibition than of the thing itself, and they talk of "expressing themselves" in their work, an idea which the old masters never thought of. If anyone doubt this view, portraits by Rembrandt or Franz Hals or other masters of their day will give proof that the old way was by far the best. Now, between expressing themselves, as they call it, and working with the show in their minds, they give us the academy daubs we are too familiar with.

The Society might well give its sanction and authority to a revival of apprenticeship as the only sound way of making a good gardener. There are several colleges now which profess to teach gardening without having any good means of doing so. It can only be taught to a boy by means of the varied work of a good garden; afterwards by working as a journeyman in a succession of good gardens.

THE LANDSCAPE GARDENING ART.

Various sorts of men and some nurserymen now advertise as landscape architects, even if they have not had the slightest training in cultivation or design. That cannot do any good. The business training for a nurseryman is quite distinct from that required for a landscape gardener, which should embrace much study of trees and hills and valley landscape beauty in wild lands as well as in our planted country. No training will make a man an

artist who has not got it in him, but some attempt might well be made to prevent seedsmen and others with no knowledge of trees and shrubs from calling themselves landscape artists.

Economy in working gardens of all kinds is so important that designing is best done by men who have been trained in garden work. Therefore young men who have been first trained as gardeners would be the best to put to the study of design. This was so with Marnock, Fraser in Ireland, and André in France, who all began as gardeners. A good way to encourage promising young men would be to give them opportunities for visiting the mountains and valleys of Central Europe and other lands of beauty. They would learn more in that way than any book could teach them. There is

CHAOS OF NAMES OF VEGETABLES.

Every seedsman, big or little, calls each Potato or a Bean after himself, so that foreigners and others find it quite impossible to know the difference between new things and old, and have to waste much time in trials. This should be changed, and all the old vegetables that were raised in France, England, Italy, or other countries should be known under their true names.

It is in the interest of all that a vegetable grown for many years around Naples or Paris should bear its own name. Also the old sorts of our own country should bear their true names and not be the victims of re-baptisings. A standard list of the best vegetables would be well worthy of an effort. The trade are working against themselves in attaching new names to all. If they raise a good thing no one can now tell whether it is really theirs or an old one re-named.

COOKING VEGETABLES.

From the point of view of health and economy we are every day becoming more alive to the importance of food from the garden, and no pains should be spared to issue a good standard list of all the kinds worth growing.

The climate of our islands is more favourable to the production of excellent garden food than that of any other country of Europe, and therefore the importance of the right cooking of such food is great. For generations the cookery of vegetables has been a disgrace to English houses and even restaurants. Much of the value of vegetables is lost in water, and a most useful work the Society might undertake would be the production of an essay of sound information as to the cookery of the vast mass of vegetable food grown in our islands. Such a work should have passed through the hands of real cooks, as the value of vegetable food, much in question in our day, depends greatly on the cooking of it.

CONTROL OF BAD TRADE PRACTICES.

In our islands much harm has been done to horticulture by fixed practices of the trade. This is a large evil that has lasted long, and nothing will cure it if the cure is left in the hands of the trade. The nursery trade is occupied in the production of young trees and plants the final growth of which they rarely see. It is difficult to give an idea of the evil done by various modes of propagating, though certain drawbacks stand out clearly. Our islands have been cleared almost of the most beautiful flowering climber of the northern world, the Clematis, by the stereotyped way of increase, grafting the Chinese and Japanese plants on the common wild Clematis of the hills, as I have proved in

my own garden. The splendid series of Rhododendrons raised in England has been half lost by grafting on the Pontic kind, the result of the practice being that the stock destroys the graft and we get too much ponticum all over the country. The many lovely kinds of Lilac raised on the Continent in recent years have been lost by grafting on the wretched Privet, which in due course takes the place of the Lilacs. Beautiful evergreens of value, like Phillyrea Vilmoriniana, grafted on the Privet died in hundreds. The Hawthorns of the northern world, many quite distinct from our native one, both in fruit and flower, are lost by grafting on our native thorn, which in due time kills the kind we hoped to enjoy.

To go from precious flowering shrubs to fruit-trees, let us take the Apricot. For generations this has been thoughtlessly grafted on the Plum, with the result that the trees are, in most gardens, on the way to death. If we ever have a garden society worthy of the name, with a garden of its own, all these practices should be tested. The public has to await the result, and, as it often ends in disease or death, the whole thing is soon forgotten, and the cause often wrongly attributed to the climate and not to a wrong mode of increase.

Large areas of poor land are bare of Roses because the trade will only give us the Rose of whatever nature worked on the Dog Briar, on which many of the finest Tea Roses perish or dwindle away.

These and like evils might be shown, with the remedy, in the Society's garden, where the public might see results not open to all in private places. Therefore the first thing any healthy garden society should do should be to free itself of all trade control. Healthy control through and for the public would in the end be for the good of the trade itself. It should be clear to all who give any thought to the subject that the loss of a noble family like the Clematis can do no good to the trade as the public cease planting.

REFORM OF NAMES.—Control of confusing synonyms and false names might well be worth striving after in the case of fruit and vegetables. Bringing out old varieties under new names is a practice that should be stopped. False naming, like Horse Chestnut applied to a tree (rightly Buckeye) that is quite distinct from a Chestnut, Artichokes, so-called, that in no way resemble true Artichokes, and wrong names used in market (Grape fruit), all these and the like might well be stopped as confusing to the beginner. Re-naming foreign fruits is not unknown with us, and, whether done by mistake or otherwise, it is a bad practice.

The confusion and wasted effort, owing to every seed merchant calling every vegetable after himself, are deplorable for the foreigner, colonist, and even for the gardener and amateur. Therefore, a standard list of the best vegetables throughout Europe would be a great gain and worthy of the best efforts of a garden society. Such a standard list would not be in any way against real novelties, which might rightly bear the raiser's name.

The Society is ill-advised to build a laboratory costing over £20,000 for experiments of doubtful value. This is done on land not their own, lent to them by the late Sir Thomas Hanbury for purely garden work. The land is not suitable for fruit culture, on which we want more light than on any other gardening question. If a garden is wanted for such work it should be in the best land, where useful examples of good fruit culture might be shown to all interested.

A LIFE FELLOW.

PERPETUAL-FLOWERING CARNATION SOCIETY.

THE exhibition, which took place in the Royal Horticultural Hall on December 6th, was the twenty-first held by this Society. Owing to shortage of labour and difficulties of transit it was also one of the smallest. For example, no entry was received for the Monro Challenge Cup Class, or for the Brunton Challenge Cup, the former the most important of the whole show. Only one exhibit was staged in the American Novelty Class, the prize being given by the American Carnation Society, while in some other classes there was little competition. For the group class, amateurs' division, for pot-grown plants no entry was received. This, seeing its teaching value and importance, was unfortunate. In short, the entries were only about half the number of last year. This notwithstanding, excellent quality flowers were staged in most of the open classes, the trade growers, chiefly from the Hampton district, coming out strongly and well. No new feature was remarked in the table class or any originality displayed in those set apart for baskets or epergnes. Three new varieties gained Awards of Merit, one only of which, Red Ensign, appealed to the majority of those present. Brief particulars of the show are appended.

SECTION A.—OPEN TO ALL.

Messrs. W. Wells, Limited, alone entered in the American Cup class for three vases of novelties distributed since January 1st, 1913, showing Aviator (a fine scarlet), Peerless (cerise), and Enchantress Supreme, the last very good. The first prize was awarded. The class for five vases of Carnations, five varieties, twenty-five blooms of each, was contested by two Hampton growers, Mr. W. Sherwood taking first prize with a set comprising Beacon (clear rich scarlet), Enchantress Supreme, White Enchantress, Triumph (maroon-crimson), and Mr. C. W. Ward (a leading variety in the cerise class). Good, all-round produce, and well displayed, this merited high praise. Mr. H. T. Mason was a good second, his flowers more erectly disposed, being also less pleasing from the decorative standpoint. Warrior, a maroon-crimson raised by the exhibitor, was unmistakably the finest thing, though the rich scarlet Beacon was also good. Subaltern, another seedling of deepest cerise tone, is of much promise. This shade is much in demand in winter and tells to advantage under artificial light. Mr. W. H. Page led in the class for three vases of Carnations, conditions similar to the last, his vase of White Wonder, adjudged the best in classes four to ten inclusive, being awarded the silver-gilt medal in consequence. We do not remember to have seen finer blooms. His other varieties were May Day and Philadelphia. Messrs. Wells, Limited, were second, staging White Wonder, Aviator, and Lord Kitchener. We think highly of this last among the deep pink varieties, but the firm have shown it much better than now. In the single vase classes Mr. H. T. Mason took the first prize for both white and crimson, employing White Perfection and Warrior respectively, the latter in every way excellent, Messrs. Wells, Limited, scoring equally in those for scarlet and pink varieties, staging Aviator and Pink Perfection. In three of the four classes named only one exhibitor staged, the flowers being excellent.

SECTION B.—GENTLEMEN'S GARDENERS AND AMATEURS.

An important class here is for six vases of Carnations, six blooms in each, six varieties, the first prize going to Mr. W.

Heath (gardener to Sir Daniel Gooch, Bart., Hylands Park, Chelmsford), who showed Mrs. C. F. Raphael, Triumph, Gorgeous, Mary Allwood, White Enchantress, and Enchantress Supreme very finely. Mr. G. Lloyd Wigg, Merstham, was second, his premier vase being R. F. Felton (pink), others of merit being Snowstorm (a very good white) and Aviator (scarlet). This exhibitor alone staged three vases of eight blooms each and three vases of six blooms each, and was awarded first prize with good produce. Mr. G. Lloyd Wigg was also a most successful exhibitor, securing no less than four first prizes for single vases of blooms, the vase of Mrs. G. Lloyd Wigg, a magnificent pure white, gaining the special prize, a piece of plate, offered by Messrs. Wells.

NON-COMPETITIVE GROUPS.

For a magnificent group of Carnations—the outstanding feature of the show—Messrs. Allwood Brothers were deservedly awarded a large gold medal. The firm staged a very considerable collection of the best commercial sorts in exemplary style, the cultivation of the flowers also demonstrating high excellence. Arranging a big centre of some eight or ten amply-filled vases of Wivelsfield White, an indispensable in its class, the remaining varieties, arranged usually three vases of each, contributed to as fine a display as could be conceived. In this way such novelties as Nancy (pink), Destiny (cerise), Nora West (pink), Wivelsfield Wonder (an advance in white ground fancy sorts), Bishton Wonder, Salmon Enchantress, Enchantress Supreme, and others were seen to advantage. Only rarely do we see such fine quality blooms so simply and effectively disposed. In colour distribution there was not a discordant note throughout. Messrs. Stuart Low and Co. secured a gold medal for a much smaller collection, Alice (a pink-flowered novelty) and Pocahontas (crimson) being among important novelties in the group.

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM DECEMBER 13TH.—*Andromeda floribunda*, *Escallonia montevideensis*, *Laurustinus*, *Jasminum nudiflorum*, *Correa magnifica*, *Veronica* (in variety), *Rosmarinus prostratus*, *Erica carnea*, *E. mediterranea hybrida*, *Winter Heliotrope*, *Helleborus niger*, *Iris stylosa*.

THE WEEK'S WORK.—During the past week there have been continual slight frosts at night, with fog, rain, and sleet during the day, which have made the ground very sticky and unfit for planting. All plants of doubtful hardiness have been well protected, as described in previous notes. The work of cleaning shrubberies and clearing away worn-out and weedy shrubs can be done in almost any weather, and this work is being proceeded with. Many evergreen shrubs and Conifers are benefited by the removal of superfluous branches. Although the present time is not the best for pruning shrubs, yet where shrubberies are numerous much of the work must perforce be done during the winter. The ground should be thoroughly cleared of all weeds, especially such as Nettles, Woodbine, etc., which accumulate in neglected shrubberies. Straggling plants of any common shrub should be cut down and the roots grubbed up, taking the opportunity thus provided of improving the soil by trenching it, and, if it is of a heavy nature, working in plenty of decayed leaves. One often sees in gardens uninteresting groups of Laurel, Yew, Box, etc., where the choicest and most interesting shrubs would thrive if properly planted. When preparing the ground for choice shrubs, if the soil is of a cold, retentive nature, it is advisable to form the beds above the level of the surroundings, and to plant only when the ground is in a suitable

condition. There is a wide selection of beautiful hardy shrubs that will succeed in any part of the country, and these can be procured at a reasonable cost. Beds of the Moccasin-flower (*Cypripedium spectabile*) have been given a good top-dressing of decayed manure and leaf-soil. It has been necessary to afford protection from birds to beds of *Polyanthus* to ensure a good supply of bloom for the spring. Small birds especially are very destructive, and will pick out the buds as fast as they appear. *Correas* are flowering magnificently planted in a sheltered position in the rock garden. They are afforded slight protection from frost. *Pernettyas* are very bright, and a few groups scattered here and there make a pleasing display, but birds have commenced to take the berries, and I fear will soon clear them. F. W. GALLOP.

Lilford Hall Gardens, Northants.

SOUTHERN COUNTIES.

Pruning.—After Morello Cherries, the pruning of wall-trained Plum and Pear trees should be taken in hand, as the weather being cold, the carrying out of the necessary amount of training, nailing, and tying, as the case may be, can then, by reason of the more favourable aspect of the walls against which they are grown, be more comfortably performed. Fully-established trees of the first-named should have the spur-wood shortened to four and five buds, and thinned also, getting rid of the weakest of it if it is at all crowded. This, though oftentimes reducing the crop as far as numbers are concerned, enhances the size and quality of the fruit that is yielded, and tends, at the same time, to maintain the trees in a healthy bearing state over a greater number of years, as it proves a sure check against over-cropping. Where the spurs have become overcrowded they should be judiciously thinned, either cutting them clean out or to within an inch or so of the main branches, so that new growths may in due course push out from these "stumps" and form the foundation for a new set of spurs. After these come to bear fruit the oldest of the remainder may be dealt with in a similar manner. By a continuance of this method the trees, if healthy, can in course of time be refurnished with new spurs. Very old trees are not worth this trouble, and should be grubbed and new ones planted in their stead. In the case of younger trees, the wood laid in during the past summer should be shortened as far back as the circumstances demand, taking care that this is done at a point where there is a wood-bud on the upper side of the shoot near to the wall, and not where a bud looks outwards or at a right angle to the wall. The observance of this rule makes all the difference when the new growth has to be trained in, as well as to the future appearance of the trees.

Pears.—Whether the trees are trained in the form of a fan, diagonally, or as cordons, the pruning of spur-wood is the same—i.e., the wood should be cut back to four buds, and the spur-wood thinned out if at all crowded. This is really of greater importance in the case of Pears than with Plums, as fine, well-developed fruits may be looked for in vain if the spurs are allowed to become congested in the manner indicated. The reduction of the number of spurs on the branches to more reasonable limits when there is a super-abundance of them is also very essential, and should be attended to at the same time. With regard to young trees, the wood laid in to form future branches in fan-trained examples must be cut back to where it is firm and well ripened. In that of diagonal-trained trees it should be shortened in like manner and to an equal length on each tier of branches and the leader, so that when the three uppermost buds break and the growths extend the two lowermost will form a new tier of branches at the right distance apart from those beneath them. The leaders on cordons, if well ripened and space available, may be left nearly full length. With respect to newly-planted trees of the foregoing, the pruning and fastening of them back to the wall should be deferred till February next. Anything in the shape of nailing and tying done now should be of a provisional nature only. Where cordon Pears are made a speciality of, the alley should not be less than 3 feet

in width at the foot of the walls, the whole of it being devoted to the roots of the trees. By careful attention to feeding from the surface, and affording a top-dressing of new compost every two or three years, the roots are not only kept near the surface, but from encroaching on the border beyond to any great extent. Now is the time to top-dress where it is required, and for which the best materials obtainable should be employed. To prevent this from becoming trodden into a compact, impervious mass while pruning and nailing are going on boards should be employed to stand upon.

Training, etc.—With regard to this, the young wood and branches should be trained out as straight as possible whatever the form of training may be, and no more shreds and nails employed than are necessary to make them secure to the face of the wall. Tarré twine is the best material to use for the fastening back of the larger branches and soft twine or "fillis" for those of less dimensions when the walls are wired.

Selection of scions.—If the re-grafting of any trees with a particular variety or with several varieties is contemplated, the scions for so doing should, before pruning is begun, be selected, labelled, and heeled in under a north wall.

Jerusalem Artichokes.—The tops were cut down some time since, and the crop—a good one—is now being lifted. Medium-sized, well-shaped tubers will be picked out for next season's planting and put away in a cool place. The largest and best will then be stored for the winter, and the remainder boiled up for pigs. The ground which will be required for other purposes will be well manured and bastard trenched.

Gas-lime.—Where a dressing of this is needed for land infested with wireworm and other insects and on which Brassicas and Turnips are subject to clubbing and the "finger-and-toe" disease, the same should be applied and dug in at once. It is always safer to use this material in a not too fresh condition if the ground is required for cropping early in the season. A medium-sized 60-sized potful in a fine condition to each square yard will prove an ample dressing if it is applied at once. The lime should be mixed as intimately with the soil as possible.

Parsnips.—In case of a prolonged frost setting in, enough roots to keep up the supply for a few weeks to come should be lifted and stored.

Seakale and Asparagus.—A regular supply of both must be maintained by introducing a sufficient number of crowns of the former every week or ten days to the Mushroom-house, and in the second case by making up a fresh hotbed in time for the crowns to be planted in a frame placed thereon before the supply in that now being used becomes exhausted. A. W.

MIDLAND COUNTIES.

All Vines that have cast their leaves should now be pruned and the houses and rods cleaned. At least one month should elapse between the pruning of Vines and the time that they are started into growth. The houses should be kept as cool as possible without admitting frost, as they will then start more freely into growth when the time for forcing arrives.

Cucumbers require special care at this season. Avoid over-cropping, and do not allow any decayed leaves to remain upon them. Give careful attention to watering, and apply an occasional light top-dressing to the roots, maintaining an atmospheric temperature of from 65 degs. to 70 degs. A sowing will now be made to provide plants to replace the old ones now fruiting. The seeds are sown singly in thumb-pots filled with a compost of fine loam and leaf-mould in equal parts. The pots are plunged in a hot-bed where the temperature is about 80 degs., and a sheet of glass placed over the top. As soon as sufficient roots have formed the plants will be transferred to 3-inch pots, and remain on the hot-bed near the glass until ready for planting out. The earliest batch of

Begonia Gloire de Lorraine having passed out of bloom, the spikes have been cut away, and the plants will be afforded a short season of rest, after which the growths will be shortened to about 9 inches. Following this they will be placed in a house having a warm, moist atmosphere and be sprayed frequently to induce them to make growths for the supply of early cuttings. Later batches of this *Begonia* are still in full beauty. The earliest batch of

Primula sinensis is now developing the flower-spikes, and is afforded a light position in a house where an atmospheric temperature of 50 degs. to 55 degs. is maintained, ventilation being given when the temperature reaches the latter figure. If the plants are strong and healthy, occasional applications of liquid-manure or a little approved fertiliser will encourage the spikes to be thrown well above the foliage, thus enhancing their beauty to a great extent. It will also help to keep the foliage of a good colour and ensure a succession of bloom.

Hippeastrums (Amaryllis).—I have often heard complaints of these failing to flower. Keeping them too dry whilst at rest and allowing the bulbs to shrivel are often the cause of this, though during the autumn and winter months (after the growth has ripened) no more water than is necessary to keep the bulbs plump should be given. The stock of bulbs should now be overhauled, selecting from them any that are beginning to develop their flower-spikes, removing these to a temperature of 55 degs. to 60 degs. The dry soil about their roots should be well soaked with water, and the atmosphere of the house in which they are placed should be kept moist by syringing. Stimulants afforded carefully will promote a robust growth, but in no case apply it unless root action be free and healthy. Those bulbs that have been longest at rest will produce their flower-spikes the first, and it is wise to periodically inspect the stock.

Autumn-planted Cabbages have made very free growth, and in the event of very severe frost will be liable to suffer serious injury. All plants that were left in the seed bed have been pricked off on a south border, so that if required they will be available to make good the failures.

Seakale.—Where it is intended to force this on the ground where the plants have grown, it will be necessary to put Seakale pots or cradles over the crowns and place a good body of fermenting material round about them. As but a mild heat is required, this should be composed principally of tree leaves, employing only just enough stable-manure to slightly supplement the warmth generated by the leaves. The covering must be sufficient to exclude light and air from the crowns. The chief thing to guard against is too much heat. A steady heat of from 45 degs. to 50 degs. is the most suitable, any increase of this being detrimental, as it causes the growth to be weak and flavourless. Hotbeds for

Forcing Potatoes recently placed in slight warmth to sprout are being made as fast as labour will permit. It is a mild and lasting heat that is required, therefore a good quantity of tree leaves is used in the construction of the beds. The manure and leaves are mixed together and turned over a few times previous to making up the beds. These are made 5 feet high at the back and 4 feet in the front to admit of their subsiding a couple of feet during the next two months. During this time the linings will be frequently made up to the top of the frames, both to keep out the cold and maintain the heat of the beds. The soil, which will consist of old potting soil with a liberal admixture of loam and leaf-mould, is put on to the hotbed to a depth of 9 inches as soon as the frames are placed upon it. The Potatoes will not be planted until the soil is thoroughly warmed through.

Lettuce plants in pits and frames require very careful attention at this season—excessive damp is the chief thing to guard against during the winter. Air should be given freely on all favourable occasions, and during mild weather a little air should be left on all night. Stir the surface-soil frequently, and do all that is possible to keep the plants healthy. These remarks also apply to all young vegetable plants being wintered in cold-frames.

Celery.—The earthing-up of the latest plants is now completed. Long litter has been placed in readiness to protect the plants in the event of severe frost.

Parsley.—There is at present a plentiful supply of Parsley from plants in the open. All decaying leaves should be removed to allow plenty of light and air to reach the plants, and some covering material should be at hand to protect them in severe frost or snow. Where Parsley is planted in frames, the lights should be kept off till as late in the season as possible to enable the plants to withstand a few degrees of frost.

F. W. GALLOP.

SCOTLAND.

Pot plants.—There are some things which must not be kept at this time of the year in a too cool temperature, even when intended to bloom at a later date. Among these may be mentioned *Libouia floribunda*, for if it does not receive sufficient heat it will rapidly lose its foliage. *Coleuses*, too, must be given a moderate allowance of heat, never falling under 60 degs., if it is intended to keep them in good form during the winter. Many growers of the *Coleus* rely upon seedlings; but when a good selection has been made, the plants are worth retaining, and the numbers can readily be increased from cuttings in the spring. Some things can be propagated at any season of the year if the needful conveniences are at hand. Among these is *Saintpaulia ionantha*, a very useful little plant for the stove or warm greenhouse. During the week a good batch of leaf-cuttings was got in. These readily root, and form neat little plants which will ultimately be bloomed in 4-inch pots. *Begonia Rex*, too, may be easily increased at this time in a similar way. The stock plants of *B. Rex*, too, appreciate a little extra warmth at this time.

Stove.—*Gesneras* still keep up a very good display. They, too, can be propagated to any extent from leaf-cuttings put in round about this time. Of course, they are quite easily raised from seed; but time and trouble are saved when leaf-cuttings are used. The *Begonia* family still maintains its popularity for winter blooming. *B. Gloire de Lorraine* and its varieties are indispensable. For a time, *B. Gloire de Sceaux* was looked upon with favour; but it is coarse when contrasted with other winter-flowering *Begonias*, and is not now so much used. *B. corallina* and *B. socotrana*, as well as the old *B. Weltoniensis* are, likewise, to a great extent superseded, although they are useful in their way. *Hymenocallis* have now finished their season of blooming. These fine plants must not after flowering be permitted to feel the lack of moisture. The young foliage succeeds the flower-spike, so that plenty of water is necessary, and I like to assist the plants during the development of the fresh leaves with a little weak stimulant. *Cypripedium* will continue in bloom for some time longer. The brightly-coloured bracts of *Poinsettias* are admirable; many object, however, to their somewhat scraggy appearance. This is accentuated when (as often happens) the foliage drops or is destroyed by red-spider. The latter may be checked by vaporising. Rather ungainly, too, is *Euphorbia jacquiniæ-flora*. I think the best way to grow this is to insert five or six cuttings in a 6-inch pot and to allow them all to grow and flower in the pot into which they were put. To a certain extent this does away with the appearance of straggling habit which mars this brilliant plant. I used to like *Bilbergias* and *Francisces*—especially *F. confertiflora*—for winter; but they have had to make way for plants of a more "all-round" character. *Gardenias* are always useful, but *Stephanotis* has in many places been given up, chiefly, I fancy, from the extreme difficulty experienced in keeping it free from mealy-bug and of cleaning it when that pest gets established upon it. *Bougainvilleas*—both *B. glabra* and *B. Sanderiana*—are always useful.

The greenhouse.—*Chrysanthemums* are, and will be yet awhile, the chief feature. One of the curious facts connected with *Chrysanthemums* during the present season is the forwardness of the reputedly late-flowering varieties. For example, that fine old white Sou-

venir d'une Petite Amie, when grown in bush form, has usually been at its best after the New Year. It has, however, come along very rapidly, and was in bloom at the end of November, or more than a month earlier than usual. Similarly, the old yellow *W. H. Lincoln*—still one of the best for late work in a general way—has anticipated its time of blooming. To prolong the display, careful ventilation and a fair heat in the pipes are necessary. Damp is much more to be dreaded in the case of *Chrysanthemums* than a low temperature.

Chrysanthemum cuttings.—These are being freely produced, and, albeit earlier than is liked, they are being put in. Clean pots are essential, and a light sandy mixture passed through a sieve of $\frac{1}{2}$ -inch mesh gives good results. About $\frac{1}{4}$ inch of sand on the surface of each pot is advisable. A proportion of this falls into the hole made by the dibber and forms a suitable bed for the base of the cutting. Single cuttings in 3-inch pots are recommended should the plants be required for large or exhibition blooms, but for decoration quite good results can be obtained by putting the cuttings thickly into 5-inch pots. These, if potted before the roots get interlaced, do not seem to be at all affected by the disturbance. I have grown quite as good plants—bushes, that is—in this way as from the more orthodox single cutting in a 3-inch pot. Some insist that *Chrysanthemum* cuttings ought to be kept air-tight until roots are formed. It is merely a matter of opinion. In my own case the cutting pots are placed upon a stage covered with crushed grauite, in a moderately warm house, and the results are invariably quite gratifying. By moderately warm is meant a house in which the temperature at night never ranges beyond 55 degs.; in frosty weather a few degrees less. Water, of course, is but sparingly given until roots are emitted.

Hardy plants.—The further removal or division of these will now be delayed until February. Meantime, it is advisable to mark such plants as it is intended to divide or to move to a different place. Cutting over is being continued as time can be spared. No doubt, neatly-cut-over plants are desirable, but if a trifle unsightly, the stems may be of value in protecting the crowns of certain varieties from severe frosts. Reputedly tender subjects may be protected. Here there is seldom any real need to do so. Ashes, well weathered, are as satisfactory a substance as anything else. Let care be taken during the progress of cutting over that labels are not displaced or removed. Stakes should be sized, tied up, and stored as the work goes on.

Roots in store ought from time to time to be looked over. This precaution is doubly necessary during the present season, when Potatoes did not lift over and above well. Any decayed or decaying tubers will very quickly contaminate sound ones, so these should be periodically removed. It is not so needful to overhaul such things as Beet or Parsnips, yet it pays to give them a look through occasionally.

Hardy fruit on walls.—A few degrees of frost are now bringing down the foliage, and it will shortly be possible to make a start with the delayed work of pruning and training in the case of Apples and Pears. Unfortunately, the frost has not been sufficiently severe to dislodge the leaves of Plums, Peaches, and Nectarines. There is no doubt that a certain amount of growth is yet going on in the case of the two latter fruits. This is to be regretted, for it means that the period of rest will be curtailed, which will very probably react on the trees next season.

Outside work.—Time has been devoted to raking leaves and tidying up, work which it had been intended to reduce considerably, but which has, after all, been completed.

W. MCGUFFOG.

Balmac Gardens, Kirkcudbright.

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CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of course the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Delphinium Belladonna (R.)—In this the individual flowers are large and of a lovely azure blue, producing in the case of well-developed specimens a most pleasing effect and affording a charming contrast to the deep rich shades of colour which distinguish so many varieties of this noble summer-flowering perennial. *Belladonna* may be termed a dwarf-growing kind, as it seldom attains a height of 3 feet. It also is valuable in that it flowers continuously throughout the summer, thus rendering it a desirable and useful subject for massing.

Primula floribunda (J. F.)—This is a very accommodating plant, and of easy growth. In a cold-house, where there is a fairly dry atmosphere, it blooms profusely nearly all the year round. Shift your plants from thumb-pots into large 60's, giving ample drainage and sandy soil. Do not pot deep, occasionally pick off decayed flower-stems, and look after mildew or damp, the chief trouble to all winter-blooming Primulas. As the plants increase in size you can shift them into 48 sized pots. If then also you cut off all the winter stems a fresh lot of flowers in the spring will spring up and be very useful.

Rust on Carnations (Salopian)—Your Carnations have been attacked by rust, which is due to cold and generally uncongenial surroundings. The fungus vegetates within the cuticle of the leaf, and, attaining maturity, bursts the membrane of the leaf and distributes its particles of brown dust in all directions. Seeing you have only a few plants affected, we should advise you to burn all these. The others you might spray with a sulphur solution, using soft water, first reducing the sulphur to a mustard-paste consistency. One ounce of liver of sulphur (sulphide of potassium) dissolved in a quart of water, then added to 2½ gallons of cold water and syringed on to the plants has been recommended as a cure. Bordeaux mixture has also been recommended.

FRUIT.

Planting Peach-trees (H. L.)—While it is best to plant Peach-trees in the autumn or early winter, they may be planted up to February. Early planting means early rooting, hence the trees are more capable of withstanding the demand made upon them in the matter of leaf and wood production than when planted late. As to county, Peach culture under glass may be carried on safely anywhere, especially where the soil is naturally of a fairly firm loam, which Peaches like. If to such a soil, first deeply broken up, be added

wood-ashes, old mortar-refuse, finely crushed bones, and nothing else, the very best results should follow. Coarse manures should always be avoided, as these help to generate coarse wood growth that is undesirable.

Crops under fruit-trees (M. P.)—The best of all crops to grow under fruit-trees, provided the tree heads are not too dense, are Gooseberries, Currants, Raspberries, and Strawberries. A great deal, however, depends on the nature of your overhead trees, because, if the heads be close together, shutting out light and air, really nothing of any value will grow, and you must be content with one crop. If, however, the trees be fairly wide apart, and the heads kept thinned to admit plenty of light and air to the ground below, then you cannot do better than plant the fruits we have named. Generally all these do very well with some shade, but they should not be planted too thickly, or too near the trees.

VEGETABLES.

Diseased Potatoes (L. R. T.)—Your Potatoes have been attacked by the common Potato disease. The best remedy is spraying with Bordeaux mixture, which should always be done as a preventive measure, commencing about the first or second week in July or a little earlier in forward seasons. Three sprayings are an advantage, but one often protects to a large extent. Gather up all the diseased tubers and the haulm, and burn them, so as to check further inroads of the fungus.

Forcing French Beans (A.)—The seeds should be sown in 6-inch pots, several seeds in a pot, which should be about three-quarters filled with soil. A good variety for the early winter is *Syon House*, a good one for late winter being *Ne Plus Ultra*. These may be grown in the same house with Cucumbers, but they must be near the glass. It would be useless to attempt to grow them in such large pots as you mention. A stage erected in the house to keep the plants near the light is best for the purpose. You should, having once made a sowing, continue to make others for a succession every fortnight.

Parsnips (Amateur)—We fear your Parsnips are suffering in appearance and quality because grown in such rich soil. It is a grave mistake to grow these roots so large, as the flesh is very soft and watery, and the roots usually have a hard, woody core that is uneatable. When Parsnips are so soft fleshed they often become subject to an attack of fungus, which eats into the flesh and causes the formation of dark spots about the shoulders. Roots from seed sown at the end of April, that make fairly quick growth, yet do not grow large or run deep, make the best edible material, especially when properly cooked. The soil should never be fresh-manured, but have been so for a previous crop. An occasional dressing of soot does great good.

Forked Carrots (Mrs. Alfred Hartley)—The forking of Carrots is, as a rule, due to the addition of fresh manure to the soil in which they are grown, but as you say your Carrots were grown "after a crop of Potatoes and without manure," the cause of the forked roots must be due to something else. We take it from what you say that the ground was manured for the Potatoes, and this ought to have suited the Carrots. You tell us nothing of the depth of the soil. To grow Carrots two things are most important—the non-addition of fresh manure to the soil in which the Carrots are to be grown and seeing to it that the ground has been deeply dug or trenched so as to allow the roots to go down freely. In your case we should say that the ground was not properly prepared previous to sowing the Carrots. A heavy or clayey soil is quite unsuitable. Such a soil requires the addition of some material to lighten it. Carrots like a sandy loam of good depth. The same care is necessary in the case of Parsnips, Beet, etc.

MISCELLANEOUS.

Fowl-manure (W. W.)—In a fresh state this is of a heating nature. If allowed to become dry before using and stored until needed, it is of great value. A dressing of 40 lb. to the square rod when dry means about a bushel. But whether you have it green or dry get it spread over such ground as you wish to manure at once, and let it be exposed to the

weather for a few weeks, digging it in some time before the ground is sown or planted. Really, it is then good for any crop. Vary the dressing from year to year, so that the ground dressed with fowl-manure this winter will get straw-manure the next. It is a good plan to mix fresh fowl-manure with double its bulk of soil, and let it lie in a heap till the winter.

Liming soil (E. M.)—Lime is, as a rule, less needed for light sandy soils than for close stiff ones. Still, an application of fine-slacked lime at this time of the year is helpful, as any astringent properties in the lime are eliminated before cropping begins. You will find that the best way to apply it on uncropped ground is to put it down, unslacked, in small heaps of half-a-bushel per rod, then throw soil over it, and very soon it will become slacked. Then, with the soil mixed with it, spread it evenly over the ground. If your soil be rich in humus or manures, you will not need to give any additional manure for Potatoes; but if it be poor it will be needful to add some half-decayed manure to help give a crop. Add that some time after forking in the lime.

SHORT REPLIES.

Robeston.—Bamboo Co., 164, Lever-street, City-road, E.C.—**C. Bateman.**—Unfortunately, the shoot of Black Currant you send has been attacked by the mite, but before destroying the trees we should go over the bushes and remove all the affected buds. This may probably check the attack. See also reply to "A. T.," in our issue of December 9th, page 641.

NAMES OF PLANTS AND FRUITS.

Names of plants.—**Rob Roy.**—1, *Ceanothus azureus pallidus*; 2, *Cotoneaster frigida*; 3, *Pleasant* in flower; 4, *Escallonia* sp.; 5, *Azara microphylla*. When sending plants for name, kindly read our rules as to the number we undertake to name in any one issue.

Names of fruits.—**E. K.**—Apples: 1, *Wellington*; 2, *Golden Noble*; 3, *Lane's Prince Albert*; 4, *Bramley's*.—**M. K.**—Pears: 1, *Marie Louise*; 2, *Catillac* (stewing). Apples: 3, *Rymer*; 4, *Winter Hawthornden*.—**K. L. M.**—Apples: 1, *Norfolk Beaufin*; 2, *Lady Henniker*; 3, *Sturmer*; 4, *Winter Greening* (syn. *French Crab*).—**C. R.**—Apples: 1, *Alfriston*; 2, *King of the Pippins*; 3, *Cox's Orange*; 4, *Golden Noble*.—**A. S.**—Apples: 1, *Crimson Queening*; 2, *Ribston*; 3, *Scarlet Nonpareil*. Pear: 4, *Beurré Diel*.

CATALOGUES RECEIVED.

J. W. COLE AND SONS, Peterborough.—*New and Choice Chrysanthemums and Pelargoniums.*

F. H. WILLIAMS, Sidney House, Park-road, Leyton, Essex.—*Catalogue of Chrysanthemums.* **SLUIS AND GROOT, Enkhuizen, Holland.**—*General Price List of Vegetable, Flower, and Agricultural Seeds.*

Royal Horticultural Society.—The Royal Horticultural Hall having been offered by the Council to the War Office for military purposes, and having been accepted for the use of the Australian Imperial Force, the Government, recognising the national importance of the work being done by the Society, has been pleased to place at its disposal the Drill Hall of the London Scottish for such period as the Vincent Square premises remain at the disposal of the War Office. The Drill Hall is in Buckingham Gate, Victoria-street, opposite the Army and Navy Stores. It will be remembered that the meetings of the Society were held there for a long number of years before the Society built its premises in Vincent Square. There will be no further meetings and exhibitions of the Royal Horticultural Society in 1916. The first meeting, etc., in the New Year is fixed for Tuesday, January 16th, and it and subsequent meetings will be held in the Drill Hall. The Society's offices and library remain at Vincent Square as heretofore.—**W. WILKS, Secretary.**

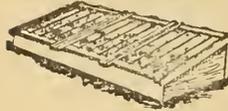
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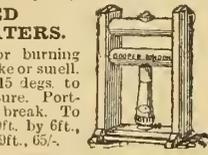


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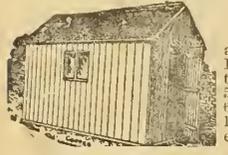
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In consequence of the Christmas Holidays, we shall be obliged to go to press earlier than the number of GARDENING ILLUSTRATED to be dated DECEMBER 30th, 1916.

Orders should be sent as early as possible in the week preceding to ensure insertion. No advertisement intended for that issue can be received, altered, or stopped after the first post on WEDNESDAY, DECEMBER 20th.

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FLOWER SHOW FIXTURES.

1917.

JANUARY.

- January 15.—National Chrysanthemum Society's Executive Committee.
- " 16.—Royal Horticultural Society's Committees.
- " 30.—Royal Horticultural Society's Committees.

FEBRUARY.

- February 17.—Annual Meeting and Committees.
- " 27.—Royal Horticultural Society's Committees.

MARCH.

- March 6.—Royal Horticultural Society's Bulb Show (2 days).
- " 13.—Royal Horticultural Society's Committees.
- " 27.—Royal Horticultural Society's Committees.

APRIL.

- April 11.—Royal Horticultural Society's Committees.
- " 17.—Royal Horticultural Society's Daffodil Show (2 days).
- " 24.—Royal Horticultural Society's Committees.

MAY.

- May 8.—Royal Horticultural Society's Committees.
- " 22.—Royal Horticultural Society, Chelsea (3 days).

We shall be glad if Secretaries of Horticultural Societies will kindly send the dates of their various shows to Editor, GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

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11, 12, 13, 14 x 9in. 28-	49-	18, 20, 22, 24 x 16in.	36-
12, 13, 14 x 10in. 29-	50-	20, 22, 24 x 18in.	38-
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GARDENING ILLUSTRATED.

No. 1973.—Vol. XXXVIII.

Founded by W. Robinson, Author of "The English Flower Garden."

DECEMBER 30, 1916.

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NOTES OF THE WEEK.

Skimmia japonica.—This is now covered with its bright crimson berries, which are very bright when the sun shines on them. Being of slow growth, it is quite suited to the rock garden. It does not seem to be fastidious about soil, though a little peat or leaf-mould is appreciated, but the position should be in semi-shade.—C. T., *Highgate*.

Cupressus Lawsoniana Pottensi.—Those who like shrubs of columnar habit should make a note of this, one of the most elegant forms of the Lawson's Cypress we have seen. Of the gracilis type, it may be likened to *C. L. erecta viridis* in form, much more refined and elegantly clothed, and with a density and softness to the touch which separates it from all else. Endowed with the hardiness and free growth of its tribe, and with a certain glaucous tone which renders it at once distinct, there is no doubt that we have here a good addition to a useful class. It was recently exhibited by Messrs. Fletcher Brothers, and gained an Award of Merit.—E. H. J.

The Altai Rose.—Allied to our native Burnet Rose (*Rosa spinosissima*) and accounted only a variety of that species, *R. spinosissima altaica* is often catalogued as *R. altaica*. It is a really handsome Rose, with large, single, creamy-white flowers, and one of the earliest to bloom, coming in considerably before the forms of the Burnet Rose. Even in 1916, not an early season, it flowered in May. It increases freely by suckers (too quickly, indeed, for some positions). It is of fairly rapid growth, although not rampant, and forms an erect bush which may be kept down if required. I have a plant which is some 9 feet high, but about 6 feet is its usual height.—SCORCH ROSE.

Landscape architects.—Referring to the so-called landscape gardeners, or architects, as some prefer to call themselves, there is now a veritable flood of these embryo landscape gardeners, female as well as male, being turned loose on suffering humanity. They are being turned out in such numbers that I wonder what must become of them all. I have noted that nearly all these youths, and their teachers, can talk on landscape designs, but that so far as practical gardening is concerned they know very little indeed. Yet these men are intruding themselves upon those who have forgotten more of horticulture than the newly-fledged landscape artists know, and in not a few cases are allowed to submit plans, make changes, and sug-

gest or even superintend plantings for which they are unfitted.—J. N. CRAIG in *Gardeners' Chronicle*, of America.

Primula florida.—This first flowered in this country last spring. It is to the Edinburgh Royal Botanic Gardens that the honour of first flowering it is due. I saw it in bloom there, and was quite enamoured with its beauty. It has rounded, prettily-toothed leaves with a longish stalk, and lying almost flat on the ground. From these rises a slender scape or stem, carrying several flowers in an umbel and on short stalks. The mealy calyx sets off the rather long-tubed flowers, which are of a fine purple-blue when they open, passing off to a lighter shade. It is doubtful if *Primula florida* will stand our winters, but it should make a good plant for pots in loam, leaf-soil, and a little sand. A collection of such new Primulas would be exquisite in a cold or cool house.—S. ARNOTT.

Campanula haylodgensis.—This Campanula was raised by the late Mr. Anderson-Henry, at Hay Lodge, Edinburgh, a number of years ago, and bears a close resemblance to that capital dwarf Bellflower called Profusion. It has yellowish foliage and a plentiful supply of light-blue flowers. It is understood to have been a hybrid between *Campanula garganica* and *C. carpatica*. Mr. Anderson-Henry was, I believe, not too careful in checking his crosses, but the characters of this hybrid would indicate the probability of this statement being correct. *C. haylodgensis* is an excellent plant for the rock garden or for stone edgings to herbaceous borders. I think it prefers a certain amount of shade, and it can be grown well in loam and leaf-soil, with a little sand and grit. Those who find it impossible to obtain *C. haylodgensis* may secure Profusion in its place, and may rest assured that either will please.—S. ARNOTT.

Cotoneaster frigida.—I quite agree with all that Mr. Jenkins says (page 616) in favour of this fine Rockspray. It seems strange that its merits are not more generally appreciated, for in early winter it is one of the most conspicuous and beautiful objects in garden, pleasure-grounds, or shrubbery. It is grown here extensively in many positions, and never fails to attract attention. I have never seen it as a standard, but I can readily believe it will be additionally striking in such a form, for the growth is (in its younger stages) rather ungainly in bush form. Even so, it is by no means to be despised, and by judicious cutting a better shape can be formed. Some pieces in a shrubbery are at least 20 feet high, and are very

effective. Birds, unfortunately, have developed a liking for the fruit during the present season—a fact which may be accounted for to some extent by the scarcity of berries on other shrubs. In the winter of 1915-16 these continued to hang in good order till quite the end of January.—W. McGRUGG, *Balmae, Kirkcudbright*.

Aster grandiflorus.—The specific name here employed when this Starwort was first introduced, nearly 200 years ago, might have been applicable enough, though to-day, in face of all that has been done by modern raisers of these flowers, it is in the nature of a misnomer. Climax and a variety of the Italian Starworts are ahead of it to-day as large-flowered varieties go; head and shoulders above it as all know from the reliability, decorative, and utility points of view. How many, I wonder, have this year seen *Aster grandiflorus* at its best? Or, again, how often in a decade do we see this November-flowering sort at its best? These things notwithstanding, I would still direct the attention of the modern hybridist to it, since there are a size and colour of flower and habit withal to be desired, and these, used in conjunction with, say, some of the best Italian Starworts, might give us improved early-flowering varieties of medium habit of growth and good colour of which we have not yet dared to dream.—E. H. JENKINS.

Erica gracilis.—The typical representative of this old favourite, known far and wide in market and trade circles as "autumn gracilis" is one of the most ornamental and popular of its race—second to none, indeed, unless it be *E. hyemalis*, which, in its flowering, is contemporary with it. Beautiful at any time when the flowers in their prime assume that rich purplish-red which appears to attract everybody, it is seen at its best, perhaps, under artificial light. Just now numbers of the plants are seen in the shops of florists everywhere, the elegant bushes of rather more than a foot high covered with countless blossoms of the colour indicated. As a bright and effective subject for the sitting-room at this season, it is one of the good things worth having, one, too, that will afford pleasure for many days to come. Like others of the Heath tribe having brightly-coloured flowers, the colour remains to some extent when the plant is beyond the gardener's skill, in this way giving a good return for its cost.—J. S.

Begonia Mrs. J. A. Petersen.—This, of American origin, was first seen here rather more than a year ago, when exhibited by Messrs. Stuart Low and Co.

This firm has also more recently exhibited it, though the best cultivated batch of it I have yet seen was from Woburn Place, Addlestone. Though it may be of hybrid origin or a sport, it is obviously of the Gloire de Lorraine set, so far as habit, size, and time of flowering are concerned. It differs from all others of that class, however, by reason of the intense rose-carmine colour of its flowers, though more particularly in the deep coppery-bronze of its leaves. In this latter respect it is unique among its fellows—as distinct as it is ornamental and desirable. There are the freedom and continuity of flowering so typical of the original, and, like it, blooming freely even in the early stages of growth, it is likely to be serviceable from many points of view. In some of the plants there is a tendency to revert to the green state. That this is so is in some measure a confirmation that the new-comer originated as a sport, though I have no definite information on the point.—S. V. S.

Sedum spectabile atropurpureum.—One of the peculiarities of vegetable life is that of "sportiveness" so-called, that change from the normal or typical state which is responsible for increased variety, though not entirely of colour. This may be superior to the original, or the reverse, or both. In the case of this *Sedum*, after having remained normal for many years, the sportive tendency became evident a few years ago, and in diverse places at once, as sports not infrequently do. All are not alike in colour, however, and all are not of equal merit. Among the best of them is that named above, for which Mr. Amos Perry was given an Award of Merit years ago. Its nearest approach in colour that I have seen was in a broad belt where the plant was used as a margin to a shrub bed. So far as I remember, the variation was in the nature of a "root sport"—i.e., the whole of one plant was affected, and not a single branch only. Among the usual run of herbaceous plants such sports are uncommon. Both forms occur, however, in the *Chrysanthemum*, which, of course, is also "herbaceous." The object of this note, however, is to call attention to the richly-coloured form named above as among the most desirable of early autumn flowers. In a bed alone it is most effective. Contrary to general belief, too, the plant is obviously most at home in stiffish loam, and, so far as my experience goes, attains a greater colour beauty in such than in much lighter soils. In a cool, moist loam the stems of established plants approximate to 3 feet in length. Given such development, it is goodly to look upon. It may be planted now or in spring.—E. H. JENKINS.

Box-edging.—If I had ever so big a garden I should have very little Box-edging. It looks very nice when doing well and is properly cared for, but the pleasure it affords is too dearly bought. Planting is a tedious process, there is nothing in gardening that requires to be more carefully done, and the man who has to trim it annually could easily find a better job. In course of time it becomes gross, robs the soil, and if ever so tiny a bit of Couch or Bindweed gets into it it cannot be got out, and all the ants in the neighbourhood find it a happy home. Some years ago I made an edging to two flower borders, and for a couple of years it looked very well, and then lost colour. I took away the gravel and gave it a heavy dressing of lime, which made a great improvement, but when it got bigger I lifted it, and instead of replanting I collected all the big stones I could find in the surrounding fields and made the edging of them, and they are there now. Box is all very well when small, but when it comes to a

certain size it robs the ground of moisture and nourishment, whereas stones, in a measure, protect the roots, and one can plant close to them—a great advantage in the case of very dwarf things either tender or hardy. The more irregular in form the stones are the better I think they look—much better, I consider, than the edging tiles in use nowadays, and which I do not admire. Box edging is troublesome to lay and expensive to keep in order; stones are easily put in place, and when the border has to be renovated can be lifted and put back again in a comparatively short time. Some of our walks are edged with bricks buried to half their depth, and with a couple of inches of ashes one gets a nice comfortable path through the winter. New bricks quickly become dull-coloured.—J. CORNHILL.

FRUIT.

APPLE ALLINGTON PIPPIN.

The choice of Apples is a matter of great importance, and one that should not lightly be undertaken. It is quite likely that "W." has known D'Arcy Spice for a greater number of years than myself, but I also can claim to have known Allington Pippin longer than he! "W." places flavour as the first duty of an Apple, and I place good cropping qualities before this. Now, it is quite obvious that in selecting fruits from a varied collection in a fruit-room, everyone will place flavour first; but it is quite a different matter when a general recommendation is given of the "best" Apples, without qualification as to locality or soil. Regular cropping is then of the first importance. An Apple a few degrees below the best in flavour which crops well and thrives on a large range of soils will be more valuable than the most delicious Apple which is irregular in crop and fastidious as to soil. "W." says D'Arcy does well in Essex. Precisely, but where else? I have never seen it thriving out of that county, nor have I yet found anyone else who could speak well of it away from its native bounds.

Mr. Farmer thinks Allington is only liked by those benighted folk who have never tasted anything better. In the selections of Apples to which I referred in which it was placed among the first half-dozen, the voters were experienced gardeners, who know and grow all the main sorts of dessert Apples. Really, it seems time to protest against the setting up of personal tastes as a standard for all men. Many people like an acid Apple, and among my friends who share this preference I do not note any alarming symptoms of degeneracy or disease as compared with those who prefer sweeter fruits. I have never yet met the Apples which are "like vinegar" and require an "equal weight" of sugar to render them edible, and should much like to add such a fruit to my collection of pomological curiosities. It is quite easy to run down "market fruits," but it must be remembered that they fulfil two very important functions—they are, firstly, varieties which pay to grow, and, secondly, varieties which the public likes. Regardless of Burke's dictum, Mr. Farmer sets out to indict a nation. If the market-grower can be shown fruits which crop as well and will be more popular with his purchasers he will not be long before he supplies the demand. Mr. Farmer's remarks as to "manufactured" sugar, I fail to understand. How, where, and from what is sugar "manufactured." An answer to this question should be of value in these days of advancing prices.

In estimating the value of any fruit, I always should place its merits in the following order—vigour, crop, flavour. Allington Pippin will score higher in the

first two points than any of "W.'s" best six, and it is for this reason that it has become in the short space of twenty years one of the leading dessert Apples for general use, and has, in my opinion, fully justified its introducer's opinion as an Apple of good flavour, free-bearing, and a wide range of adaptability.

E. A. BUNYARD.

[*Manufactured sugar all must know as distinct from the natural sugar found in a fruit or vegetable—quite different in its effect. It is made largely from Beetroot, and in that form said to be less wholesome than from the sugar-cane. Its use on sour Apples is frequent, and the result far from being so good as where an Apple finds its own natural sugar as the Blenheim does.—Ed.*]

—The remarks under this heading in your issue of the 16th inst. will, no doubt, have been read with considerable interest by your subscribers. There appears, however, to be some confusion as to the standard by which this Apple is judged. As a market Apple it appears to be a success, both on account of its high-cropping qualities and the fact that it sells well to the general public. With regard to the Allington Pippin, I think we shall find many amateurs will agree both with "W." and Mr. W. J. Farmer as to its quality, but there is a good market for it. With regard to the D'Arcy Apple, I do not think anyone would recommend this to market-growers, but to amateurs this Apple must appeal on account of its wonderful qualities; in fact, it is pretty well agreed that this is the finest English Apple known. I was very pleased to read Mr. W. J. Farmer's remarks with regard to many recent Apples so-called dessert, which are lacking in quality. Nevertheless, these have obtained Awards of Merit and First-class Certificates at the Royal Horticultural Society's shows. One wonders what is the standard by which they are judged. It would appear as if size and colour were the determining factors for the committee.

I think I am correct in stating that there is a growing feeling amongst amateur gardeners that there is room for a Pomological Society in Great Britain, which could be run on similar lines to the Société Pomologique in France. The Apple question wants seriously tackling by somebody—at present there seems to be a condition of chaos. Descriptions in catalogues are misleading to say the least of it, and owing probably to the numerous first-class certificates and awards which have been given in recent times to poor quality Apples, we have undoubtedly lost a good many good old standard sorts, as it does not pay the nurserymen to grow them because they are not prominently before the public, and consequently are not asked for. I believe that Mr. E. A. Bunyard has been for some time devoting himself to getting together all these old varieties which were considered first-class in bygone days, and which are so described in "Hogg's Manual" and other books.

Your paper appeals mainly to amateurs, and I think it would serve your readers better if the discussion could be confined to Apples suitable for the amateur gardeners, and not necessarily for the market. I venture to send with these remarks a list of the best varieties, most of which I have personal experience of. I do not claim that these are the only ones, or that they come before any particular varieties which others can name, but I do claim that these are all first-class Apples, and granted that they will grow in the particular soil and climate of any amateur's garden, I feel sure that they would produce general satisfaction. There is one other point in Mr. W. J. Farmer's letter which I should

like to refer to—that is, King's Acre Pippin. This is a most excellent Apple in February and March, and I can endorse fully his recommendation. With regard to its origin, I speak under correction, but I believe that it is not actually known what the exact cross was, and it is only assumed that Ribston was one of the parents—in other words, the Apple was found as a chance seedling.

SELECTION OF DESSERT APPLES FOR AMATEUR'S GARDEN.

Approximate order of ripening:—

1. August.
2. September—October.
3. October—November.
4. November—December.
5. December—January.
6. February—March.

Six best dessert Apples in order of merit:—

D'Arcy Spice	6
Cox's Orange	4
Ribston	4
Claygate Pearmain .. .	6
Lord Burghley	6
King's Acre Pippin .. .	6

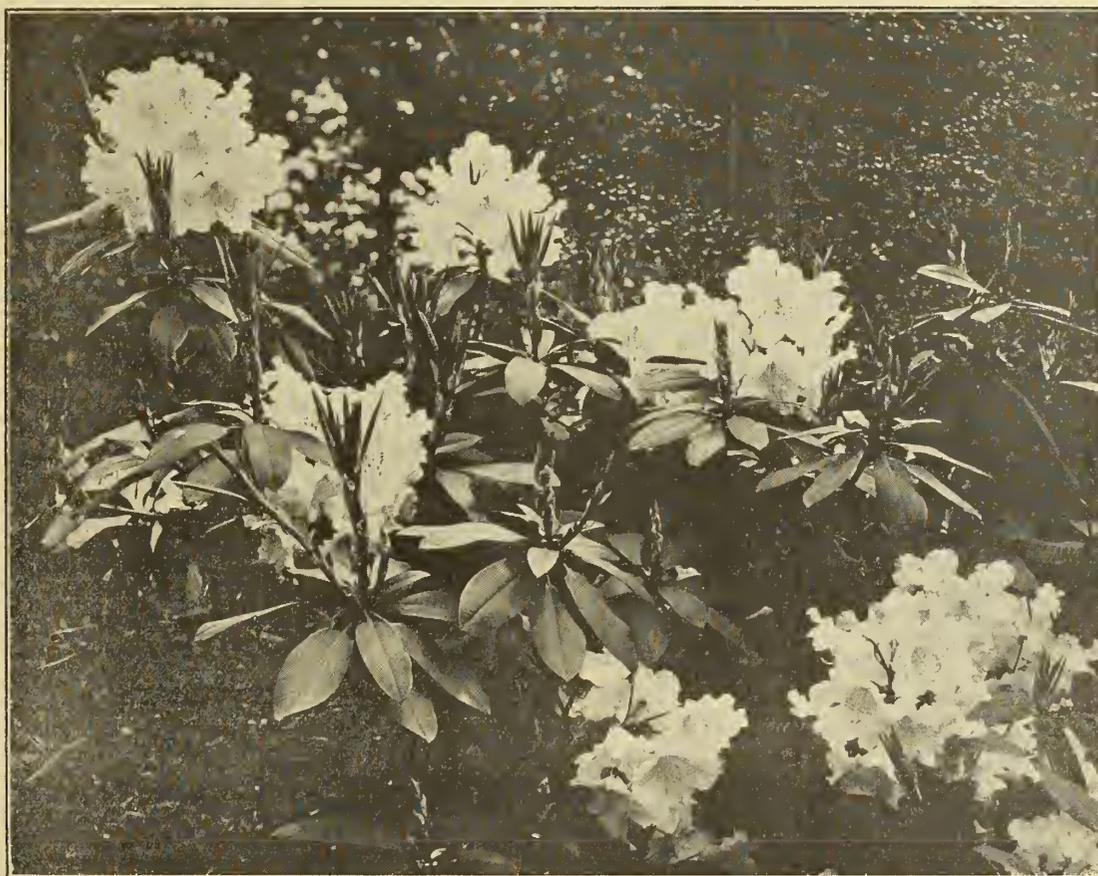
they would no doubt impress him with some effects of shop sugar. Also a visit to a sugar factory would tell him of things not always pleasant. As to the D'Arcy Apple, Mr. Bunyard's idea that it will thrive in Essex and nowhere else is one that can be easily tested. Does the stock suit it? We have evidence in plenty that fruit-trees, like others, will not all thrive on the same stock. Some Pears, for example, will never thrive on the Quince; many do admirably. An Apple of the quality of the D'Arcy deserves to be tried on the best stocks to see how far this charge of want of vigour is justified or may be remedied. Praising an Apple because of its bearing is beside the question. Otherwise one might name the Cider Apple-trees, which break down with fruit most years. If it were a matter of fertility, one need not go beyond Bramley or Domino, or a score of others—not to name

carefully cut out any berries in which decay has set in. Keep the bottles filled with water to within an inch or so of their mouths. After the Grapes are taken away the Vines can be pruned, taking the precaution afterwards to dress the wounds with "knotting" to avoid the risk of bleeding. The Vines and structure can then be cleaned when opportunity occurs. —K. P.

TREES AND SHRUBS.

RHODODENDRON LODER'S WHITE.

This, which is said to be a cross between R. Aueklandi and R. arboreum album, when shown at the Temple Show in 1911 was given an Award of Merit. As there shown, the habit of the plant did not appeal to us, the growth being very leggy, this fault being noticeable in the illus-



Rhododendron Loder's White.

Further selection of first-class merit:—

Gladstone	1
Beauty of Bath	1
Early Margaret	1
Lord Lennox	2
Sac and Sugar	2
Lady Sudeley	2
Devonshire Quarrenden .. .	2
American Mother	3
Wyken Pippin	3
Ashmead's Kernel	3
Margil	5
Cornish Gilliflower	5
Roundway Magnum Bonum .. .	5
Winter Quarrenden	5
Orleans Reinette	6
Rosemary Russet	6
Pine Golden Pippin	6
Duke of Devonshire	6

F. B.

Springfield, Northampton.

NOTES AND REPLIES.

The D'Arcy Apple.—Mr. E. A. Bunyard, not knowing what "manufactured" sugar is, makes me wonder if my understanding is in its usual place. He is young and strong, and has no need for consultation with the learned men in Harley Street, or

the Worcester Pearmain, which the fool voter puts on the top of his list.—W.

Grape-room.—With so much damp and fog to contend with, late-keeping Grapes will be less troublesome off than on the Vines. Advantage should, therefore, be taken of a fine, dry morning to get the bunches cut and transferred to the Grape-room, where, if everything is in readiness, the bottling can be quickly done. As great a length of lateral as possible—i.e., between the rod and bunch—should be cut with each bunch, this being the portion to be inserted in the bottles. The portion above the bunches, if of inconvenient length, may be shortened. Care must be taken to see that the bottles are not so full of water that they run over when the stems or pieces of lateral are inserted, as the drier the atmosphere the better will the Grapes keep afterwards. When finished, exclude the light, and maintain an equable temperature of 55 degs. Examine the bunches closely every few days, and

of the plant we give to-day. The flowers are large, pure white, with crisped edges.

The Willow-leaved Magnolia (*Magnolia salicifolia*).—This is one of the newest and most distinct of the numerous Magnolias, and promises to become one of the most useful. A native of Japan, it was introduced to the British Isles ten years ago, and already good-sized examples are to be met with in several gardens. In Japan it forms a small tree 20 feet or so high. Here it will probably grow as tall. The glistening white flowers, each up to 4 inches in diameter and made up of six narrow petals, are borne freely in April, well in advance of the leaves. It should be planted in well-drained loamy soil containing peat or leaf-mould, and in such a position that protection will be afforded from cold winds in spring and shade from early morning sun will be provided, for after a frosty night the flowers

are less likely to suffer if thawing is gradual than if bright sun suddenly shines on the frozen blossoms. The flowers are rather like those of *M. stellata*, but are not semi-double as are the blooms in that species.—D.

Aucuba japonica.—The form of this which nurserymen and others call "vera" is among the most attractive of hardy shrubs at this time, when carrying its clusters of brilliant-scarlet fruits. Well-furnished bushes, 9 inches or a foot high, have often been exhibited, and few subjects are more serviceable on window-sills in town or suburban districts. Less well-known is *A. longifolia*, whose leaves are longer, narrower, and more tapering. In good fruit it is less frequently seen than the above. The oblong fruits are brilliant scarlet. Quite near to this last is *A. J. Fletcheri*, the dark green shining leaves somewhat broader. The fruits are also larger. In this, too, the young shoots and leaf-stalks are green, while quite dark in the other form.—E. H. J.

The Chinese Fringe-tree (*Chionanthus retusa*).—Although this is a small genus, it contains two very interesting and useful species—*C. retusa* and *C. virginica*, the former a Chinese shrub, and the latter a native of N. America. *C. retusa* forms a bush 8 feet to 12 feet high in this country, but it grows very much larger in China, sometimes, it is said, being as much as 40 feet high. It was introduced originally about the middle of last century, but was little grown until reintroduced thirty years later. The white flowers are borne in June and July in large, light inflorescences, terminating short shoots, the inflorescences resembling somewhat those of the Manna Ash. It requires a sunny position, and should be planted in well-drained, loamy soil.—D.

The Virginia Creepers—their waning popularity.—When in a young state the delicate tendrils of the Virginia Creepers are admired, and autumn sets the leaves aflame. We are loth to think that a day may come when we should regret their planting. It has to be said concerning these once very popular creepers that people are beginning to think, after all, other things less troublesome might have been planted. "Never again," I heard it remarked the other day, when long shoots were being extracted from inside a spout and from under tiles, and had caused an overflow of rain-water much to the detriment of the bedroom walls belonging to the owner.—TOWNSMAN.

A delusion—Mendelism.—Writing on the breeding of yellow-flowered Cattleys, Mr. Rolfe, in the *Orchid Review* for November, says that "Mendelism provides no means of controlling the elements that it has to work with. If it were able to eliminate undesirable qualities there would be something hopeful about it, and even if it could foretell exactly what would happen in any given experiment the knowledge would be useful and prevent many disappointments, but it can do neither the one nor the other. It tabulates the results of hybridisation, from which it assumes the existence of characters that are indestructible, and that can only be reshuffled according to the law of chance, and it proclaims the existence of laws that it is unable to define. Mendelism is, in short, a species of symbolism, representing nothing more concrete than its own supposedly indestructible units, which can be sub-divided and recombined according to circumstances, and which are as shifting as the sand on the sea-shore." This is precisely what experienced plant breeders say with respect to Mendelism. It does not help the breeder in mating for characters that have not already been obtained, and he must take the knowledge that comes from experience as his best guide. Then Mendelism may step in and account for his results, but that is only a kind of counting and sorting the chickens after the eggs have been hatched.

PLANTS AND FLOWERS.

FERNS.

BRITISH FERNS.

ALTHOUGH the species of British Ferns, which are popularly known and grown in thousands of gardens, may be numbered on the fingers, and, indeed, in the vast majority of cases, consist but of four or five kinds, viz., the Common Male Fern, the Lady Fern, the Broad Buckler Fern, the Shield Fern, and the Harts-tongue, there are really no less than forty-four species, representing fifteen genera, indigenous to the British Isles. A certain number of these, it is true, hardly lend themselves to general garden use as decorative plants, presumably owing to their small size and the difficulty of imitating those natural conditions under which they thrive in their native habitats. Thus the Sea Spleenwort (*Asplenium marinum*), which lines the caves and dots the cliffs with its bright green foliage on many of our rocky coasts, especially in the west, will not stand inland outdoor culture. Deprived of salt-laden air it languishes, and despite its tough, leathery foliage, a very few degrees of frost suffice to kill it. It is, in point of fact, better adapted to sub-tropical conditions, and when grown in a warm greenhouse assumes a size and luxuriance of growth such as it never attains here under natural conditions, the fronds reaching a height of 2 feet and the plant forming a stout bush as much through. The delicate Maidenhair Fern (*Adiantum capillus Veneris*) is also a coastal Fern, but of more limited extension; this, too, is tender, and is confined to our warm western counties. A few of the other Spleenworts (*Asplenium*), *A. fontanum*, *A. septentrionale*, *A. germanicum*, and *A. viride*, may, under very favourable conditions of climate, be induced to survive in rocky chinks and crevices, but cannot be recommended as popular plants. The Adder's Tongue (*Ophioglossum vulgatum*) and the Moonwort (*Botrychium Lunaria*) belong to the same category requiring special conditions, while in no way appealing to taste as regards their beauty.

Outside these exceptions, however, there are many of the remaining species which are popularly ignored, but which are well worthy of a place in those rockeries which are devoted to the hardy Ferns already cited. The Buckler Fern or *Lastrea* group, for instance, popularly represented by the Male Fern (*Lastrea filix-mas*), and the Broad Buckler Fern (*L. dilatata*) embraces two other species of quite equal or greater merit, viz., the Lemon-scented Fern (*L. montana* or *Oreopteris*), and the Hay-scented Fern (*L. amula*). The former is an erect-growing Fern, with pale green fronds arranged shuttlecock fashion around a central caudex. These fronds are covered with glands, and when gently drawn through the hands an agreeable Lemon-like odour is perceived, whence its name. In habit and make it somewhat resembles the Male Fern, but is distinguished by the side divisions continuing right down to the base, where they taper into rounded lobes, while the Male Fern has a naked stalk of several inches, the side divisions then commencing are fairly long ones. *L. amula* is a little on the lines of the Broad Buckler Fern, but smaller, and with its fronds beautifully crisped and crinkled rendering it far prettier. *L. Thelypteris*, the Marsh Fern, resembles an attenuated *L. montana*, but has a creeping root, and only thrives in bogs. It is not to be recommended for garden culture. The

SHIELD FERNS consist of three members, viz., the Holly Fern (*Polystichum Lonchitis*), the Soft Shield Fern (*P. angulare*), and the Hard Shield Fern (*P. aculeatum*). The first is a true mountain Fern, rarely found below 2,000 feet. Its hard, lucent, green fronds are once divided, the midrib bearing two rows of acutely-pointed divisions, somewhat like Holly leaves, whence its name. Given a northern aspect, with its crown well sheltered by an overhanging rock or Brier, it will grow in the garden, but is rather apt to perish, unless the air be very pure. *P. angulare*, the Soft Shield Fern, grows much larger and has long, lax fronds twice divided, the segments resembling those of the Holly Fern in shape, but being much softer in texture, whence the name. The Hard Shield Fern (*P. aculeatum*) is stiffer in growth and tougher in make, but otherwise not very dissimilar. The

POLYPODY FAMILY, represented by the Common Polypody (*Polypodium vulgare*), the Oak Fern (*P. Dryopteris*), the Beech Fern (*P. Phegopteris*), and the Limestone Polypody (*P. calcareum*), are all available for rockeries in sheltered situations. The first-named is a very common Fern in many parts of the country, topping old walls and fringing the hedgerows and stone dykes with its pendulous, once-divided fronds. All four species have rambling, creeping root-stocks, but those of *P. vulgare* are thick and fleshy, those of the others are very slender and stringy, in a sort of mat whence the fronds spring, forming a dense clump. *P. vulgare* is quite evergreen, while the others die down in the autumn. As a result of this habit of growth a loose, open, leafy soil is essential. The

BLADDER FERN (*Cystopteris*) is not to be recommended for general culture, not being particularly beautiful, while the fronds have a habit of becoming brown very early in the season. Recurring to the Spleenworts, of which we have mentioned a few of the ineligible, the Maidenhair Spleenwort (*A. Trichomanes*) is a pretty little rosette-forming Fern which does well in chinks of rocks, and the Black Maidenhair Spleenwort (*A. Adiantum nigrum*) of very different habit, with upright, twice-divided fronds, is also a rock lover and forms a pretty relief among the robuster growers. The other Spleenworts (*Ceterach officinarum*) may do well in the chinks of a wall with sunny aspect. The Royal Fern (*Osmunda regalis*) is extremely handsome when well grown, but it is a moisture-loving species requiring plenty of water, and is most at home when its roots are in boggy soil. To plant it high up on rockwork is, therefore, to court failure. The Hard Fern (*Blechnum Spicant*) merits far more attention than it gets. It is a very pretty Fern, with dark green-shining, once-divided fronds of two kinds, leafy, barren ones, which form a spreading rosette, and thinner, erect, fertile ones, consisting of little more than midribs bearing the spores. It is quite evergreen and thrives in good leafy soil, provided it does not suffer from drought. The Parsley Fern (*Allosorus crispus*) is a pretty small-growing species, usually supposed to be difficult of culture, but really of the easiest if properly planted. Its normal habitat is on the sloping débris of mountain sides, where it is constantly liable to be buried by slips and slides of the loose material. The way to plant it, therefore, is to dig a hole with a northern aspect, half fill it with loose rubbly Fern-mould, lay the plant on that with the crown towards the north, and then bury it entirely with a shovelful of gravel; this done, drop a large cairn on the south side,

leaving room on the north for the new fronds to push through the gravel, as they will do. This done, leave it alone and it will thrive for years. The Lady Fern and the Harts-tongue practically remain to complete the list of available species, and both of these are too familiar to require description or cultural suggestion.

Given suitable positions and a little care these common forms are very pretty, but as we have seen it is only a few of these that are utilised, so that a popular British fernery is ordinarily, as we have said, a monotonous grouping of a few species only. What, then, will be thought when we assert that a fully representative collection of British Ferns would embrace many hundreds of distinct forms, very many of which far and away eclipse the common ones in delicacy and beauty? Yet that this is so is evidenced by the magnificent collection in Kew Gardens, where some thousands of British Ferns and some hundreds of distinct varieties exemplify that remarkable faculty which our native Ferns possess of spontaneously sporting into

the Buckler Ferns (six species), 259, and the Common Polypody seventy-five. A large number of these consists of beautifully-tasselled forms, others are delicately dissected and feathery, others are prettily dwarfed and congested, and others are varied on quaint and eccentric lines. There are, therefore, forms adapted to meet all tastes, all are hardy save these species already mentioned, and in short, given sheltered conditions from hot sun and destructive wind, there is no family of truly British plants which remotely approaches that of the Ferns in varietal interest and amenability to culture.—CHAS. T. DRURY, in the *British Fern Gazette*.

INDOOR PLANTS.

THE CULTURE OF THE VIOLET.

The cultivation of the Violet fascinates as much as the bloom itself. Although for years past Violets have been grown for the market, it has only been of recent years that the industry has taken a really serious

grower rents the holding, from £400 to £500 of capital would not be too much, although many have started with a smaller sum, and have been very successful. But with a nest-egg of from four to five hundred the novice should win through without having 'to cut and contrive' to any irksome extent." The

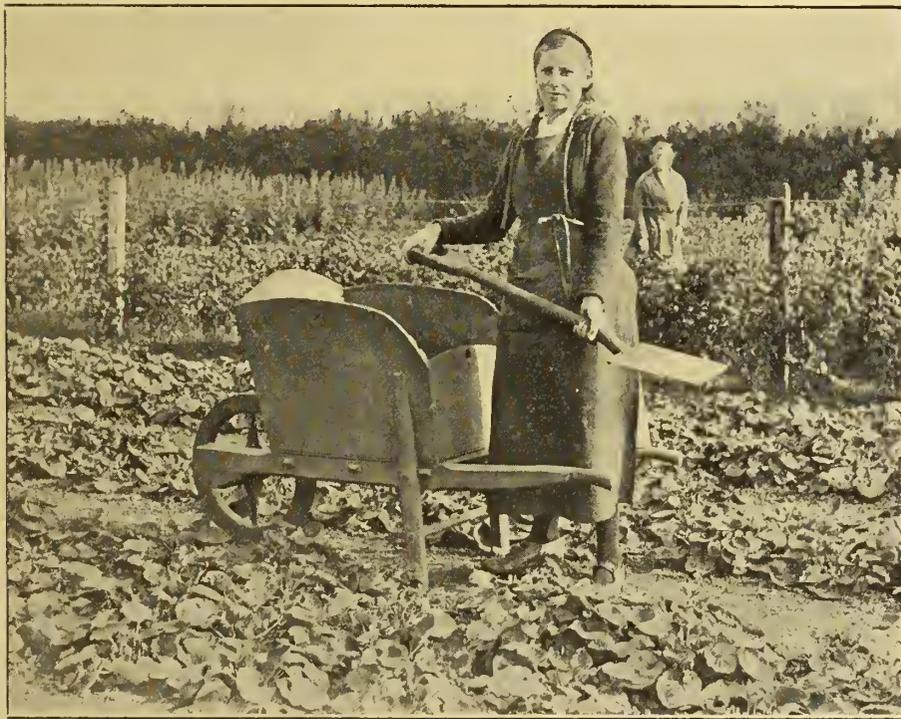
CHOICE OF A SUITABLE HOLDING is of vital importance. Violets will not flourish on either a too heavy or too light soil. They require a good medium soil. "The holding selected," Mrs. Coleman went on, "and the greenhouse or frames set up, next comes the choosing of the plants. There are many varieties, but I have yet to discover that one variety is better than another. I may say, however, that single are bought more readily than double Violets, although the latter have the sweetest scent. The single bloom, moreover, is the more profitable, in that it is much the larger and thus not so many Violets are required to make a bunch. Indeed, some growers produce a single Violet almost as large as a pansy, but in the production of this abnormal size practically all scent is sacrificed, and what is a Violet without scent?" The plants may be set in the greenhouse in the latter half of September, and if properly attended to will begin to bloom early in October, and continue to flower till April.

In this month, after suitable cuttings and runners have been taken from them for next season's use and planted in the garden, they may be thrown or given away. For each season young plants alone must be cultivated. Very little manure should be dug into the soil in the greenhouse, and in watering, great care must be taken not to pour any of the water on the plants themselves. Water from the tanks in the greenhouses must be used, as it is of the same temperature as the air in the building, hence its value. It is impossible to advise how often water should be given, this depending on the state of the weather. On mild, sunny days the soil beneath glass quickly becomes parched and the watering-can has to be used frequently, whilst on sunless, cloudy, moist days the soil remains damp and little watering is necessary. The plants must be carefully looked over from time to time, and all dead leaves pinched off, for, as with everything, one bad leaf, if allowed to remain, will invariably pollute the whole.

Eighteen double and from nine to a dozen single Violets to the bunch are the numbers required by the retailer, and with each bunch some foliage has to be given, and the whole should be bound together with bast, or in the case of those intended for private customers, fine wire or black thread. The retailer pays from 2s. to 3s. for a dozen bunches; private customers may be charged as much as sixpence a bunch when the flowers are scarce. In an average season a thousand Violet plants will yield about £25 worth of flowers. A point in favour of the Violet is that the plants require no extra heat, beyond that which the glass attracts, except when very severe frosts prevail. There is no such thing as forcing Violets. Begin to heat your houses artificially, and thus try to force the flowers, and most of the plants will rebel against the treatment, will cease to flower, and finally "damp off."

Mrs. Coleman does not depend on Violets alone for a living. Even in the winter she grows several other varieties of flowers. But Violets are her sheet anchor. She expressed the opinion that professional flower growing was an ideal occupation for the middle-class girl.

"It rarely yields a large income," she said, "but it does yield a comfortable living. What is more, all the work can be



Among the Violets.

types very different from the common ones. No man knows how or why it happens, but here and there among the normal species there is occasionally found a "sport," that is, a Fern of the same species as its neighbours and undoubted parents, but shaped and fashioned in quite different lines. Such a plant moreover, when removed and cultivated, not only retains its new form unaltered, but when propagated by its spores its progeny will be fairly true to the new type, or better still, may vary still more on like lines, so that greatly improved types are eventually obtained. Thus a Fern with once-divided fronds may sport into one with twice-divided fronds of much more feathery nature, and this may go on until in a few generations, or even it may be in one, we arrive at fronds so dense and so Moss-like in appearance, that only an expert could determine its species. Nearly every one of the British species has yielded "sports" of this description. According to the most recent descriptive catalogue the Harts-tongue boasts no less than 450 varieties, the Shield Ferns 384, the Lady Fern 313,

turn. The culture of Violets appeals strongly to the fair sex, because, unlike most other branches of outdoor work, it need not be pursued at the expense of dishevelled hair, heavy boots, and a general rough appearance. The Violet is not difficult to grow, and, provided you grow a sufficient number of plants, a living for from five to six months of the year can be had. A few days ago I met a very interesting woman, who has been a Violet grower for the greater part of her life. This was Mrs. Coleman, of Henfield, Sussex. She is a freeholder, owning a small house, about three-quarters of an acre of ground, and three greenhouses—two 100 feet in length and one slightly smaller. In speaking of the capital required to start a Violet farm of an acre in extent:—"It's the glass," said Mrs. Coleman, "that runs away with the money; and glass, either greenhouses or frames, but for preference the former, is the first essential. Without glass you can have Violets only in March and April, when they are plentiful, cheap, and unprofitable. "Presuming," she continued, "that the

done by the woman of average strength, except, perhaps, an occasional bit of heavy digging. As for Violets," she concluded, "they are the most profitable flower as far as I am concerned, and, strange to say, since the war I have sold more than ever."

J. C. BRISTOW-NOBLE.

Aldingbourne, Chichester, Sussex.

The Australian Fuchsia (*Correa cardinalis*).—When hard-wooded plants were extensively grown this was very generally met with. Like most of its class, it has, however, gone out of fashion. Though spring is given as its season of blooming, the flowers are often borne in the depth of winter, and are at this season much appreciated in the greenhouse. There are several species and garden varieties, but few of them can now be obtained from the ordinary trade sources. That under notice—*C. cardinalis*—forms a slender, spare-growing shrub, the drooping tubular flowers being bright scarlet tipped with green. Like all the members of the genus, it requires much the same treatment as the Cape Heaths—that is to say, it should be potted in a mixture of good peat and sand, taking care that the pots are clean and well drained. In potting, the soil should be rammed down very firmly. It is most essential that the ball of earth is not buried any deeper than it was before, as, if this precaution is not taken, the plant is very likely to fall into ill-health. Watering, too, must be carefully done at all seasons.—W. T.

GARDEN FOOD.

OATMEAL AND ITS RIGHT USE.

This is now in use from this year's crop. It is the best food grown in Britain, often misused by the ignorance of cooks, and served up in such a way as to resemble the paste of the bill-sticker. There are many people who have never tasted it in its right state. The other week I saw a lady at breakfast, who told me she could not bear even the sight of it. Of course, she had never seen the real thing. I get my Oatmeal from Scotland—usually in the form of groats from Annan, or pinhead meal from Dundee. Properly cooked and served it is the best food—quite unlike the pappy dish we see as porridge in English houses. Quaker Oats and other precooked cereals are good, but not quite so good as fresh, stone-ground Oatmeal. But you must have the best Oatmeal from Scotland or Ireland. Foolish people, in eating, put cream or sugar upon it. A little buttermilk or milk is far better. I prefer to eat it without milk or sugar, but with a little Clover honey scattered over it, a good way of eating Groats or Oatmeal after being well cooked.

Another important matter arises out of the use of this larger and cleaner form of the Oats, such as Groats. In using this, one gets away from the ground dust of the shop and has an article akin to Rice, in that it can be used for cooking like Rice. This also does away with the need of milk, to which many people object. Groats can also be separately cooked and served with vegetables, in the absence of meat, and in vegetable soups, thereby making a better-balanced dish.

The ways of eating this good food are worthy of notice. In England people seem not to have the least idea that they can eat it in some simple way with milk only, or buttermilk. A man I knew, who was very fond of it, used to put a quarter of an inch of manufactured sugar on the sloppy porridge and on top of that a bed of an inch of cream. Is it any wonder that he was gathered to his fathers before his day?

W. R.

YORKSHIRE PUDDINGS.

FARINACEOUS food can be counted on to supply four-fifths of the whole of the average diet. In spite of increased prices this form of food remains in most cases, comparatively speaking, the cheapest as well as the most economical form of nourishment. It supplies energy to the young, and this is essential to their welfare, for they require a good deal more of this kind of fare than do grown-up people.

Yorkshire pudding, Norfolk dumplings, suet puddings of various kinds, milk puddings, buns, scones, oat cakes, porridge, and other items that are easily made ought to be represented on the table at one meal every day. Yorkshire pudding is too often served as a heavy, greasy mass, when to be really appetising it ought to be light and most attractive in appearance. Old-fashioned English housewives know how to make this dish to perfection, and it is a pity that the recipe of days gone by seems to have been lost.

YORKSHIRE PUDDING.—The following recipe is good, and, if carefully followed, will result in a most satisfactory dish. Instead of allowing one egg to 1 oz. of flour in the usual way, 4 oz. of flour are counted to one egg. No more should be used unless baking powder is put in to lighten the dough. The batter should be kept fairly thick, $1\frac{1}{2}$ gill of milk to 4 oz. of flour and one egg being the right proportion. The batter should be allowed to rest before baking, and if baking powder is added it must be stirred into the mixture and well worked into it just before the batter is put into the oven to bake. The tin should be heated and lined with dripping, which is best done by placing it under the joint. When hot and sufficient dripping is in the pan, add the batter to about $\frac{3}{4}$ inch in thickness. Raise the tin very near the joint level with the fire, and turn the tin so as to give the heat to all parts of the pudding. When brown and done serve quickly. A Yorkshire pudding does not improve by keeping. If baked in an oven, the tin with dripping should be heated and placed over a covered fire. Then the batter is put in and allowed to start to bake before placing it in the oven, so that the pudding will bake equally in the centre and at the sides. This will not take place if the pudding is put directly into the oven. The sides will work up, driving all the fat to the centre, and preventing the pudding from rising, leaving it with a greasy, doughy centre.—*Daily Telegraph.*

FOOD VALUES.

WHEN Brillat-Savarin wrote "Animals feed, men eat, but only intelligent men know what to eat," he little thought how aptly his famous words would apply to the food question during the great war. It is the intelligent man or woman who has to think of the nature of the food that should be eaten to-day, not only in the matter of personal expenditure, but as a duty to the country. Meat is becoming scarcer and dearer, and it is necessary to seek substitutes—substitutes so well known in other countries. There are foods in France, in Italy, in Spain that are either ignored or under-estimated by the British public.

VALUE OF VEGETABLES.—It is to be regretted that the nutritive properties of Carrots, Turnips, Parsnips, Onions, Leeks, and Celery are not appreciated at their true value in this country, and it is not generally known that a combination of these vegetables, cooked for three or four hours, is a most nourishing food. In cases of serious illness a "bouillon de legume," or vegetable soup, is given in France to young and old; children thrive on it when they cannot digest anything else. For the normal person soups are made of these ingredients cut into small pieces, boiled in a saucepan full of salted water for three hours, with a tablespoonful of Barley per person added, and, before serving, a lump

of butter melted in the hot liquid. And of vegetable soups there is infinite variety. Sufficient is made at the time for two days' supply, which economises both labour and fuel. A French family will dine off a soup of this description, followed by a palatable dish of macaroni, Rice, or "pommes de terre au lard" (Potatoes cooked with cubes of bacon), a green salad or cooked fruit, and prefer this menu to a late meat meal.

AN EXCELLENT FOOD.—What does the general public know of macaroni in any form, whether spaghetti or macaroni proper? "An Italian compound—nothing in it," I have repeatedly heard it called. It is Italian assuredly, but how large a portion of the southern populations live almost exclusively on it is probably ignored. And how simple is the preparation of this excellent food! A pound of macaroni of a clean yellow colour broken in pieces and thrown into boiling salted water, cooked for twenty minutes, then strained and placed upon a hot dish with small pieces of butter and grated cheese—Cheddar, Cheshire, or Gruyere—inserted in the quivering mass deftly mixed with fork and spoon, is a dish for an epicure, and a hungry man. And with a good Tomato sauce as a variant, can a man or woman require anything more satisfying by way of a change from the heavy meat diet that brings so many ills in its train? Macaroni seasoned with a sauce of a stew, one of those juicy meat stews "in their own gravy" that the French know so well how to prepare, is another treatment for this "Italian compound." Do we recognise that there are other ways of preparing Rice than as milk pudding or boiled with curry? Rice treated like macaroni and flavoured with butter, cheese, and Tomato, or cooked in the water in which fowl has boiled, is not to be equalled. Here, again, do we realise how many people, Indian, Chinese, Japanese, live on rice alone? And we British, when we can so easily and cheaply obtain it, give it the insignificant place of a child's pudding!—F. KEYZER in *Daily Chronicle.*

NOTES AND REPLIES.

Value of Rice.—In view of the high price of Potatoes it is well to consider the comparative value of Rice as a food. Rice has over four times the heat and fat-forming principle compared with Potatoes, and its tissue-forming protein is some two and a half times greater, while its mineral salts are rather less than in Potatoes. The relative cost of Rice and its greater relative food value compared with Potatoes should be a matter of importance to the nation at this time. Rice well deserves to be far more freely used by the masses of our land and made to take the place of Potatoes at all times. As an article of diet it is easy of digestion and assimilation—much more so than Potatoes. It lends itself to various modes of preparation, savoury and sweet, readily blending with other nutritious articles of food; but plain boiled Rice should regularly take the place of Potatoes in our meals as a matter of real economy.—W. NARRAMORE in *Daily Mail.*

The Parsley-leaved Bramble.— "S. A. M. D." is right. I have tried the American Blackberries and found none nearly so good for our country as the above. It is a very free-bearing Bramble, handsome, useful, and I think a better thing than the Loganberry. Against a wire or other open fence it does well. I wonder, has Mr. Lynch, with his fine sorts of Blackberries, ever hunted out the best fruits in that good collection of our native Blackberries.—W.

OUTDOOR PLANTS.

A FLOWER BORDER ON A HAMPSHIRE HEATH.

We so long after rich loam and deep digging for our mixed borders that I was surprised to see how well one could do without all that on a sandy heath in Hampshire. The soil is a good, free, open sort, on which everything seems to do well, and the effect is excellent. The edgings are made of the very useful blocks of ironstone which are found on the heath. Good in shape and colour, they make the best edgings one could desire for fruit, flower, or kitchen gardens. For us stuck in

though one more free-flowering and of like size and colour would find a ready welcome.

PLANTING THE ADONIS.

Mr. Annett, page 637, speaks of "autumn as the best time for planting" these, and if the work is done fairly early—say, September-October—there is much to be said in its favour, so far as established plants are concerned. The Adonis has a root-system not widely removed from the Christmas Rose, in that both send down their main roots unbranched very deeply—2 feet or even much more—into the soil. In the ease of the Adonis, these main roots are produced over a more extended period

of heeling them into boxes containing weathered coal-ashes and Coconut-fibre in about equal parts, the warmer soil conditions so obtained being so congenial that even the smallest plants survived, rooting well into the mixture. Indeed, it answered so well that I subsequently employed it for many collected plants, Christmas Roses, hardy *Cypripediums* (save *C. spectabile*), the alpine *Anemone*, Pasque-flower, and others, which, coming to hand with the merest stumps of roots, had perished wholesale when put out into the soil even quite early in autumn, notwithstanding the soil was light, warm, and well drained. It may have been that sweating during transit had to some ex-



Flower border on a Hampshire Heath.

Kentish and Sussex Weald, how nice it would be to have one of these sandy Heaths near to draw upon to soften our asperities in our struggles with the soil.

W.

Violet Governor Herrick.—This new single-flowered sort, recently exhibited by Messrs. Blackmore and Langdon, appears, so far as size is concerned, to come into competition with *La France* and *Princess of Wales*, though distinct from either in colour—a rich reddish-purple, and rendered all the more conspicuous by a large white eye. Arranged with the two others named, the colour did not harmonise well, though alone it was distinct. In its way, it is difficult to conceive anything finer than *La France* as a winter-flowering sort,

than in the other plant named, hence the planting season may be extended also with impunity. I think it were better, however, to get the transplanting done early, and so give to the coming plant the maximum benefit to be derived therefrom. The main roots of both groups named— which belong to the *Ranunculus* order— have this in common—that once cut or broken they rarely, if ever, lengthen again, and frequently die back to the root-stock. Where this is so, recovery takes a longer time. Where the roots live, they presently send out fibres laterally, which tide the plants over a difficult period.

Years ago, when receiving big consignments of collected plants of *A. vernalis* chiefly, I found that autumn-planting was so fatal to them that I hit upon the plan

tent ensued, though this could not be wholly accountable for the loss. Indeed, there was this conflicting evidence—viz., while the largest of the batch perished when put into the ground, the smallest—the fragments quite unfit for sale—put into the ashes and fibre mixture for convenience at the moment invariably pulled through. One year I had an undue proportion of small fry—probably some two or three hundreds—and it was the discovery in spring that they were rooting through the boxes that afforded me a most valuable lesson. Planted and established, they were seen the following year by the late Robert Parker, of Tooting fame, who pronounced it "the finest bed of Adonis he had ever seen." The soil was light, very dry in summer, hence it was generously

treated with old cow-manure. How many hundreds of plants this accidentally-obtained lesson saved me in subsequent years I do not know. The broad facts are, however, recorded for what they are worth in the hope that those who have not experienced great success with a beautiful spring-flowering plant may be encouraged to further efforts.

Given the above treatment, I have not found division inadvisable, though I am at one with Mr. Arnott in his recommendation of increase by means of freshly ripened seed. E. H. JENKINS.

PIMPERNELS FOR THE GARDEN.

OUR NATIVE BOG PIMPERNEL (*Anagallis tenella*) is a gem for the bog garden and one of the most charming of the genus to which it belongs. It is not, however, one which can be accommodated in the ordinary garden, and those who have only beds and borders of common soil or a rock garden must grow some of the exotic species, which are best treated as annuals. In their own land they are generally perennial, but they cannot stand our winters without protection, and it is hardly worth while preserving them during winter in frames or greenhouses, seeing that they can be cheaply and easily grown from seeds sown in spring. These Pimpernels are best sown in the same manner as half-hardy annuals. They can also be sown outside at the end of April or in May. They must have a sunny position, so that their full effect may be obtained. With plenty of sun these beautiful little flowers will display themselves to advantage. Any common soil, not of a heavy character, is suitable. A pretty little trailing plant is

ANAGALLIS INDICA, known as the Indian Pimpernel, which is of trailing habit, and gives an abundance of small, bright-blue flowers. It is, however, eclipsed in public favour and in beauty by the Italian Pimpernel,

ANAGALLIS LINIFOLIA, more frequently called *A. Monelli*, a most variable plant in cultivation, so far as regards its colouring, varying from blue through purple, ruby, scarlet, rose, and lilac. It is of more erect habit than the others named, and produces an abundance of flowers on neat plants with narrow foliage, and from 9 inches to 12 inches in height. A variety called *Parksii* has bright red flowers, and one named *Phillipsii* has these of a deep blue. Mixed varieties are also obtainable, and are very beautiful in beds, in clumps, in borders, or in the rock garden. S. A.

GROWING THE KAFFIR LILY

(*SCHIZOSTYLIS COCCINEA*).

I FIRST saw this some fourteen or fifteen years ago in Messrs. Backhouse's nursery at York. The plants had a splendid bed of rich light loam on the north side of a fairly high hedge, and in this position the flowers always developed well until very late in the year. Again, I found the plant in Yorkshire, four years ago, in a garden high up above Ilkley, on the edge of the moors, and here again it was in a very shady position, and was flowering gloriously quite late in November. My own plants here at Stevenage are in a very shady place under an old Plum-tree. I put them there because they had not done so well as I expected in a sunny situation. In spite of frost and every sort of poisonous weather, I have been picking *Schizostylis* for the house and to give away until about a week ago. Then I lifted a few dozen half-developed spikes, together with a number of even more backward plants, and potted them up in a very large pan and brought them into a cool greenhouse. They have not resented the disturbance in the least, and already those spikes which were at a half-developed

standstill a week ago are opening brilliantly and well, and the pan gives promise of a succession which should last until Christmas or later. This, although it is answering well, is rather rough-and-ready treatment, and the better way to secure late flowering under glass would no doubt be to pot up strong roots earlier in the year, keep them back by standing or plunging the pots in a northern exposure until late in the autumn, and then bring them under glass to flower.—CLARENCE ELLIOTT, in *The Garden*.

MULLEINS FOR GARDEN AND WOODLAND.

SOME of the *Verbascums* are natives, but only three—the Moth Mullein (*V. Platytaria*), the Dark Mullein (*V. nigrum*) and *V. Thapsus*—are sufficiently beautiful to claim a place in our gardens. Of these three, *V. Thapsus* is perhaps the most striking, its branching spikes of yellow flowers forming a pleasing feature on hedge banks, by roadsides, and on other waste ground in the summer months. The



Verbascum phlomoides.

basal rosettes of leaves closely resemble those of the Foxglove, except that they are of rather more woolly texture, and on more than one occasion we have known the Mullein to be culled from the hedgerow and planted in the garden in mistake for the Foxglove. Mulleins usually occur wild where the soil is gravel, sand, or chalky. Most of the wild and cultivated Mulleins are of biennial duration and should be raised from seed sown in the open in early autumn or in frames in early spring. There are no difficulties attending cultivation, the chief aim being to get them into their permanent quarters as early as possible.

Far grander, from a garden point of view, are such species as *V. olympicum*, a giant of its race from Bithynia; *V. phlomoides*, the Woolly Mullein; the perennial *V. phœniceum*, with violet flowers; and the Nettle-leaved Mullein (*V. Chaixii*), all natives of Southern Europe. Most of the *Verbascums* are old-fashioned flowers that seem quite as much in place in a cottage garden as in the extensive grounds of a manor house. It is grand to see them massed with other old-world plants near

to the house, with Thyme, Thrift, and low-growing Bellflowers in the foreground. The cool, grey foliage and stately flowering spikes of *V. phlomoides* associate remarkably well with Campanulas, Evening Primroses, Foxgloves, Columbines, Hollyhocks, and Monkshood as border flowers. The smaller Mulleins are pleasing when seen growing on old stone walls; indeed, they are such handsome plants that they look well in almost any situation. We have seen them on old stone walls in company with Snapdragons, Corydalis, Dianthus, Geraniums of the dwarfier species, like cinereum, Endressi, and ibericum, the Violet Cress (*Ionopsidium acule*), a little annual less than 2 inches high, with pale violet flowers open at all times of the year, Wallflowers, and Arabis.

V. OLYMPICUM is one of the giant species of this genus. It grows to a height of anything up to 10 feet, sending up enormous candelabrum-like branching spikes of sulphur-coloured flowers well above its handsome silvery woolly foliage. It is almost invariably referred to as a biennial, though it will live for at least four years. *V. phœniceum* has violet or red flowers, and as most of the *Verbascums* hybridise very freely, this species is no doubt responsible for the remarkably rich colours seen in some of the newer hybrid *Verbascums*. From a packet of hybrid seeds the colours may embrace rose, rosy-buff, lilac, purple, crimson, crushed strawberry, and tones of coppery-red; and by judicious selection from these hybrids, pleasing and at the same time uncommon effects may be obtained.—*Country Life*.

UNSUITABLE PLANTS IN THE FLOWER GARDEN.

THE illustration of *Solanum jasminoides* on a Sussex house in a recent issue shows what the plant is capable of doing under such conditions, and is a sharp contrast to the specimens often seen in flower beds in the open air. In common with several other plants of a somewhat similar habit of growth and requiring about the same atmospheric conditions to grow it well, it has been used in large beds for summer work occasionally fairly satisfactorily, but often very much the reverse. Plants of a similar character I have in mind are *Plumbago capensis*, *Bougainvillea glabra*, and *Streptosolen* or *Browallia Jamesoni*, and of all it may be said that they look quite out of character, and certainly no plant lover can appreciate them when grown under such conditions. If large plants of a tender nature are required in the flower garden they can be found in things like the best of the *Marguerites*, *Salvia Glory of Zurich*, *Bouvardia corymbiflora*, also extra sized *Pelargoniums* (both Zonal and Ivy-leaved), and *Fuchsias*. It is to be hoped that when our gardens return to their normal character we shall see little more in our flower beds of those plants that are only at their best when allowed to develop at will their trailing or climbing habits, still less many other things that have been pulled and trained into shapes quite at variance with their true character. Many growers regard a certain number of tender plants as quite indispensable in the flower garden through the summer, but where they are used it is certainly advisable to have them as far as possible in their true character. With the wealth of *Roses* now at our disposal plenty of material is available to plant many beds, a favourite plan now being to utilise some good continuous-flowering variety in the Hybrid Tea, Perpetual, or dwarf Polyantha sections, and plant thinly on a carpet of some dwarf plant like *Nemesias*, *Petunias*, *Linaria*, or Tufted Pansies of the *Violetta* section. E. B. S.

Hardwick.

CHRYSANTHEMUMS.

NOTES AND REPLIES.

Ball-shaped Chrysanthemums.—I should feel much obliged if any of your readers would kindly give me the names of any Pompon Chrysanthemums that have ball-shaped flowers, not flat.—J. HANCE.

[The only true ball-shaped Pompon Chrysanthemum is the variety *Mdlle. Elise Dordan*, a beautiful pale silvery-pink flower of exquisite form. A few sorts that under good culture develop blooms that are almost circular or ball-shaped, as you express, are the following: *Kate Mannings*, sometimes given as *Katie Mannings*, a rosy-bronze sport from an old variety named *Model of Perfection*. The latter may still be obtained, and the colour is rose-lilac. This variety is synonymous with a variety named *Ada Vincent*. *Snow-drop* (white) and *Primrose League* (primrose) are two refined and beautiful sorts, rather smaller than most other Pompons, and extremely dainty when partially disbudded. A pink-tinted sport of the same family is named *Gertie Waterer*, which can even now be procured. Two very minute Pompons of circular form are *Baby* (deep yellow) and *White Baby*, both very tiny flowers. *Florence Carr* (deep bronze) is another little-known Pompon, which has flowers of rather ball-shaped form; and two of the oldest Pompons, *Mdlle. Marthé* (pure white) and *Golden Mdlle. Marthé* (a yellow sport from the last-named), are both excellent Pompons. However, they and most of the better Pompons must be disbudded to get round flowers of the kind you desire.]

Chrysanthemum La Triomphant.—Some varieties of Chrysanthemums are more addicted to sporting than others, and the above-named is one of them. Although an old variety, as Chrysanthemums go, *La Triomphant* is yet very useful for early flowers, and can be grown with but little trouble to produce large and massive blooms, or, what is more useful, as a bush plant which will provide plenty of material for cutting. The colour is of a pinkish shade, turning paler with age. Of late years a useful white sport has arisen. In addition we have now a yellow form of *La Triomphant*, all three, naturally, flowering simultaneously. As indicating the sportive character of the variety it may be said that plants in bloom here show variations in the flowers of individual plants, pieces of *La Triomphant*, the type, having pure white flowers, while there are similar changes in the case of white *La Triomphant*, which is carrying blooms both white and pink, while others have a mixture of both colours in the petals. All the forms have a tendency to mildew which seems to be inherent in the variety, but, curiously enough, it does not affect other Chrysanthemums in their neighbourhood, and is probably induced by a certain weakness of constitution.—W. MCG., *Balmac*.

Single Chrysanthemum Miss Rose.—This old variety still holds its own in the estimation of many growers. It lends itself admirably to bush cultivation, and some very fine specimen plants have been exhibited in past years. It is largely used for conservatory decoration, and is one of the most useful in the winter garden at *Tollerross, Glasgow*.—SCOTSMAN.

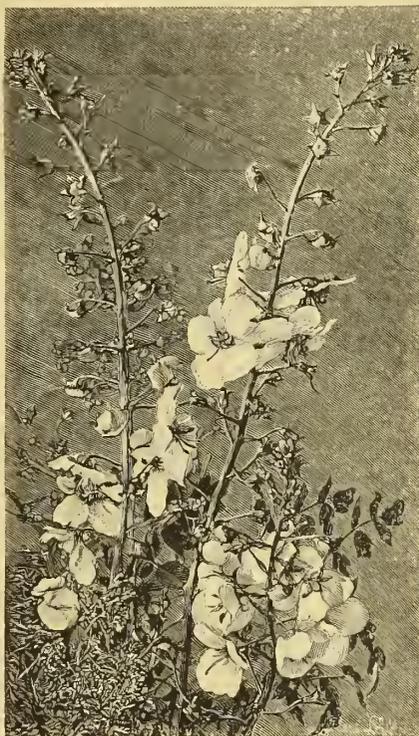
Single Chrysanthemum Miss A. Holden.—Those of us who remember the advent of such single Chrysanthemums as *Miss Mary Anderson*, and who have grown it for years, appreciate the variety called *Miss A. Holden*. It is a sport from *Miss Mary Anderson*, and has been in cultivation for some years. It is a counterpart of *Miss Mary Anderson*, but has flowers of a good yellow.—SCOTSMAN.

VEGETABLES.

POTATOES NEXT YEAR.

[To the Editor of GARDENING ILLUSTRATED.]

SIR.—I have read "Byfleet's" remarks on "Potatoes in 1916," in the issue of November 18th, page 576, and am sending you this letter on "Potatoes Next Year"



Verbascum phoeniceum. (See p. 672.)

because I think the subject is one of vast importance to all gardeners and farmers. Most of the gardeners of my acquaintance take little interest in the cultivation of the Potato. Up to the present there is "no halo of glory" attached to getting a record Potato crop; men are not encouraged to do their best, for Potato culture is, up to the present, considered a very dull job. "Just dig or plough up a plot of land, stick a few tubers in," and, except for moulding them up, the rest is left to Nature. The man who takes a real interest in the cultivation of the plant is scorned by his fellows, and gets none of the recognition he deserves for the good work he is doing. After two years of war we are beginning to realise how much the Potato is to us, and there are many who wish they had paid attention to the better growing of it. I spoke to an allotment holder a couple of days ago, and he told me that he had, without purchasing costly artificial fertilisers, got 56 lb. of tubers from a single pound of seed tubers. Of course, this record has been largely exceeded in some parts of the country. "Byfleet" says that "Yorkshire is a bright spot in a dismal record," but, as I live in this country, I may say that the prospects are none too rosy. We, too, have had short crops. On one piece of very rough land taken over to be worked along with my garden and planted very late with Potatoes, I only got eight times the weight of seed put in, which was poor in the extreme. Doubtless, I shall do better next year, for I shall have time to get the land ready. Owing to the wetness of the season, many Potatoes in the district produced masses of haulm at the expense of tubers. *King Edward VII.*, a variety in which I have great confidence, producing haulm between 4 feet and 5 feet

in length! Next year we shall have to cultivate as many Potatoes as we can because of their value as food. With good cultivation I believe it is possible to quadruple the crops we got this season. Gardeners and farmers cannot do all this alone. It must be made worth their while, for what is the good of doing one's utmost to get a huge crop of Potatoes if there is no market where they can be sold at over cost price? Farmers, however, will no doubt realise there is likely to be no lack of profitable markets next season judging by the present scarcity and great demand for Potatoes. As to inducing farmers and gardeners to do their best to grow the big crops one hears about, this must be the duty of the agricultural and horticultural societies, of which there are so many hundreds in this country at the present time. Prizes for the best crops of Potatoes ought to be a special feature.

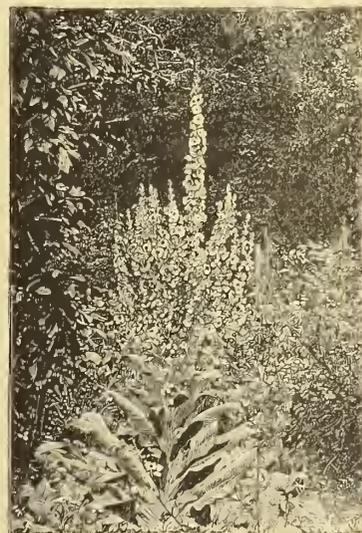
E. T. ELLIS.

Weetwood, Ecclesall, Sheffield.

GROWING MUSHROOMS.

(REPLY TO "F. R. S.")

THE proper way to prepare the manure is as follows:—It should be collected daily or as frequently as possible, and not allowed to remain in a heap, where it is liable to be much injured, or perhaps spoilt, in a very short time from overheating. It should be stored rather thinly in an open shed, and when sufficient is collected to form a bed it should be all thrown into a heap. Directly it is found to be very hot, and before the centre has heated dry, the heap should be turned inside out. This should be repeated three or four times, and in this manner the whole will be sweetened and yet be fairly moist. Thus prepared, the beds, when well rammed down, need not be more than 9 inches deep in front and 12 inches at the back; but with inferior or dry and partially exhausted manure, which some growers have unavoidably to deal with, increase the depth of the beds by at least another 3 inches. The aim should be to secure a good, lasting, but not violent heat, without which the crop will either be a failure



Verbascum olympicum. (See p. 672.)

or a very thin one. Where inferior or badly-prepared materials are used the heat of the bed is apt to decline to below 60 degs. before the mycelium has taken possession of the beds. Spawn the beds directly the heat has declined to about 80 degs. The longer the beds retain their heat, provided they do not become too dry, the better will be the crop and quality of

the Mushrooms. When the beds are formed before the manure has been properly prepared, or when it is prepared in the open and unavoidably becomes wet and cold, there is sure to be much steam generated directly fermentation commences, and in this case unless great care is taken the spawn may easily be spoilt.

SPAWNING AND SOILING the beds materially affect the value of the crop. Make shallow holes either with the hand or with a trowel, and use lumps of spawn about 2 inches square, disposing them about 5 inches apart each way. Soil the beds directly after spawning, and thus avoid any disturbance to the bed and the interruption of the spread of the spawn. It should be borne in mind that the spawn takes possession of the soil, and a good thickness of it, being less liable to become too dry, also ensures the production of larger Mushrooms. Much depends upon the nature of the soil used for surfacing the beds. Where possible, it should be procured from high and naturally-drained pasture-land, and be taken either from below the thinly-pared-off turf and used at once, or the turf itself may be cut and stacked for several mouths in common with the potting-soil. When used it should be broken up finely, be kept fairly dry, and placed in the Mushroom-house if very cold in order to warm it somewhat. Use a good thickness of it, or not less than 2 inches when beaten down, and never water the surface as it is beaten in order to make it run together.

NOTES AND REPLIES.

Soil covered with ashes.—I have a piece of land on which town ashes have been deposited 12 inches to 18 inches deep. The soil is very thin, on heavy clay subsoil. I am trenching this and mixing with the ashes after sifting. The old tins have mostly decayed, and the drainage water is red. Is this oxide detrimental or otherwise to plants.—**CRITIC.**

[Seeing that the soil has such a large quantity of ashes mixed with it, we are afraid you will fail to get anything to succeed, or but indifferently, unless you can counteract the harmful effect of the ashes by adding more soil of some description to the plot. If you have a good-sized heap of garden refuse in an advanced stage of decomposition you could, after freeing it of the rougher particles, employ this with good effect. The cleanings of ditches when undergoing their annual turning up could also be used with advantage, and the same with regard to the sidings of roads, provided the latter are not of the tarred macadam type. This kind of material can generally be had for the trouble of carting. You may also be able to find, on inquiry, that soil of a better or similar description can be had in your locality. Unless you can add to the plot in the manner indicated, so that it will contain soil in the proportion of at least three-fourths of the whole, we can hold out no hope of your being able to obtain any good results. The oxide would then do no harm.]

Autumn Broccoli.—Up to the time of writing, these have given a regular succession since the Cauliflower season closed. The now well-known Self-Protecting Broccoli has been an early winter treasure for some years past, and the pioneer, no doubt, of other good stocks of these early-maturing Broccolis. I have been cutting capital heads for some time from such sorts as Michaelmas White, Autumn Protecting, and Self-Protecting, successive sowings of which often maintain a supply until Christmas, or later. Winter Mammoth, First of All, and Early Penzance are others that give a good succession. I have not always been for-

tunate in getting a good stock of the Penzance Broccoli. Winter Mammoth I regard as indispensable. It is quite true this will not stand real wintry weather, but as one cannot forecast such events we cannot afford to neglect these early, though tender, Broccolis, as, should the weather be favourable, they yield one of the most desirable of our winter vegetables. It is only by frequent sowings one can keep up a succession of these several stocks, especially the early autumn and winter varieties, such as these named, which, given favourable weather and good cultivation, will give a supply extending over, at least, four months.—**W. S.**

Seaweed.—A note on this by "G. G. B.," at page 571, should interest those who live near the sea. I mix farmyard manure with Seaweed in equal proportions. If turned several times, the resulting mixture makes a fine and easily-handled compound, the value of which, especially for Brassicas during a dry summer, cannot be over-estimated. "G. G. B." will find, too, that it can be safely dug or ploughed in when fresh. One of the heaviest crops of Onions I ever saw was in the neighbouring shire of Wigtown. This crop was grown upon soil manured solely with freshly-gathered "wrack." The bulbs were large, not by any means show-bench specimens; but, as they were marketed in Glasgow in an undried state, a little coarseness was not objectionable—at any rate, the bulbs paid their grower—a small farmer—a very handsome return. The best Seaweeds for manure are *Fucus digitata* and *F. serrata*, in the order named, and a novice in a single lesson may be taught to distinguish between them.—**W. McGUIFFOG, Balmac, Kirkcudbright.**

The Carrot bed.—Carrots delight in a light, yet deep and friable, soil, whilst deep, retentive soil is generally looked upon as totally unfit. Even such a soil may be brought to a state as will grow good crops of Carrots. Too many, I fear, lose sight of that most important factor, not only in the cultivation of Carrots, but of other vegetables, viz., the winter preparation of the ground. We do not all possess land that is light and friable, as many of us have to do with stiff loam, bordering on clay, that, if not worked, becomes hard, and in a wet season sodden and unfitted for some crops. As Carrots are deep-rooting we must, in the winter, dig deeply, throwing the soil well up for frost to have a chance of lightening it, first incorporating with it road scrapings or any similar gritty material. The recommendation to sow Carrots on ground that has been well manured for a previous crop is practical, for it is well known that ground freshly manured is often the cause of "forking." The site for the bed should, therefore, be decided upon at once, and the work taken in hand, so that when it is time to sow, the soil will be in a light, mellow state.—**DERBY.**

Savoy Cabbage Sutton's Sugar Loaf.—I have grown this for the first time this year. It is claimed that the small types of Savoys possess the finest flavour, which may or may not be true, as the very best vegetables may be spoiled in the cooking. I believe that the larger-headed Savoys are objected to more from being badly cooked than from any lack of quality. Savoys when over-grown have bleached leaves that cannot be changed to green by the process of cooking, and it may be that that gives rise to complaints in the matter of flavour when compared to the smaller head that has a correspondingly greater proportion of outer green leaves. Certainly, the sallow leaf of an overgrown Savoy appeals neither to the eye nor the palate. This Sugar Loaf Savoy, if cut as soon as matured and well cooked, would afford no occasion for complaint.—**WILTS.**

THE WEEK'S WORK.

OPEN-AIR GARDENING.

IN BLOOM DECEMBER 18TH.—*Correa magnifica* (slightly protected from frost), *Escallonia montevidensis*, *Laurustinus*, *Jasminum nudiflorum*, *Daphne Mezereum*, *Andromeda floribunda*, *Osmanthus ilicifolius*, *Veronicas*, *Christmas Roses* (*Helleborus niger*), *Erica mediterranea hybrida*, *Erica carnea*, *Sternbergia lutea*, *Iris stylosa*.

THE WEEK'S WORK.—Work continues to be chiefly of a routine nature. The rock garden needs frequent attention, as leaves collect in nooks and crannies where their presence may soon destroy some tiny gem which withstands the severest of frosts or heavy falls of snow, but which resents a covering of decayed vegetation. After hard frosts, too, some shallow rooting subjects may be found partially raised from their bed. These require to be carefully replaced and made firm before another spell of frost is experienced. Plants like *Androsace Chumbyi*, *A. lanuginosa*, *A. sarmentosa*, and many others now require the protection of a piece of glass fastened in such a way as to allow the plants to have plenty of light and air, but to protect them from excessive rains. Other tender plants, like the beautiful *Gerbera Jamesoni*, are also better for slight protection. When severe frost is expected a covering of Spruce or Silver Fir branches laid over them in the manner of roofing tiles will carry off excessive moisture without altogether stopping ventilation. In this locality dampness is our greatest enemy. Preparations for planting the stocks of alpine plants—raised from cuttings and seed and now being wintered in cold frames—are carried out as opportunity occurs. The positions chosen for the various plants are marked with labels, and the allotted spaces filled with suitable soil, so that when planting time arrives all will be in readiness to receive the plants. Advantage is taken of dry, frosty weather to wheel out manure and soil wherever required. On wet days plenty of work can always be found under cover, such as making labels, pegs of various sizes, sharpening stakes, etc. Any trees or shrubs requiring stakes should be given timely attention. Examine all old ties, and see that they are not cutting into and injuring the swelling growths. Numbers of valuable trees are annually spoiled by non-attention to this. Up to the time of writing we have had very little snow in this locality, but the weather is very wintry, and any time now we may experience a heavy fall of snow. Much damage to valuable trees and shrubs may be avoided by shaking the snow off the branches. Good, long, light props should always be kept in readiness for this purpose wherever a choice collection is grown, and care be taken not to injure the young growths.

F. W. GALLOP.

Lilford Hall Gardens, Oundle, Northants.

SOUTHERN COUNTIES.

Shrubs for forcing.—These are fairly numerous, the chief being Lilacs, Guelder Roses, *Azalea mollis*, Ghent *Azaleas*, *Deutzia gracilis*, *Andromeda floribunda*, *Rhododendrons* of the early-flowering types, *Staphylea colchica*, *Prunus sinensis* fr.-pl., and *Wistarias*. Some of these have to be purchased, while others which can be grown at home have only to be lifted and potted. Where from any cause this matter has not yet had attention, no further delay should be allowed, and the sooner the plants are acquired or lifted, as the case may be, and potted, the more satisfactory the after results. It does not follow that forcing should be commenced at once, unless necessary to do so, but if they are got into the pots and placed outdoors in full exposure they will respond all the more readily when placed in suitable temperatures. Lilacs, *Deutzias*, Ghent and *mollis* *Azaleas* require more warmth to force them into bloom than the other subjects named. With regard to these, a mild, genial warmth suffices to produce the desired effect. As a protection against frost the pots should be surrounded with short litter, well covering the surface of the soil at the same time, or they may be plunged in ashes with a covering of litter on

top to prevent the balls becoming frozen. The heads of the plants should be left quite exposed. So treated, the stock can be drawn upon as required.

Solomon's Seal.—This is quite easily forced, and in lieu of a forcing-house can be brought gently along in a Mushroom-house. When growth is partly developed the plants should be moved out into a warm greenhouse and shaded for a few days or until the growth becomes inured to the light. Only the best of the crowns or rhizomes should be used. The smaller-sized ones can be placed on one side for replanting.

Genista racemosa.—Well-grown plants of this useful subject are always held when in flower in high esteem, and their bright yellow flowers also serve to render the conservatory and greenhouse attractive during the early months of the year. A warm greenhouse temperature usually suffices to bring them into bloom, half-a-dozen plants being a sufficient number to introduce at a time into warmth.

Callas.—Those now pushing up their spathes require a stimulant, nothing being better, when it can be had, than liquid-manure. This, if given in mild doses, can be applied each time water is required, of which a plentiful supply in a tepid state is needed now the plants are in full growth. A sharp look out for fly must be kept and the house vaporised at once should any insects be found present. The latest batch of plants intended for flowering at Easter must be kept quite cool.

Espalier fruit-trees.—These, which usually consist of Apples and Pears, and in less degree Plums and Cherries, should now be pruned so that the borders in which they are grown may, when filled with bulbs—Lily of the Valley, and so forth—not be trampled upon as the new growth begins to push through the soil, as will shortly be the case. This is a very economical way of growing fruit-trees where the garden is of limited extent, and when established they bear heavy crops of fine fruit. The trees may be trained to good stout stakes driven 3 feet apart, but the best and most durable method is to have a post and wire trellis. If the wires are well painted no harm to the branches will ensue. The trees should stand from 12 feet to 15 feet apart, the latter distance being advisable for strong-growing varieties. The actual pruning consists in shortening the spur wood and thinning it out where necessary, as with wall-trained trees, and in confining the spurs to the branches alone. It is a mistake to allow spurs to form on the stems. Young trees should be treated in precisely the same manner as recommended for diagonal-trained trees in a previous note until the full complement of branches has been obtained. If the borders are vacant it is a good plan to give them a good dressing of well-rotted manure after the pruning and the requisite amount of tying are completed.

Cordons.—This is a good method of growing choice Apples and Pears in the open; using a wire trellis for their support, the same as espaliers. The pruning in their case is the same as for wall-trained examples. These also pay for good cultivation. In some instances they are employed to form a covered way in the kitchen garden, the trees being trained to stout wires let into the ground at either end and bent in the form of an arch. Highly-coloured fruits are obtained in this way, and the effect when the trees meet or when the whole of the wires are covered is good.

Rhubarb.—When necessary for any reason to form a new Rhubarb bed in another part of the garden the present is a good time to do so. The new site should be dug at the least two spits deep and plenty of manure incorporated with both layers of soil. When the soil has settled into place the corms may be lifted, divided, and replanted, using the best portions only for this purpose. The rows should stand 4 feet apart, allowing the same distance between the stools. As these should not be pulled from next year, a sufficient number of old stools should be left to keep up the supply in the old bed for another season.

Flower garden.—Where forest trees are numerous on the confines of the grounds, the latter, except where labour is plentiful, get to look untidy from the time the leaves begin

to fall until all are down. A general clean-up has then to take place, which, if thoroughly done, will render the grounds clean and tidy for some time to come. When leaves are very abundant or there are more than are required for hotbed making, the filling of beds in Cucumber and forcing houses, and the forming of a good heap to rot down for supplying leaf-mould for potting and other purposes, they may be employed when manure is scarce for digging in when the soil is heavy or of a clayey nature. In this case they may be used on a very liberal scale. A bed of good length and width may also be formed with them in some inconspicuous spot, which later on can be utilised for the growing of a crop of Potatoes for digging in advance of those grown in the kitchen garden. A. W.

MIDLAND COUNTIES.

The fruit crops were generally satisfactory, with the exception of Apples and Apricots, which were by far the worst crops of the season. Plums were slightly below the average. Pears were plentiful and of good quality. Peaches and Nectarines were an exceptionally good crop, and the fruits were of first-rate quality. All bush fruits were above the average, also Raspberries. Strawberries were a very heavy crop, and good both in size and flavour. The following varieties were exceptionally good:—King George V., Royal Sovereign, Fillbasket, Laxton's Leader, Laxton's Maincrop, Givon's Late Prolific, and Laxton's Latest. Fruit-trees in general promise a good show of blossom buds, especially Apples.

Plant-houses.—Perpetual-flowering Carnations: At this time of year there is no flower to equal these for cutting. Among all the newer varieties that are being continually introduced none is better than the forms of Enchantress, the pink, white, and rose-pink. These are most reliable and at the present time are producing blooms of lovely shades. May Day is also very fine at the present time, its colour, deep satin-pink, remaining good under all conditions. The stems are good and the habit perfect. Other good varieties that are now in full bloom are Empire Day (pale salmon-pink), Baroness de Brien (salmon-pink, strong grower), R. F. Felton (rose-pink), Lucy (salmon-pink), Lady Alington (rich rose-salmon), Beacon (orange-scarlet), Mary Allwood (cardinal pink), Triumph (rich bright crimson), Mikado (glistening heliotrope), and White Wonder (the most perfect white variety yet in commerce). For the next six weeks, the most trying time in Carnation culture, manure, if applied at all, must be meted out with great judgment. Nitrogenous manures, especially, should not be used, a flaccid condition of the flower, accompanied by a weak calyx that more often than not splits, being results which follow their use. Another cause of weakness in some varieties is the production of too many growths, which, if left without reduction, either do not flower or only yield small, worthless blooms. Lady Alington, Empire Day, Mikado, Baroness de Brien are varieties which I have found require attention in this direction. These should be examined and thinned two or three times in the period from October to May. Those left in a very short time increase in vigour. An atmospheric temperature of 50 degs. should be maintained when the weather is mild, but rather than resort to too much fire-heat lower the temperature to 45 degs. Ventilate the house freely on all favourable occasions.

French Beans are much appreciated during the winter, and sowings will now be made once a fortnight to keep up a continuous supply. Seven-inch pots are used for the earliest batches, and 9-inch later. The pots must be well drained and rather more than half filled with a compost of three parts fibrous loam and one part spent Mushroom-manure or well-prepared horse-manure, which should be made moderately firm. From seven to nine seeds should be sown in each, reducing the plants to five in each pot when they have germinated. Until germination has taken place the pots can be stood closely together in almost any position near the hot-water pipes, but afterwards a light position near the glass must be afforded them. As soon as they have made the first pair of leaves, fill the pots

to within $\frac{1}{2}$ inch of the rims with the same kind of compost, after it has been placed in the house to get warmed through. Endeavour to keep the temperature of the house at about 55 degs., allowing the maximum to be 60 degs., and the minimum 50 degs., according to the outdoor temperature. Extreme temperatures either way must be guarded against. Too much fire-heat is worse than allowing the temperature to get somewhat low, as the plants become weakened, and red-spider is almost certain to make its appearance. The atmosphere of the house must be kept moist, and the plants thoroughly syringed with tepid water between 9 a.m. and 10 a.m. on fine days. Pieces of old Birch brooms placed round the edges of the pots with a spray or two in the centre form suitable supports. After the plants have flowered and the blooms set, weak manure-water will assist the quick development of good-sized tender pods, and will also prolong the season of bearing. The pods should be picked immediately they are of sufficient size for use. If not all required for present use, they can be kept for several days by placing the ends in a little water, keeping the vessel in the same temperature as that in which the Beans are growing, and changing the water every day.

The past season has been a good one for most vegetables in this locality, though many crops were somewhat late owing to the heavy falls of snow and rain in March and April, which made it impossible to get in the crops at the usual time. Peas, Beans, Cauliflowers, and other Brassicas gave exceptionally good results, whilst Carrots, Beetroot, Turnips, and Celery have seldom been better. I gathered the first dish of Peas on June 20th from plants raised in pots and planted out on a warm border in April. From that date until the middle of September I was able to keep up good supplies daily, and the last dish was gathered on October 10th. Early varieties of Potatoes, though much later than usual, gave good returns. Maincrop and late varieties were a moderate crop and became badly diseased during September and October. Royal Kidney and King Edward (varieties largely grown in this locality) were the least affected. Tomatoes (out-of-doors) failed to ripen, except in very favoured positions. The condition of all the winter vegetables is perfect, and unless very severe weather prevails there should be an abundance of all kinds. The rainfall for the year to December 13th inclusive was 26.84 inches, which fell on 158 days.

F. W. GALLOP.

SCOTLAND.

Zonal Pelargoniums.—These are never more useful than during the winter and spring. At the present season their requirements are few. Let them be kept in a moderately warm atmosphere, free from damp, and but sparingly supplied with water, and results will be satisfactory. I think in the case of Zonals that it is much better to concentrate on a few varieties with flowers of good colour, and grow serviceable batches of each, than to strive after a "collection," an idea which is in no case satisfactory, let the plant be what it may. For winter blooming Paul Crampel is of a good rich colour, Raspail Improved has much to recommend it, while Rada is of a good shade of cerise, and the old Olive Carr (pink with white eye), is valuable for winter blooming. Among whites there is a good choice—I like Eureka. The older varieties seem to possess a more robust character than do those of more recent origin. With the turn of the year and the increasing root-action, more moisture will be required, with occasionally weak doses of stimulants.

Calceolarias.—At this season, no matter how coolly herbaceous Calceolarias are grown, there will always be a few plants which will throw up flower-stems. Such plants may as well be got rid of without delay. If permitted to develop, the blooms are out of season and almost invariably of poor quality; while if the stems are pinched out, the chances are that the plant, if it does not collapse, will never be satisfactory. A close watch ought to be kept for incipient outbreaks of aphid, at all times inclined to infest Calceolarias. Vaporising at intervals will keep this pest at bay. The present-day plantsman has much to

be grateful for in this handy and effectual method of dealing with this and similar insects—the disagreeable fumigations with Tobacco paper, common a quarter of a century ago, being now entirely obsolete.

Early Vines.—The increasing price of fuel, and in some districts the difficulty of obtaining it, will interfere with very early starting of Vines in many instances. It is usual to make a beginning with Black Hamburgh, Foster's Seedling, Buckland Sweetwater, and similar varieties at this time. When the house is closed let the temperature be maintained at as steady a figure as possible. The right temperature at first may be about 50 degs., rising gradually to 55 degs., with the thermometer at 60 degs. when the buds expand. To ensure the buds breaking regularly the Vines may be slung in an almost horizontal position until growth begins, and if they are slow in starting if the position of the rods can be reversed it will be found beneficial. In the case of very sluggish canes, I have noticed good results from the following treatment: Take the point of the rod in the hand and twist it spirally until the pressure extends to the roots. It always seems to me that after this twisting the sap flows much more freely. At any rate, I am quite convinced that such is the case with pot Vines, which respond to this treatment, in the case of sluggards, in quite a remarkable way.

Peach-houses.—If it is intended to replace any of the existing trees, no time should now be permitted to elapse until the renewing takes place. Naturally, the border in the immediate neighbourhood of the new tree or trees must be renewed, and a good allowance of lime or of lime-rubble ought not to be forgotten. It is always a good plan to have coming on out-of-doors, on a south wall, a few young trees, which can be lifted and planted indoors. This permits of a crop being taken during the first season after planting. For early work, Amsden June and Hale's Early are good sorts. These can be followed by Dymond and Royal George. Stirling Castle is a reliable and favourite Peach for indoor work, and although practically colourless Alexandra Noblesse is rather a taking fruit. Among Nectarines, Early Rivers and Cardinal are useful for first crops, Stanwick Elruge, Pineapple, or Humboldt making a good succession. Goldoni may be planted with confidence. Lord Napier has in some places a habit of cracking as ripening time approaches, which makes one chary of recommending it—good Nectarine though it be. Every grower, however, has, as is quite natural, his own favourites.

Hardy fruit.—Those who may be planting Apples at the present time would do well to notice the varieties which succeed in their own immediate neighbourhood. Apples which succeed in one district will fail in another, and disappointment follows. Bismarck is a good bearer, and produces fruit of a useful type, but it is rather capricious in some districts, and has had to be discarded here. Lane's Prince Albert and Frogmore Prolific are free croppers, and keep well. Alfriston, Wellington, and Bramley's Seedling are alike prolific and long-keeping varieties. Those who have to deal with an exposed situation might profitably plant the Galloway Pippin—a good keeper, and while, strictly speaking, a kitchen variety, not to be despised for the dessert. The Apples referred to have been named for their useful cooking qualities. Dessert Apples are a class by themselves, and, in planting, the taste of the consumer must be consulted; Apples which are considered excellent by one not being appreciated by another. One thing is certain. It is almost impossible for a beginner to make a satisfactory selection from a nurseryman's catalogue. There are far too many varieties, the would-be grower becomes confused, and disappointment follows.

Raspberry canes.—The foliage having fallen, the final thinning and training have been accomplished. I yet adhere to the old practice of "bowering" the canes. For those who are not acquainted with this method it may be briefly described. The canes are planted in clumps—from five to seven canes being allowed to each clump—at intervals of 5 feet. Midway between each clump a stout post, 4½ feet high, is driven in, and the canes on either side are "bowered" over and secured to the post by means of tarred twine. As the crops of fruit

obtained from canes so treated are annually very heavy, I have never considered it needful to change the system. One thing is very certain: A large plantation can be very quickly got over—much more quickly than is the case when individual canes are closely planted and secured separately to wire supports—a fact not to be lost sight of at present. No matter how good a given variety may be, close observation will show that certain canes are much superior to others, alike in respect of productiveness and of robustness. If such canes be marked, and suckers propagated from them, it becomes possible to build up an improved type of the variety in the course of a few years. By rigid selection and regular propagation there has been built up in these gardens a much superior type of Superlative, the fruit of which in point of size almost equals that of the Loganberry, and the canes of which are massive and prolific. Superlative, Baumforth's Seedling, and Füllbasket can be confidently recommended to intending planters.

Wall trees.—Recent frosts having now, in the case of all trees except Peaches and Nectarines, cleared off the foliage, a beginning has at length been made with the pruning and nailing. As the wall trees are well dealt with at the time of the summer pruning, the work now is reduced to a minimum. In the case of trees which have filled their allotted space, the shortening or clearing out of spurs, as is necessary, together with the regulation or renewal of the ties is all that is required. So far, and until the work was interrupted by rain, considerable progress has been made with Apples and Pears; and it is hoped to continue, and, if possible, finish the wall trees during the ensuing week.

Plant-houses.—Chrysanthemums last well, the mid-season varieties now taking the place of the earlier types and of the singles—the latter of which, with a few exceptions, are now past their best. W. McGURIOG.

Balmæ Gardens, Kirkcudbright.

LAW AND CUSTOM.

COMPENSATION FOR MARKET GARDENERS.

A good many market gardeners are still in doubt as to what precisely are their rights of compensation on quitting their holdings, and it may be useful to set out here the true legal position of the market gardener as it was after the passing of the Agricultural Holdings Act, 1908, which was what is known as a Consolidating Act, and in which there was embodied a good deal of the existing law touching the right of market gardeners to compensation.

The position of the market gardener can therefore be best explained by giving a short epitome of the provisions of Section 42 of the Act of 1908. That section requires first of all that there shall be a written agreement between landlord and tenant that the holding is to be let or treated as a market garden. Then the fact of such written agreement being in existence automatically adds certain things to the list of improvements an ordinary farming tenant may carry out without consulting his landlord and receive compensation for. These "extras," in respect of which market gardeners (and they only) can claim are:—(1) planting of standard or other fruit-trees permanently set out; (2) planting of fruit bushes permanently set out; (3) planting of Strawberries; (4) planting of Asparagus, Rhubarb, and other vegetable crops which continue productive for two or more years; (5) erection or enlargement of buildings for the purposes of the trade or business of a market gardener; provided, too, that the right of an incoming tenant to claim compensation in respect of the whole or part of an improvement which he has purchased may be exercised, although his landlord has not consented in writing to such purchase.

With regard to new buildings and fixtures which have been added by the tenant we must look first of all at what the Act provides in regard to ordinary farmers, because the market gardener is entitled to the full benefits in the first place that any farmer can secure. The Act not only provides that compensation shall be paid to a farmer for the erection, enlargement, or alteration of buildings to which the consent of the landlord has been given, but it also provides for compensation being paid in respect of repairs to buildings, being buildings necessary for the proper cultivation or working of the holding, other than repairs which the tenant himself is under an obligation to execute: provided that the tenant before beginning to execute such repairs shall give to the landlord notice of his intention in writing together with particulars of such repairs, and shall not execute the repairs unless the landlord fails to execute them within a reasonable time after receiving such notice. The market gardener has the value of these provisions together with an additional benefit for himself provided in the third schedule, which requires the landlord, among other things, to pay compensation to a tenant who has erected or enlarged buildings for the purpose of his trade or business as a market gardener. As regards fixtures and buildings added by the tenant, the Act provides that its benefits are to be extended to every fixture and building added by the tenant to the holding, or acquired by him since December 31st, 1900, for the purpose of his business as a market gardener.

A few words now as to the right of the market-gardening tenant to remove any portion of what he has planted. Some tenants naturally want to be able to remove as much as possible to a new holding. With regard to that it is lawful for the tenant of a market garden to remove all fruit trees and fruit bushes planted by him on the holding and not permanently set out; but if the tenant does not remove such fruit trees and fruit bushes before the determination of his tenancy they will remain the property of the landlord, and the tenant will not be entitled to any compensation in respect of them.

This article would not be complete without some reference to the general compensation which a market gardener, in common with every other agriculturist, is entitled to in respect of improvements set out in the third schedule to the Act—e.g., manuring, compensation for feeding-stuffs used, laying down of Grass and other seeds, and repairs to buildings. The position of the market gardener here is quite a favourable one. Where, under a contract of tenancy in existence on January 1st, 1896, a holding was in use or cultivation as a market garden with the knowledge of the landlord, and the tenant has executed thereon, without the consent of the landlord, any improvement covered in this third schedule, the provisions of this Section 42, which we are now discussing, are to apply as if it had been agreed in writing after January 1st, 1896, that the holding should be let as a market garden, so, however, that these improvements in respect of which compensation is to be given are to include such as have been executed before, as well as after, that date; and there is the further important proviso that where the market-gardening tenant holds his land on annual tenancy, and not upon a tenancy under a lease, the compensation payable in any event shall be such as an annual tenant might have claimed if this Act had never been passed.

CORRESPONDENCE.

Questions.—*Queries and answers are inserted in GARDENING free of charge if correspondents follow these rules: All communications should be clearly written on one side of the paper only, and addressed to the EDITOR of GARDENING, 63, Lincoln's Inn Fields, London, W.C. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent each should be on a separate piece of paper, the name and address being added to each. As GARDENING has to be sent to press some days in advance of date, queries cannot always be replied to in the issue immediately following their receipt. We do not reply to queries by post.*

Naming plants.—*All who wish their plants to be rightly named should send fair examples of each—the stem, leaf, flower, or fruit. (Snippets of leaves and points of shoots are useless.) Not more than four plants should be sent in any one week by the same correspondent. Where more than one kind is sent they should be numbered. Of conifers the fruit should always be sent.*

Naming fruit.—*Several specimens in different stages of colour and size of the same kind greatly assist in its determination. We have received from several correspondents single specimens of fruits for naming, these in many cases being unripe and otherwise poor. We can undertake to name only four varieties at a time.*

PLANTS AND FLOWERS.

Mice and Tulip bulbs (C. F.)—The only way is to trap and poison them. The latter is the more summary method, but the former is the safer. It is wise to occasionally vary the kind of trap and the bait. We have always managed to keep down mice by using the figure 4 brick trap, baiting with cheese, fat meat, or the seed of garden Beans softened by soaking for a time in water.

Oleander unhealthy (F. T.)—The Oleander leaves were swarming with mealy-bug, brown-scale, and red-spider. The black, sticky slime is caused by the brown-scale and mealy-bug. Set to work and sponge the leaves at once frequently with strong Tobacco-water, in which some soft-soap has been mixed, using the same remedy for any other hard-leaved plant in the same house similarly affected. Continued perseverance in the sponging is necessary.

Sediment on leaves of greenhouse plants (P.)—We think, if you will examine the Orange-tree, you will find that it has been attacked by brown scale, which is evidently spreading to the other plants in the house. The plants have also been attacked by green-fly, which has caused the sediment on the leaves. The best cure for green-fly is fumigating with one of the many remedies advertised in our pages. You must wash the Orange leaves carefully with some insecticide.

Repotting Camellia (G. M.)—The beginning of March will be a good time to repot the Camellia in a mixture of good turfy-loam and peat, with some sharp silver-sand added; the pot should be well drained. After the plant is potted it should be placed in a comfortably warm house, and should be encouraged to freely by the aid of frequent syringings. Water should be given on all bright days. Mossy growth that appears on the surface of the soil should be immediately removed.

Chinese Primulas failing (S.)—Your Primulas appear to have been in a too low temperature. To get good leaves and blooms more food may be required, and more warmth, at the same time giving plenty of air. Keep up a higher temperature; give more food, with plenty of air on back or top of house in fine weather. The atmosphere being charged with moisture now, a little warmer temperature with air is required.

Camellia buds dropping (M. J.)—The most probable reason of the Camellia losing its flower-buds is that it has been allowed to get dry at the roots. If you give water in dribbles, that is almost sure to be the reason. Examine the state of the soil in which it is growing, and, if found to be dry a little way beneath the surface, set the plant in a tub of water, where let it remain until you find that the bubbles have ceased.

Ferns doing badly (R.)—You had better get the plants out of the china pots at once, and as best you can. In these there are, as a rule, no holes for drainage, while the glazed sides are unfavourable to the healthy action of the roots, so that the soil becomes sour after a time, and then the plants fail. They should be carefully repotted in ordinary pots, just large enough to hold the roots, using some nice, sweet, fresh peaty ordinary soil, with plenty of sand, and be placed in a warm greenhouse or stove with a moist atmosphere, where they will probably soon commence making healthy growth again.

Begonia discolor Rex in winter (E. B.)—Begonias of the discolor Rex class are not deciduous, neither do the plants form tubers, hence they must be kept watered during the winter. Of course, at that season they will not require so much as when the days are bright and they are growing freely, but the soil must be kept fairly moist. They do not require any absolutely resting period. A winter temperature of 60 degs. to 65 degs. suits them well. They can be readily propagated by cuttings in the spring, as the members of the discolor Rex section do not grow from leaves so readily as the different varieties of Begonia Rex itself.

Solanum capsicastrum (C. P.)—Cut the branches back in March to about half their length, and place in the greenhouse; then, when the young shoots commence to start, repot in a compost of two-thirds loam and one-third leaf-soil, with a little sand. The pot will have to be a size larger, and in repotting remove a little of the old soil. Keep the plant indoors till the end of May, and then stand in a sunny spot out-of-doors to induce it to flower and produce berries. When frosts threaten in the autumn, again remove to the greenhouse or a sunny window. Take care it has plenty of water during the summer months while standing in the open air. It is easily increased from cuttings and seeds in the spring.

VEGETABLES.

Seakale (J. W.)—Open a trench on one side of your Seakale bed, and get out carefully every root, preserving every portion. Hard trim all the strong main roots of all side roots, and lay all these trimmings together in one way. The main roots having strong crowns may be 8 inches long. These should be laid into soil, chopping down a furrow for the purpose deep enough with a spade, and placing the roots in thickly, crown upwards, putting soil against them. So placed you can get in a score or so at a time into any quite dark place, three parts burying in soil and watering. If there be warmth, growth soon follows, and when 7 inches high the crowns may be cut and cooked. Trim all the pieces of side roots

to lengths of 5 inches, making the bottom end slanting, the top cuts quite level. Dibble these out into rows 20 inches apart, and 12 inches apart in the rows, in the coming spring in soil trenched and well manured, and you will have a fine lot of plants to lift and force next year. Do the same every year.

MISCELLANEOUS.

Worms in pots (S.)—We think the best way of dealing with the worms in the pots is to get some fresh lime and make a solution of lime-water—say, a quart of lime to a gallon of water. Stir it well and let it stand for a few hours until the water is quite clear, then pour off into a water-pot and give to the pots in which the worms are. This should be repeated two or three times in the case of plants with a large ball of earth attached to the roots, as it may not be possible to kill all the worms at one watering. Many of the worms may be taken out when the plants are repotted, but perhaps not all; therefore, it is well to apply the lime-water first.

Basic slag for lawns (Gardener)—Basic slag is a very finely-crushed powder, made of the slag that is given off in the process of converting iron into steel by means of what is known as Thomas's patent. Hence it is also known as Thomas's phosphate powder. It has, of course, in it some slight metallic character, but as it is chiefly of chemical composition it is found to contain a good proportion of phosphates. It is a slow-acting manure, probably one of the slowest, and it should be used at once, so that it may to some extent become soluble under the influence of the winter rains. You should apply the manure at the rate of about 5 lb. per rod. We fear its application will not permanently remedy the sourness or wetness of your lawn. Bad drainage is probably the cause of the sourness of the soil, in which case top-dressing will be of no avail until you have thoroughly drained it.

Leather-jackets (N. S. T.)—The grub you send specimen of is that of the Daddy-long-legs (*Tipula olearacea*). These grubs are generally known by the name of "Leather-jackets," on account of the toughness of their skins. They are very troublesome because of the difficulty of destroying them. The toughness of their skins and their subterranean habits render it almost impossible to kill them with any insecticides. They do not like drought, but wet and cold have no effect on them. Hoeing the ground is useful, as it exposes them to the birds. Rooks and starlings are especially fond of them. Laying pieces of board, turf, slate, bricks, or tiles near the plants they are attacking make good traps for them. They often ramble about at night and find such things convenient to hide under during the day. The traps should be examined every morning and replaced in the position they formerly occupied. Dressing the ground with one of the many soil fumigants now to be had should do good.

NAMES OF PLANTS AND FRUITS.

Name of plant.—*Wm. Sheringham.*—Flowers very much dried up, but, so far as we can make out, the specimen is *Browallia elata*.

CATALOGUES RECEIVED.

SLUIS AND GROOT, Enkhuizen, Holland.—*Special Offer of French and Broad Bean Seeds.*

SUTTON AND SONS, Reading.—*A Amateur Guide in Horticulture.*

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FLOWER SHOW FIXTURES.

1917.

JANUARY.

January 15.—National Chrysanthemum Society's Executive Committee.
" 16.—Royal Horticultural Society's Committees.
" 30.—Royal Horticultural Society's Committees.

FEBRUARY.

February 12.—Annual Meeting and Committees.
" 27.—Royal Horticultural Society's Committees.

MARCH.

March 6.—Royal Horticultural Society's Bulb Show (2 days).
" 13.—Royal Horticultural Society's Committees.
" 27.—Royal Horticultural Society's Committees.

APRIL.

April 11.—Royal Horticultural Society's Committees.
" 17.—Royal Horticultural Society's Daffodil Show (2 days).
" 24.—Royal Horticultural Society's Committees.

MAY.

May 8.—Royal Horticultural Society's Committees.
" 22.—Royal Horticultural Society, Chelsea (3 days).

JUNE.

June 5.—Royal Horticultural Society's Committees.
" 19.—Royal Horticultural Society's Committees.

JULY.

July 3.—Royal Horticultural Society's Summer Show (3 days).
" 17.—Royal Horticultural Society's Committees.
" 31.—Royal Horticultural Society (dry bulb show).

AUGUST.

August 14.—Royal Horticultural Society's Committees.
" 23.—Royal Horticultural Society's Committees.

SEPTEMBER.

September 11.—Royal Horticultural Society's Dahlia Show.
" 25.—Royal Horticultural Society's Vegetable Show.

OCTOBER.

October 2.—Royal Horticultural Society's Fruit Show (2 days).
" 9.—Royal Horticultural Society's Committees.
" 23.—Royal Horticultural Society's Committees.

NOVEMBER.

November 6.—Royal Horticultural Society's Committees.
" 20.—Royal Horticultural Society's Committees.

DECEMBER.

December 4.—Royal Horticultural Society's Committees.

We shall be glad if Secretaries of Horticultural Societies will kindly send the dates of their various shows to Editor, GARDENING ILLUSTRATED, 63, Lincoln's Inn Fields, London, W.C.

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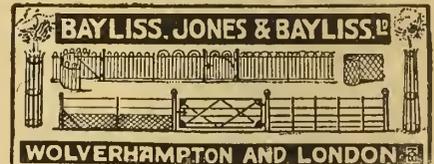
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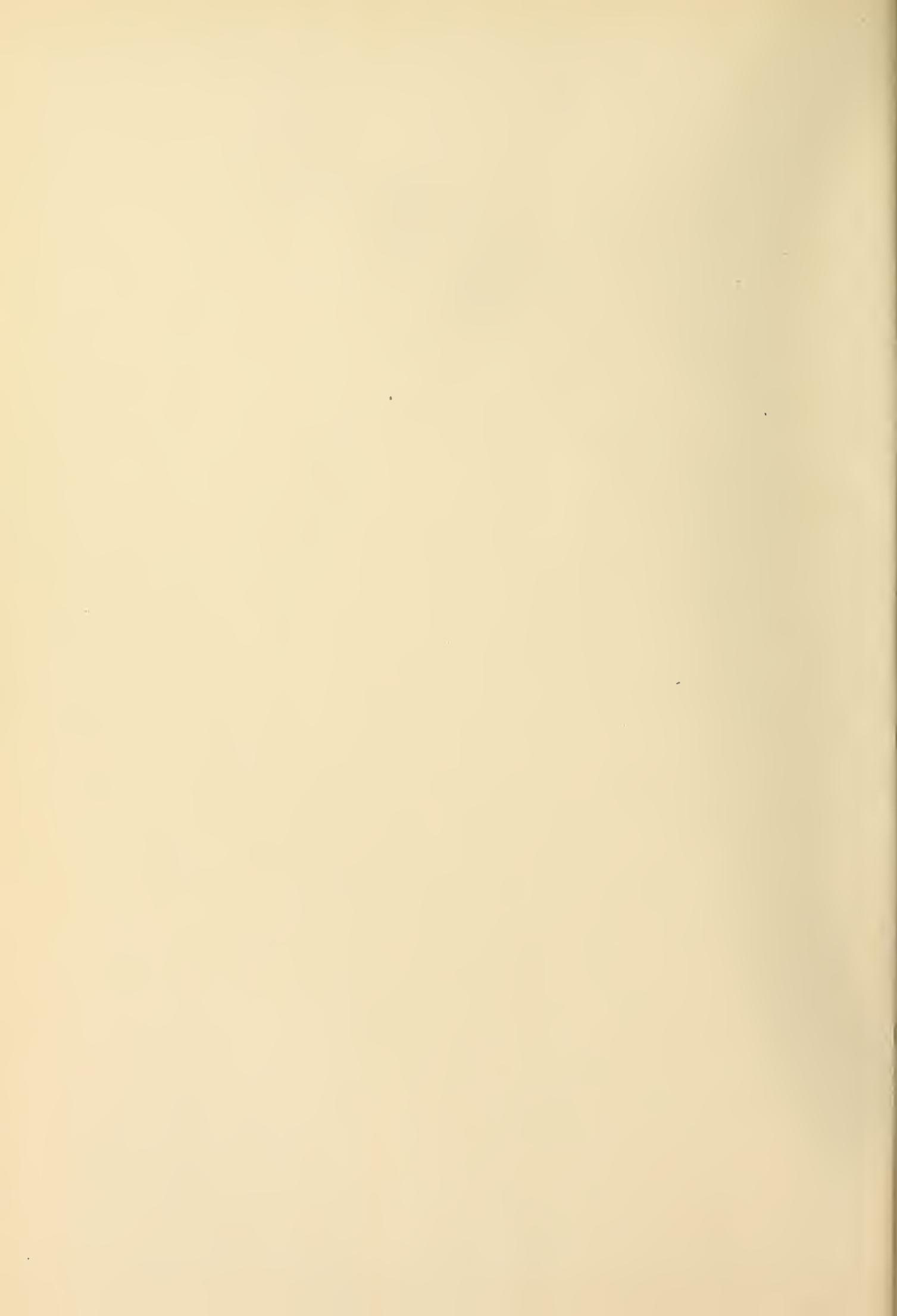
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